



A research project by National Geographic and GlobeScan



Greendex 2008:

Consumer Choice and the Environment—
A Worldwide Tracking Survey

Study Details

Introduction



- National Geographic partnered with GlobeScan to develop an international research approach to measure and monitor consumer progress towards environmentally sustainable consumption. The key objectives of this unprecedented consumer tracking survey are to provide regular quantitative measures of consumer behavior and to promote environmentally sustainable consumption.
- This research project differs from other environmental surveys in that it goes beyond attitudes and concerns to focus on actual behavior and material lifestyles across 14 countries. This includes measures such as the relative penetration of green products versus traditional products, household footprint, energy use, transportation habits, and food consumption.
- Because National Geographic wishes to inspire action both among the millions that its brand touches worldwide and others who will hear about this study, the research is specifically focused on consumer behavior. Although we recognize the importance of regulatory frameworks, country-specific climatic conditions, culture, economic development and other factors affecting consumption, this study is focused on measuring consumer behavior in absolute terms.

Introduction



- The central component of this research initiative is the creation of a composite index of environmentally sustainable consumption called the Consumer Greendex™. With 2008 measurements serving as the baseline, the Greendex will be used to monitor and report changes in consumer behavior at the global level and within specific countries by replicating the research annually.
- The Greendex is distinctly different from other environmental performance rankings that factor in the performance of government and industry or whose rankings reflect the total emissions, energy consumption, or other measures for an entire country. The Greendex rankings reflect the behaviors of the *average consumer* in each of the countries included in the study, and the environmental sustainability of that behavior.
- In this report, “sustainable consumption” is defined as consumption that demands less of ecosystem services that the Earth provides and is less likely to impair the ability of future generations to meet their own needs as a result.
- Consumption is determined both by the choices consumers make and those dictated more by circumstances beyond their control. This initiative considers both factors.

Methodology: Preliminary Research



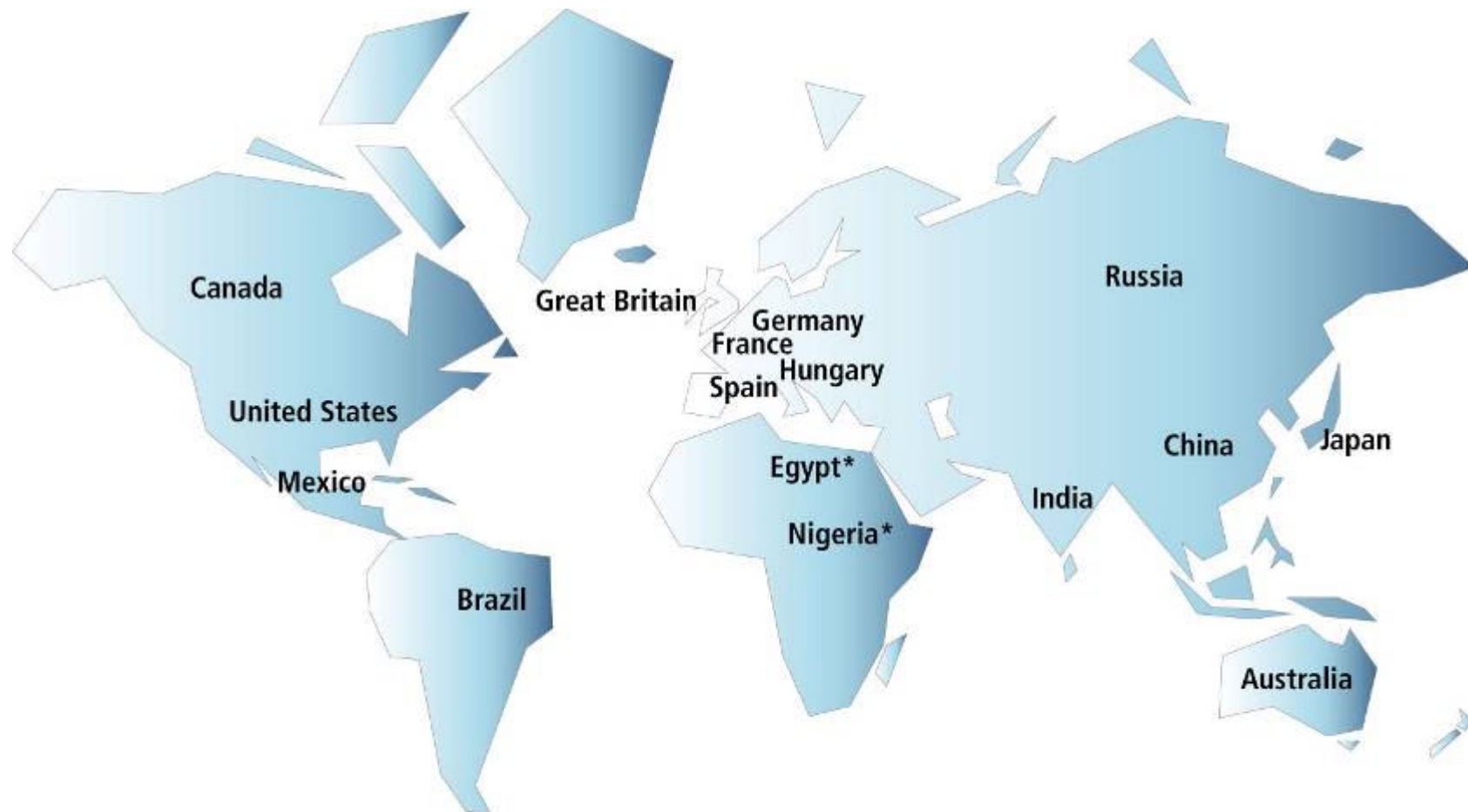
- As part of the survey design process, GlobeScan conducted a preliminary study that engaged a group of 27 experts around the world to acquire broad-based expert insight and to help identify critical behaviors to be measured among consumers. The objectives of this phase of the study were also to ensure that the Greendex components are relevant to the countries in the study, to help anticipate potential challenges and to solicit constructive criticism from experts.
- The experts interviewed were defined as professionals who have demonstrated an outstanding commitment to advancing global sustainability in their positions as leaders of relevant sustainable development organizations—typically think tanks, academic research organizations, major NGOs and consultancies. A number of panelists representing the private sector were also included. To ensure that the survey content was internationally applicable, National Geographic and GlobeScan interviewed experts who are based in many of the countries included in the study.

Methodology: Country Selection and Survey Method



- To select countries to include in the study, GlobeScan mined its extensive survey database to classify countries according to the environmental behaviors and attitudes of their consumers. Countries were selected that would be indicative of these classifications as well as a variety of geographies and different levels of environmental impact and economic development. The 14 countries selected represent 55 percent of the world's population and include 7 of the 11 most populous nations. In 2007, the 14 countries accounted for 75 percent of the energy consumed in the world.
- GlobeScan used a quantitative Internet methodology for this study. While Internet panels cannot be thoroughly representative of a country's population (the poorest of the poor and those living in remote areas without Web access are not included), it is felt that our objective of measuring *consumer* behavior was well met by the use of Internet research in the countries included in this study since sufficiently large panels were used.
- In addition, since the norm for public opinion research is quickly evolving toward the use of online panels, it is sensible to adopt this methodology at the outset so that modal changes that negatively affect the ability to track changes in future years will be avoided.

Participating Countries* 55% of Global Population



*Interviews in Egypt and Nigeria were conducted in person and are not included in the total or Greendex

Methodology: Sampling



- To ensure that no demographic groups were over-represented in the quantitative survey sample, quota caps were set for education, age, and gender.
- The data for each country were then weighted according to the latest census data to reflect the demographic profile of each country.
- As a function of the quotas applied to the survey sample and the weighting factors applied to the results, the populations surveyed can be briefly described as representative cross sections of consumers in each country who have access to the Internet to complete surveys in either their homes or offsite in libraries, cafes, schools, etc.
- Based on this methodology and because the focus of the research is the consumption behavior of those surveyed, survey respondents are frequently referred to in this report as “consumers.” GlobeScan does not equate the words “citizens” or “individuals” with the word “consumers.”

Methodology: Sampling



- The margin of error per country is approximately ± 3.1 percent 95 percent of the time.
- GlobeScan also ran parallel face-to-face studies in Egypt and Nigeria; however, as data acquired through Internet surveys and in-person interviews are not technically comparable, these results are not included in the core of this report. In the future, as online survey research becomes viable in these countries with increased Internet penetration, it is envisioned that they will be included in the core set of countries.

Figures and Charts

- All figures and charts except those reporting Greendex findings are expressed in percentages, unless otherwise noted. Totals may not add to 100 because of rounding.
- In the case of certain bar charts, white space represents the portion of respondents who either answered “Do not know” or did not answer at all (i.e., “DK/NA”).

General Findings

General Findings



- **Consumers feel empowered as individuals and are willing to make changes in their consumption habits.** Few people across the countries surveyed believe that either their governments or companies are performing well on the environment. As a result, consumers are assuming some ownership of environmental problems.
- **Consumers in developing countries feel more responsible for environmental problems than those in developed countries.** They are more likely to agree to take action and believe it will make a difference.
- **Environmental problems are hitting home in large developing countries.** People in Brazil, China, India and Mexico report being more affected by environmental problems than are respondents in Europe, North America, and Australia. Consequently, they are more motivated to do something about it.
- **Consumer choice in these countries is more limited than elsewhere, however, as people in less developed countries report lower levels of availability of green household products and foods.** Consumers in less developed countries do, however, display a widespread preference for products that they think are environmentally superior to others.

General Findings



- **Current material lifestyles in emerging markets are environmentally more sustainable than those of wealthy countries as overall per capita consumption is lower – for now.** Chinese and Indian respondents are also more likely than people in other countries to say they have installed solar panels at their residence to heat water. Consumers in China, Brazil, Hungary, India, Mexico, and Russia, all emerging economies, are also more likely than others to say that they plan to make changes to their residence that will reduce its footprint, such as installing insulation and thermal windows, solar panels, and energy saving appliances and heating systems.
- **The current pace of economic development in emerging markets and its implications for sustainability are reflected in the survey results.** Citizens in large developing countries express a thirst for increased consumption, and many believe that people in all countries should have the same standard of living as those in the wealthiest countries do today. People in the developing world, however, are more willing to make environmentally friendly choices given the opportunity.

General Findings



- **The survey results identify global gaps in transportation patterns.** Consumers in North America, Australia, and Western Europe are much more likely than others to own at least one car or truck, and they also drive alone in a car or truck much more frequently than others – most Chinese surveyed say they never do. Instead, consumers in Brazil, China, India, Mexico, and Russia frequently use public transportation, whereas North American, Australian, and European respondents rarely do so; American respondents are especially unlikely to use public transportation.
- **The global outlook for sustainable transportation is challenging as the transportation gap between rich and poor countries is beginning to narrow.** When asked how frequently respondents drive alone in a car or truck compared to one year ago, consumers in Brazil, China, India, Mexico and Russia are the most likely to say that they do so more often than they did one year previously. Chinese and Indian respondents are also the most likely to say they fly more frequently than they did in the recent past, reflecting rapid economic growth in these countries. They also are among the most likely to agree that owning a luxury car is a very important personal goal. Consumers in China and India are also cycling less.

General Findings



- **Consumer demand for organic and local foods is strong.** Four in ten people say they consume organically grown foods at least once a week and one in ten do so daily. A majority of respondents report that locally produced foods, as well as organically grown meats, poultry, fruits and vegetables are available to them. It should be noted, however, that “organic” means different things in different countries.
- **The food consumption profiles of Japanese and Americans are the least sustainable of those surveyed.** American consumers are the least likely to report consuming organic or natural foods and locally grown foods, with relatively frequent consumption of beef together with low consumption of fruits and vegetables.
- **Consumer knowledge of environmental issues can be improved.** Consumers worldwide fair poorly on a simple environmental knowledge quiz. When asked to answer a series of six questions that assess overall environmental knowledge, on average, consumers answer less than half of the questions correctly.

Top-of-Mind Issues

Top-of-Mind Issues

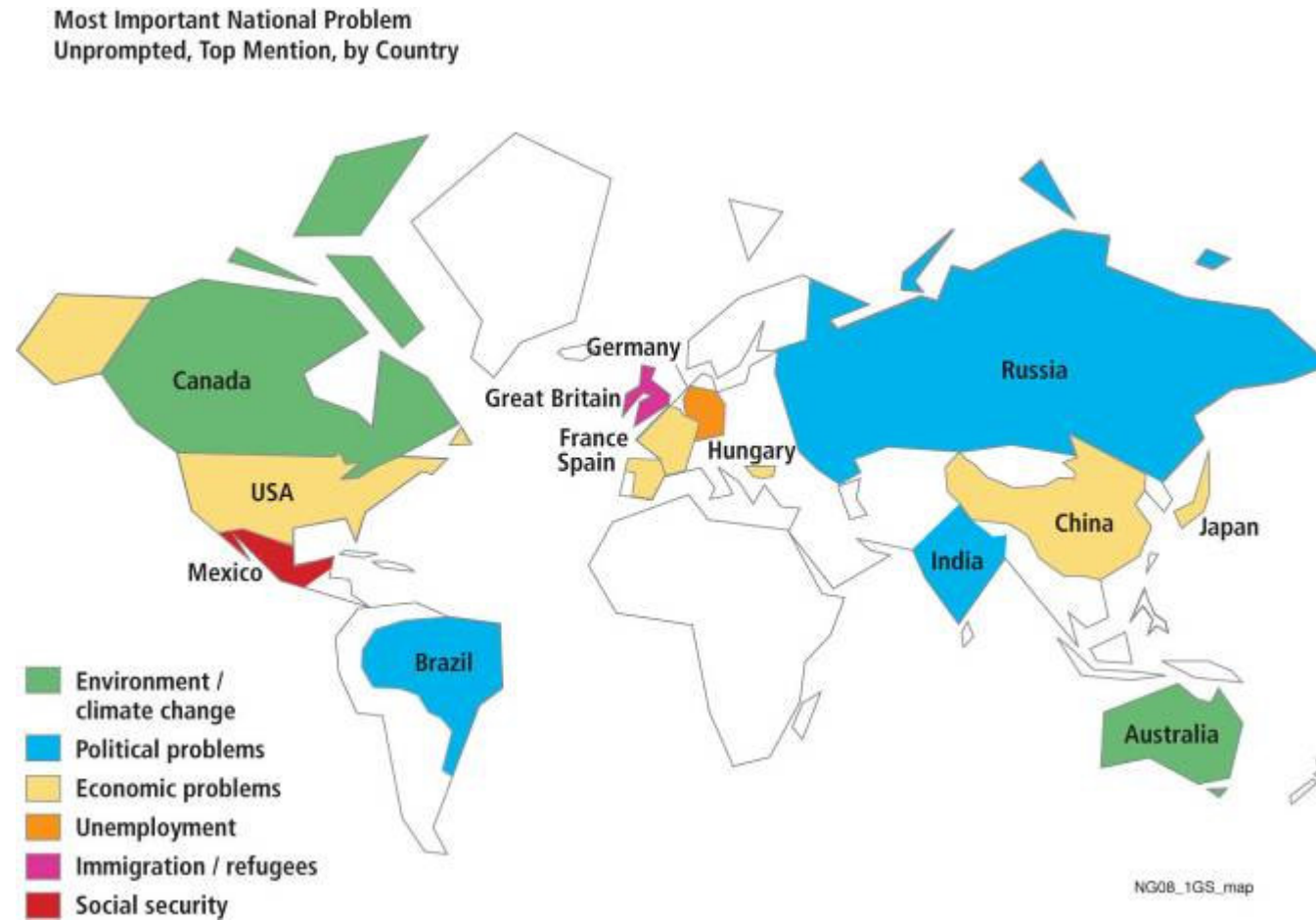


- Consumers were first asked what they think is the most important problem facing their country today. In most countries, top-of-mind issues tend to relate to the economy: economic problems, low purchasing power, and unemployment are mentioned in half of the countries surveyed. This is the case in the USA, Europe (excluding Great Britain), and Japan.
- In the rapidly growing economies of Brazil, India, Mexico, and Russia, however, top-of-mind concern tends to relate to governance rather than economic worries. This is reflected in higher environmental concern and activism of behalf of respondents in these countries, who may have less faith in their governments' handling of the issues. However, less worry about economic issues also shows in the strong consumer confidence displayed by respondents here.
- In Australia, global warming and the effects of climate change are now considered the most important national problem, with water an urgent issue.

Most Important National Problem



Unprompted, Top Mention, by Country



Most Important National Problem



Unprompted, by Country

	Total	Austra- lia	Brazil	Canada	China	France	Ger- many	Great Britain	Hun- gary	India	Japan	Mexico	Russia	Spain	USA
Economic problems	22	16	5	15	35	49	13	13	32	7	24	10	18	25	39
Political problems	11	2	26	6	8	4	8	3	20	20	8	13	19	10	4
Environment / climate change	8	36	*	16	9	2	*	6	*	3	20	1	1	1	3
Unemployment	8	2	5	5	4	18	30	1	11	9	*	10	2	6	3
Social security	5	1	6	1	1	4	3	1	*	*	17	24	4	1	1
Crime / violence	4	2	9	4	1	1	4	18	1	1	1	11	2	1	1
Health care	4	8	6	16	1	*	1	2	5	*	1	*	1	*	12
Poverty / homelessness	4	1	2	6	1	4	7	1	7	16	0	8	3	0	2
Terrorism / war	4	2	0	4	0	0	0	5	*	7	*	*	*	22	17

NG08_1GS_table

* = less than 1%

Context: Environmental Concerns

A New Wave of Environmental Engagement



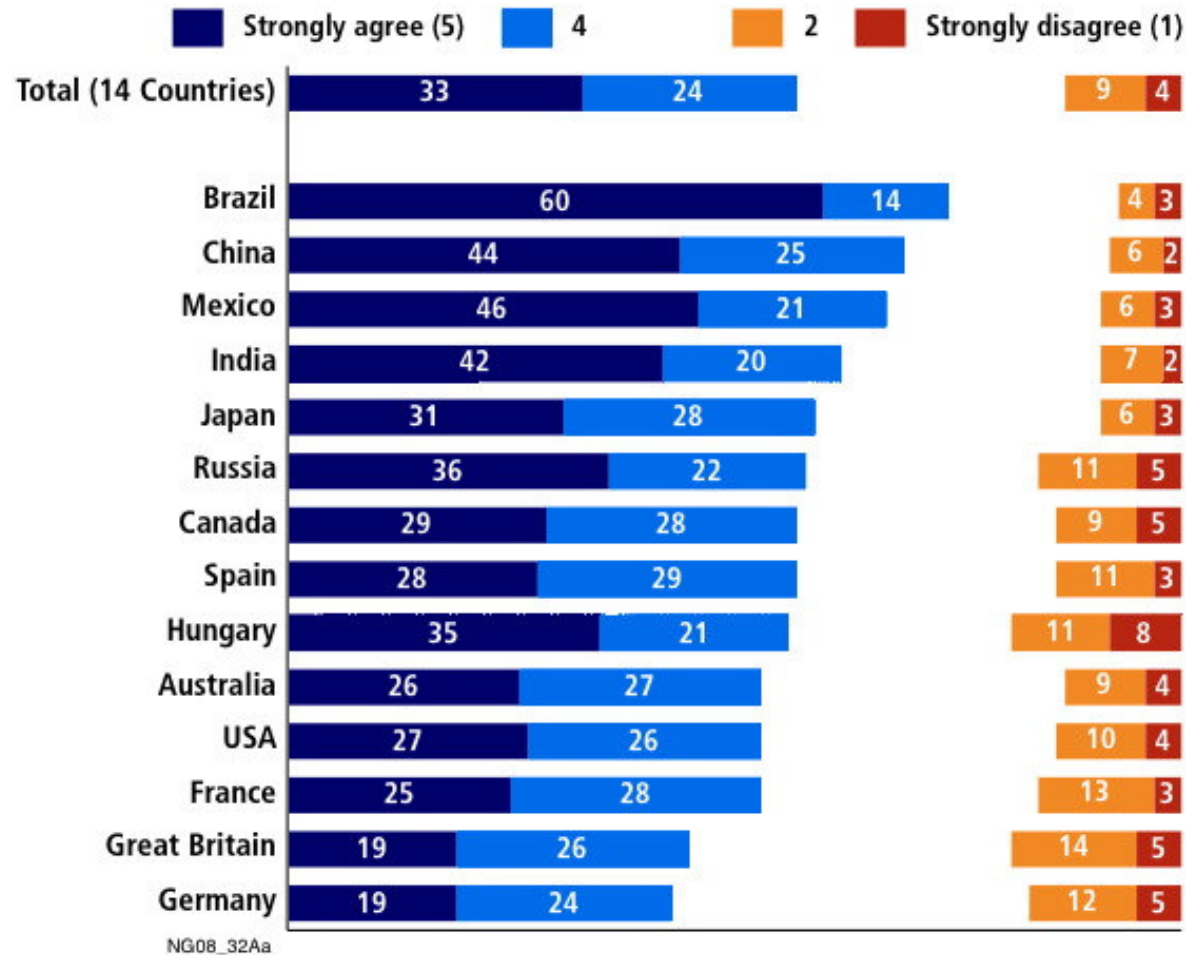
In questions more specifically focused on the environment, we found both concern and engagement among the consumers surveyed.

- Environmental concern is widespread among the consumers studied.
 - Six in ten agree they are “very concerned” about environmental problems; only one in ten disagree.
- People think the issue is here to stay.
 - Consumers reject the notion that environmental concern is a “passing fad” by a ratio of more than four to one.
- Consumers believe they have a role to play.
 - Three-quarters agree that “we will need to consume a lot less to improve the environment for future generations.”

I Am Very Concerned about Environmental Problems



% By Consumers in Country

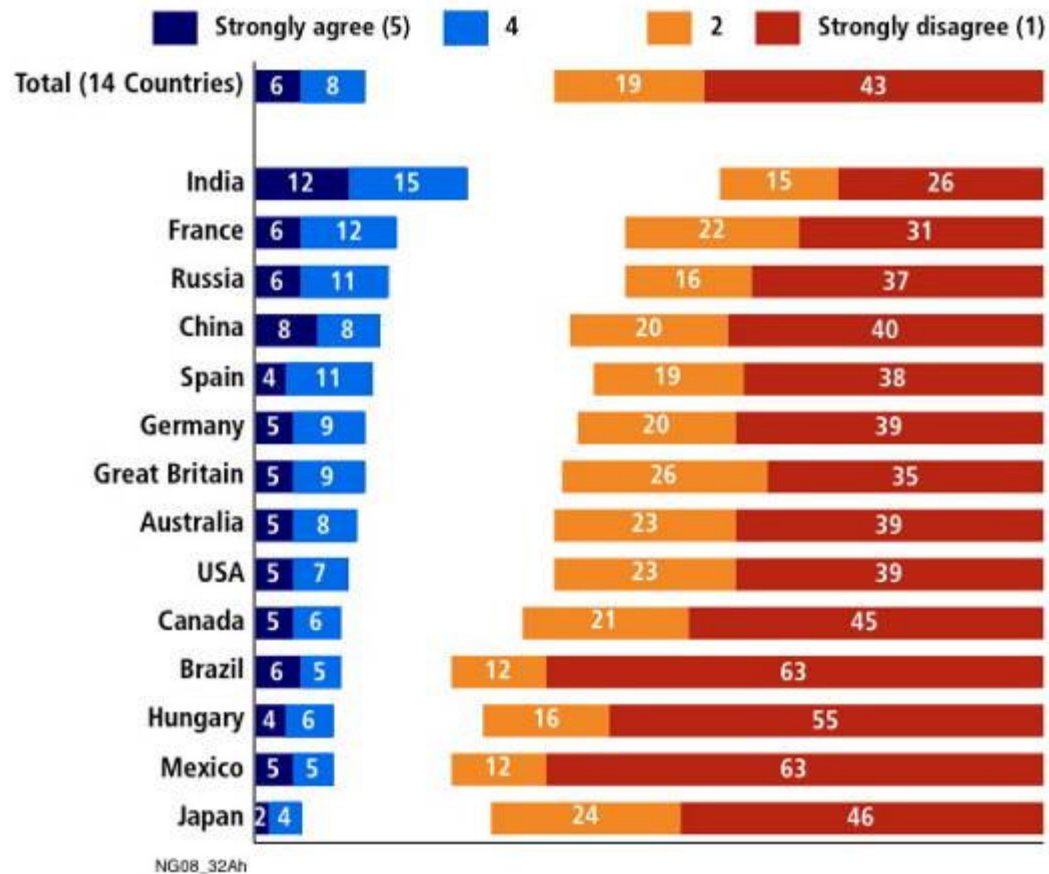


The white space in this chart represents "3" (on a scale of 1 to 5 where 1 means that you "strongly disagree" and 5 means that you "strongly agree" with the statement) and "DK/NA."

The Environmental Movement Is A Passing Fad



% By Consumers in Country

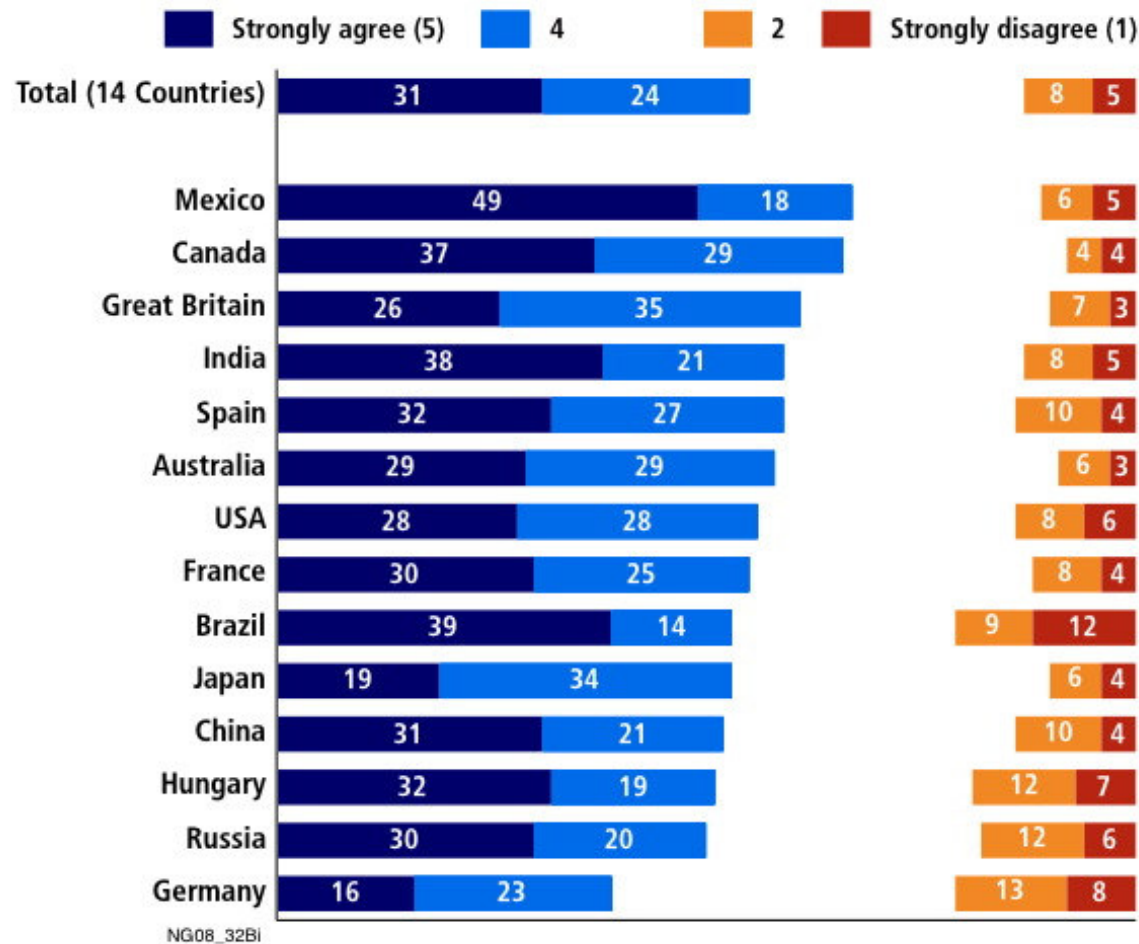


The white space in this chart represents "3" (on a scale of 1 to 5 where 1 means that you "strongly disagree" and 5 means that you "strongly agree" with the statement) and "DK/NA."

As A Society, We Will Need to Consume a Lot Less to Improve the Environment for Future Generations



% By Consumers in Country



The white space in this chart represents "3" (on a scale of 1 to 5 where 1 means that you "strongly disagree" and 5 means that you "strongly agree" with the statement) and "DK/NA."

The Consumer Greendex™

Introducing the Consumer Greendex



- As the centerpiece of the study, National Geographic and GlobeScan developed a composite measure of environmentally sustainable consumption called the Consumer Greendex. The Greendex scores each respondent based on the consumption patterns they report in the survey, and compares scores of average consumers within each country.
- The Greendex measures consumer behavior in four broad areas: **housing, transportation, food consumption** and **goods**.
- The Greendex scores are determined by types of behavior that consumers can change (e.g., what they eat) as well types of behavior that they cannot change (needing to heat their residences in temperate climates). Of the 65 consumer behavior variables included in the Greendex, 60% are choice-driven, 40% are determined by circumstance.
- The Greendex is meant to encourage environmentally sustainable consumption by increasing consumer awareness and providing consumers with global reference points for comparing their own consumption patterns.

Greendex Methodological Overview



- Each respondent earns a score that reflects the environmental impact of their consumption patterns. Low scores signify less desirable environmental impacts and vice versa.
- Points are awarded or subtracted for specific forms of consumer behavior, resulting in a score out of a maximum total available for each respondent.
- No allowances are made for consumer behavior that is determined by geography, climatic conditions where respondents live, culture, religion or the relative availability of sustainable products. All of these factors ultimately affect how sustainable one's consumption is.
- Additionally, environmental issues are not explicit in the survey instrument until late in the questionnaire. The survey first asks about people's daily lives and what they do – not in the context of trying to be “green,” but simply an inventory of their behaviors related to their residence, transportation habits, food consumption, and goods.
- Forms of behavior that have obviously larger environmental costs or benefits are weighted more heavily (e.g., home heating and driving alone). That is, these activities have a greater impact on Greendex scores.

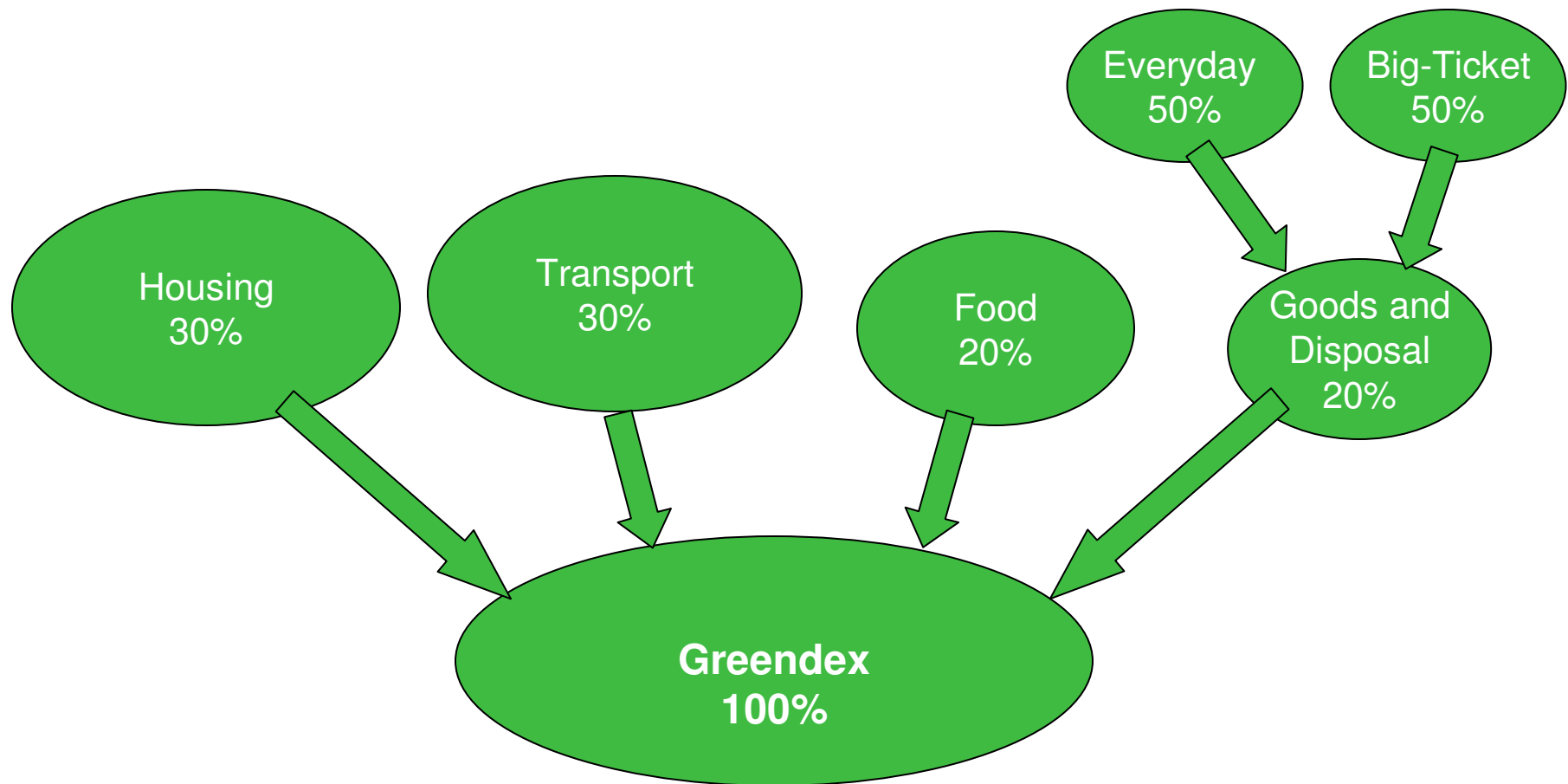
Greendex Methodological Overview



- Greendex calculations are weighted to account for the fact that housing and transportation behaviors generally have a more significant impact than the consumption of food and consumer goods.
- The weighting factors are based on both the direct and indirect impacts of consumption within each category. For example, Greendex calculations take into account the impact of not only driving a vehicle, but also the impact of manufacturing and disposal of the vehicle.
- As previously noted, Greendex scores are based on 65 response variables to uncover persistent patterns. Using many variables avoids skews that can occur within a smaller set of variables.
- Greendex values are expressed as a score out of 100. One hundred, however, does not represent a perfect score since there is no definition of perfectly sustainable consumer behavior. One hundred represents only the total number of Greendex points available in the index algorithm and questionnaire.

Greendex Design: Adding it All Up

The sub-indices contribute to the total Greendex scores in the proportions below:



The Housing Sub-Index



Sub-Index Content: Housing



The Housing sub-index consists of 24 variables measuring the following:

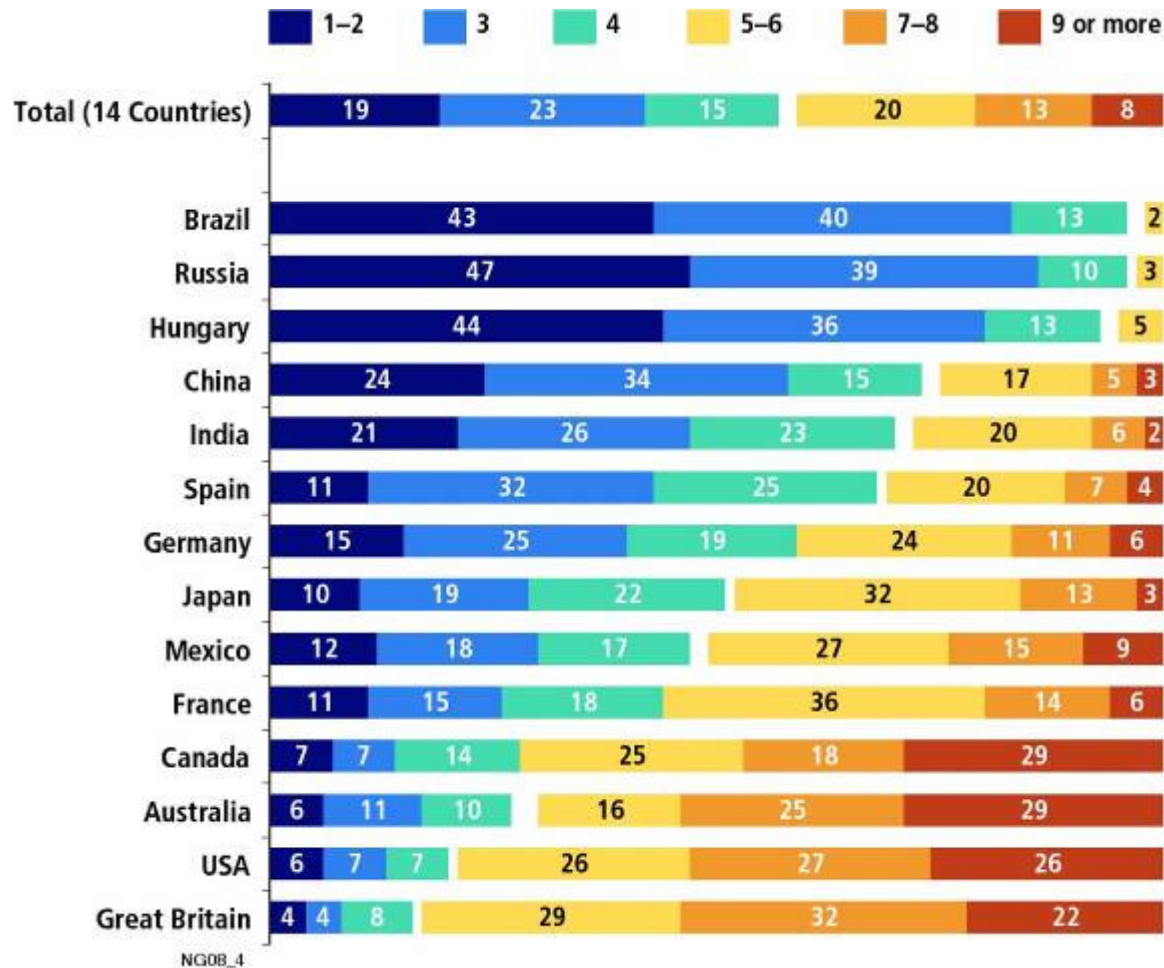
- Size of residence relative to number of inhabitants
- Home heating and cooling, including fuel source
- Hot water and water heating equipment
- Recent upgrades to residence that result in more efficient heating or cooling
- Consumption of renewable energy (both through the grid and generated onsite)
- Energy-efficient major appliances
- Water usage

Sample results from several of the variables used to calculate the housing sub-index follow.

Number of Rooms in Primary Residence



% By Consumers in Country

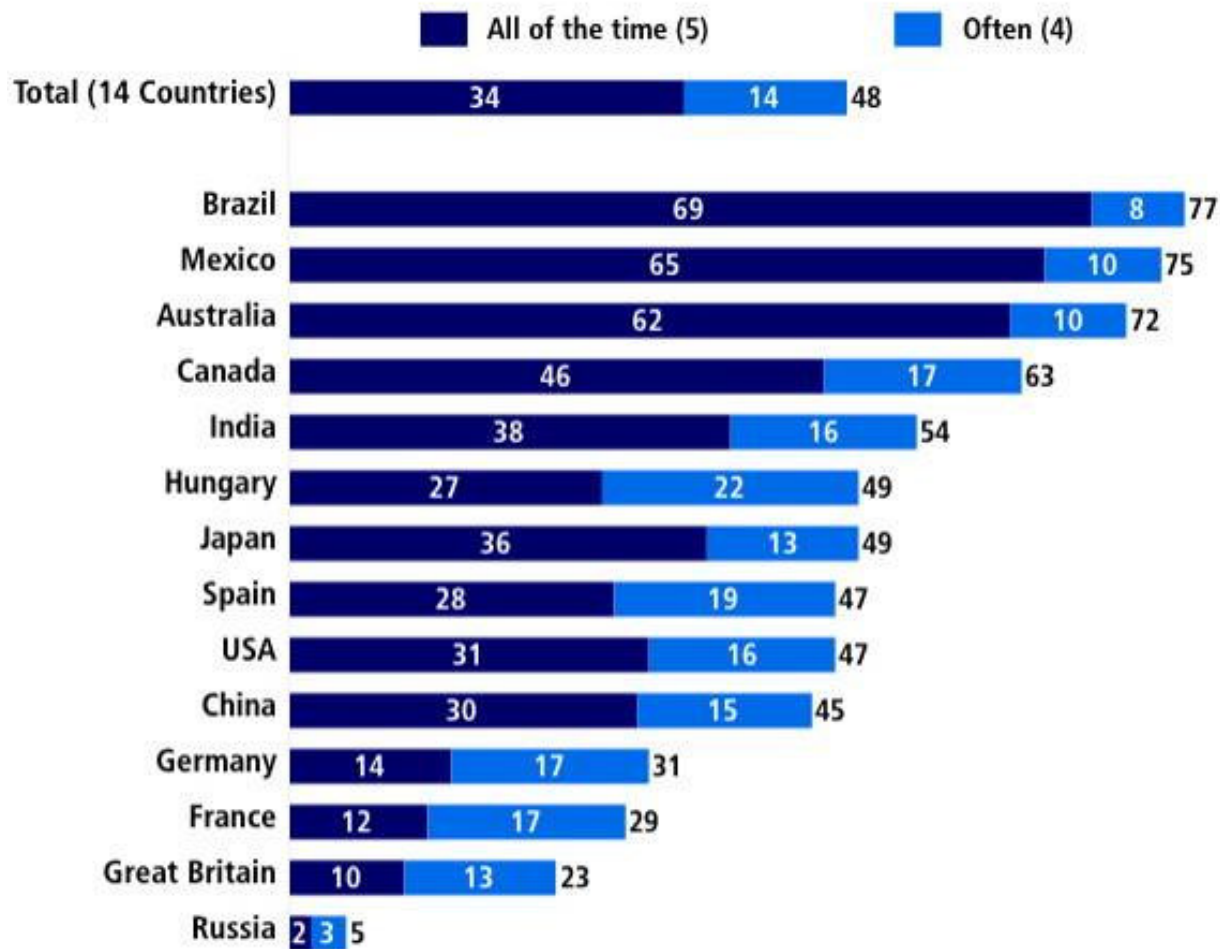


The white space in this chart represents "DK/NA."

Frequency of Washing Laundry in Cold Water to Save Energy



"All of the time (5)" and "Often (4),"* by Consumers in Country



NOR 30° cold

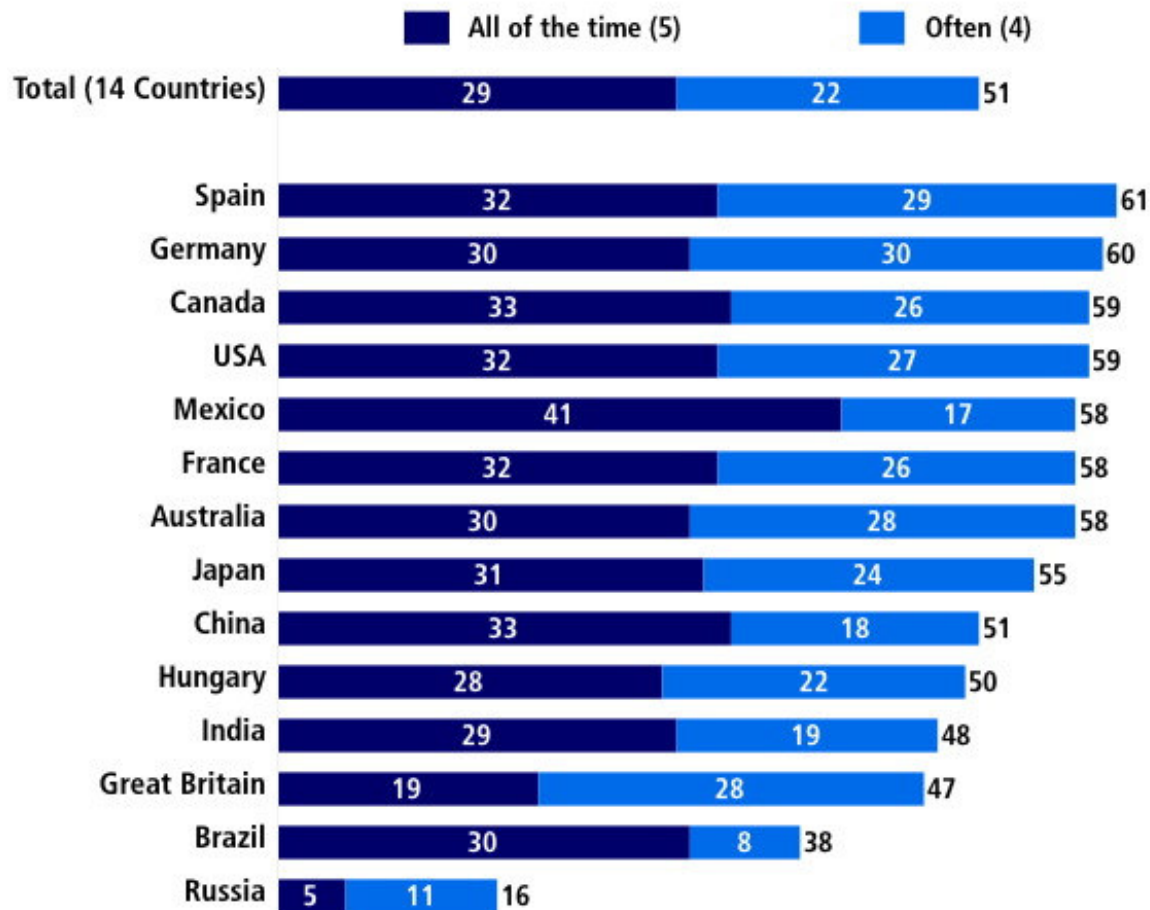
*On a scale where 1 means "never," 3 means "sometimes" and 5 means "all of the time"



Frequency of Keeping Heating/Cooling at Low Setting to Save Energy



"All of the time (5)" and "Often (4),"* by Consumers in Country

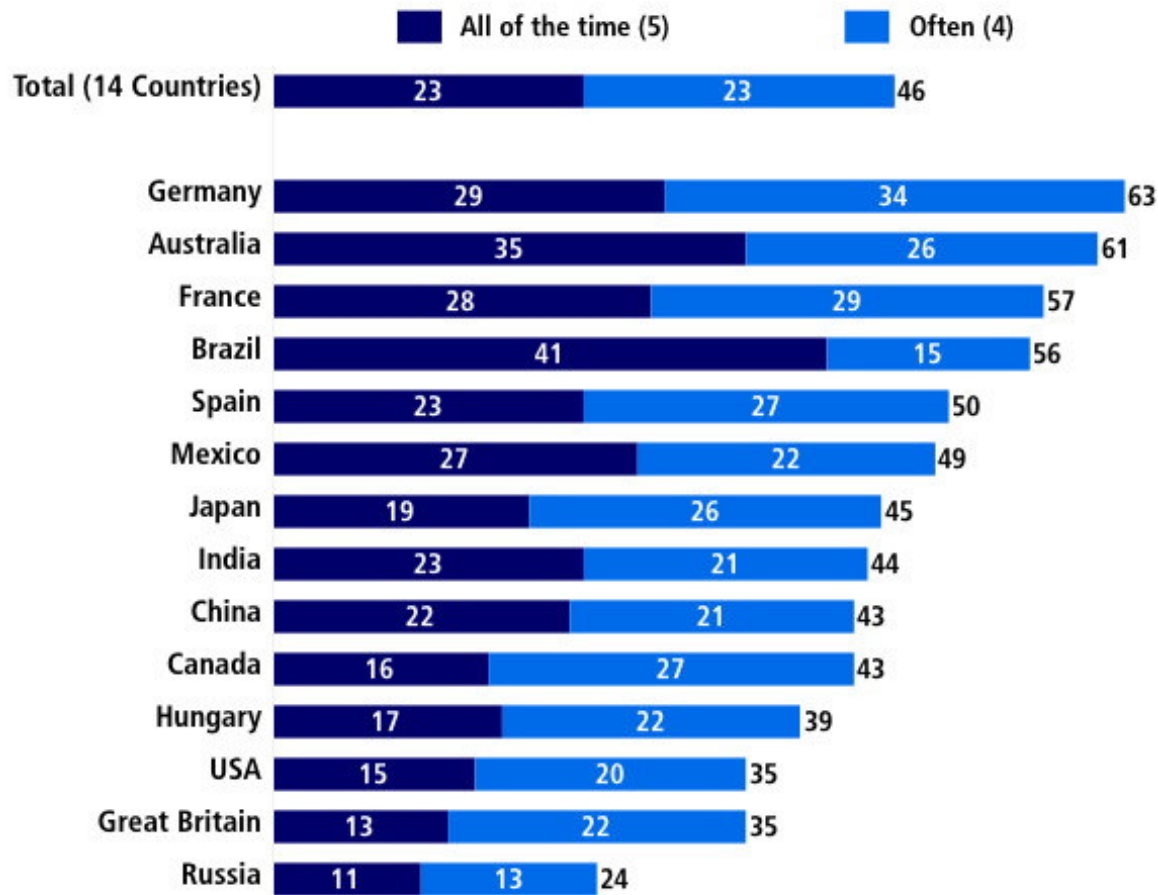


NG08_30g_heat

Frequency of Minimizing Use of Fresh Water



"All of the time (5)" and "Often (4),"* by Consumers in Country



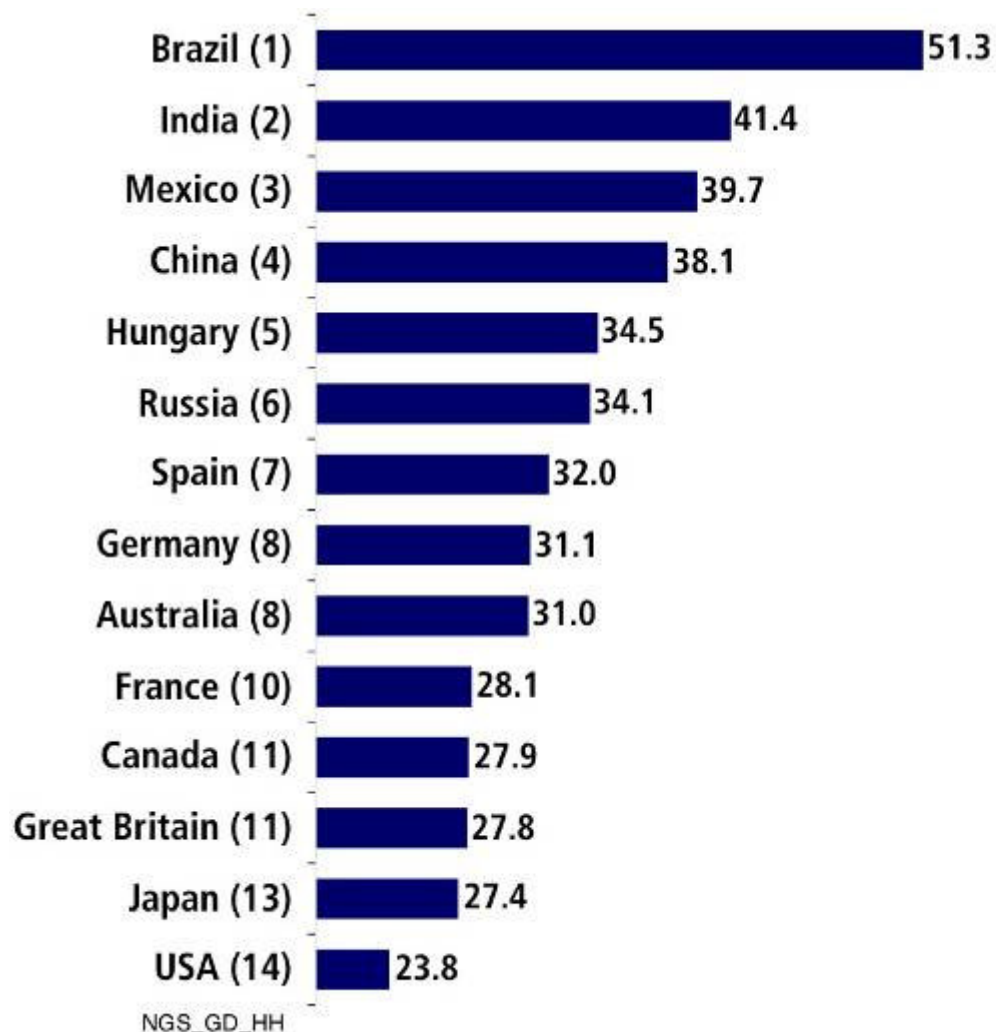
NG08_30i_water

*On a scale where 1 means "never," 3 means "sometimes" and 5 means "all of the time"

Greendex Rankings: Housing



Consumers in...



High scores = more sustainable

Low scores = less sustainable

Housing Highlights



- Consumers surveyed in Brazil earn high Greendex scores for housing. This is driven by small residence size as measured by number of rooms per household member, least use of home heating, relatively widespread use of on-demand water heaters (rather than tank heaters), and wide penetration of renewable electricity.
- Among western countries, German respondents score highest for household sustainability.
- Chinese consumers rank fourth. The use of coal for home heating is far more widespread here than in all other countries surveyed, yet other attributes within the index help to counteract this.
- Japanese residences surveyed receive low ratings, partly due to the use of oil for home heating.
- American consumers score last as home heating and air conditioning are commonplace and residences tend to be large.
- Of the four components of the Greendex (housing, transportation, food and goods) the greatest opportunity for future increases in scores lies within housing. Many consumers report that they are planning efficiency upgrades for their homes in the coming years.

The Transportation Sub-Index



Sub-Index Content: Transportation



The Transportation sub-index consists of 17 variables measuring the following:

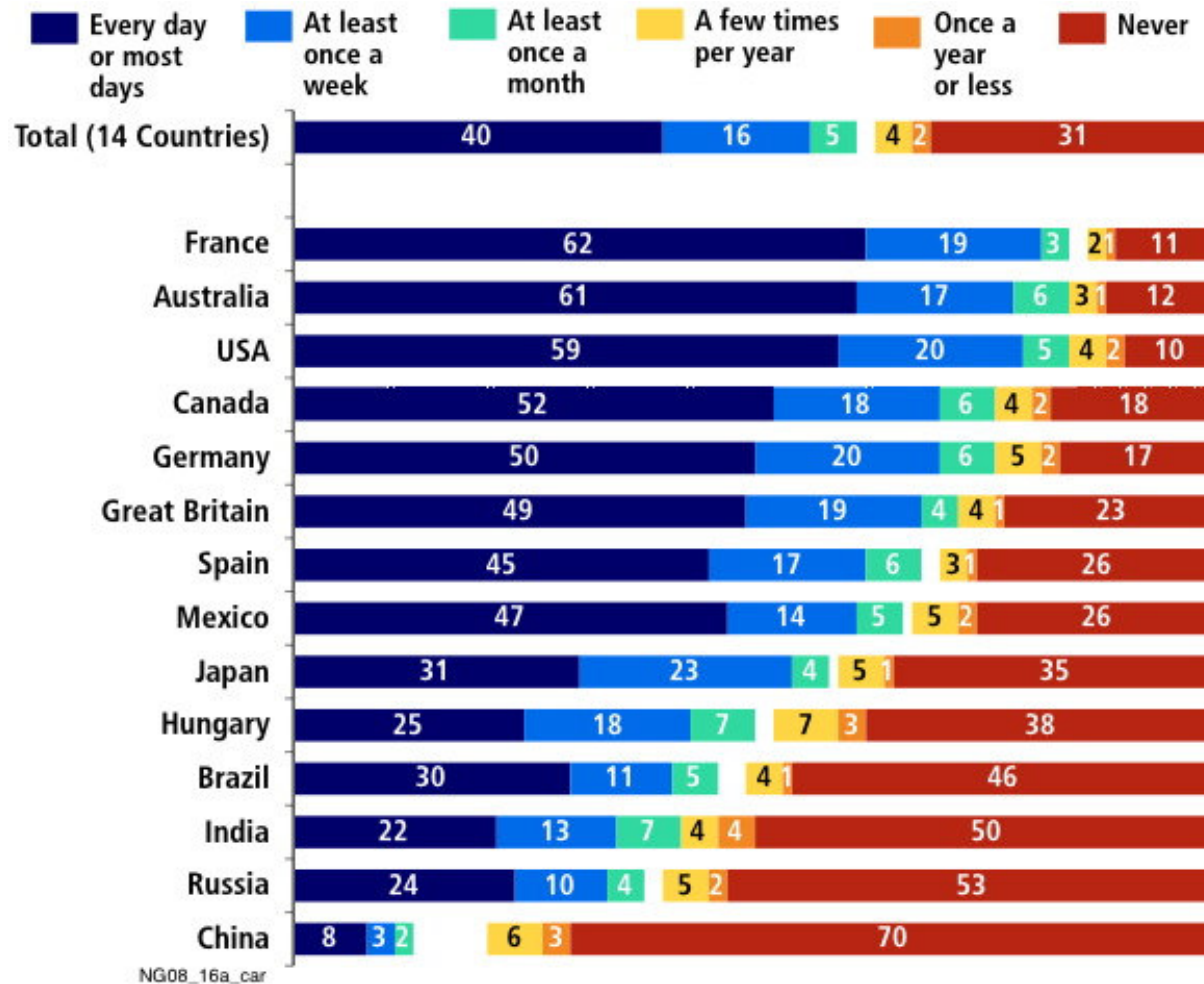
- Driving
- Ownership of motorized vehicles
- Size of vehicle driven
- Distance vehicle driven
- Owning an ultra-low emissions vehicle (ULEV or hybrid)
- Air travel
- Use of public transit
- Taking trains
- Riding a bicycle
- Walking
- Location of residence relative to primary destination

Sample results from several of the variables used to calculate the transportation sub-index follow.

Frequency of Driving Alone in A Car/Truck



% By Consumers in Country

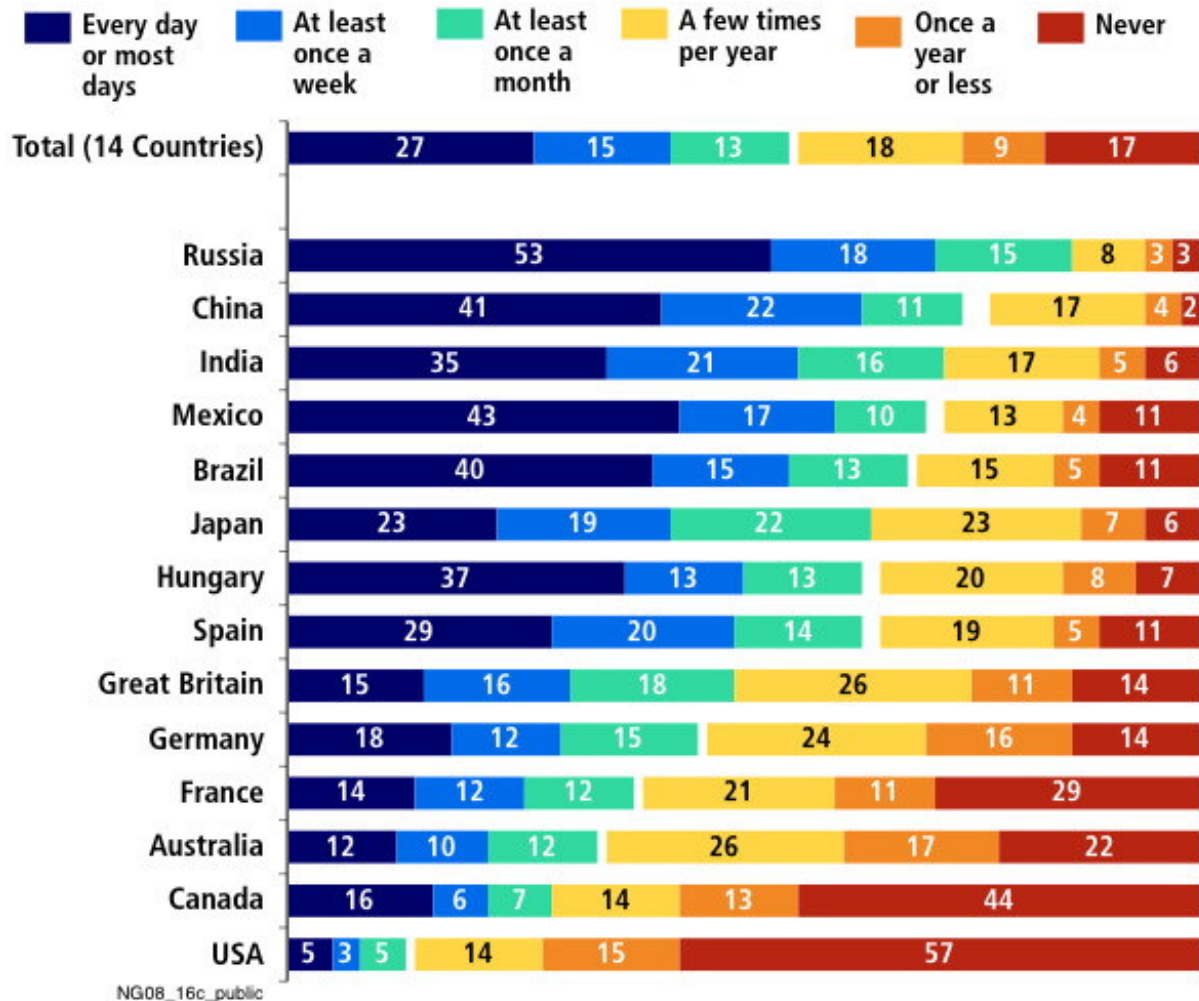


The white space in this chart represents "DK/NA."

Frequency of Using Public Transportation



% By Consumers in Country

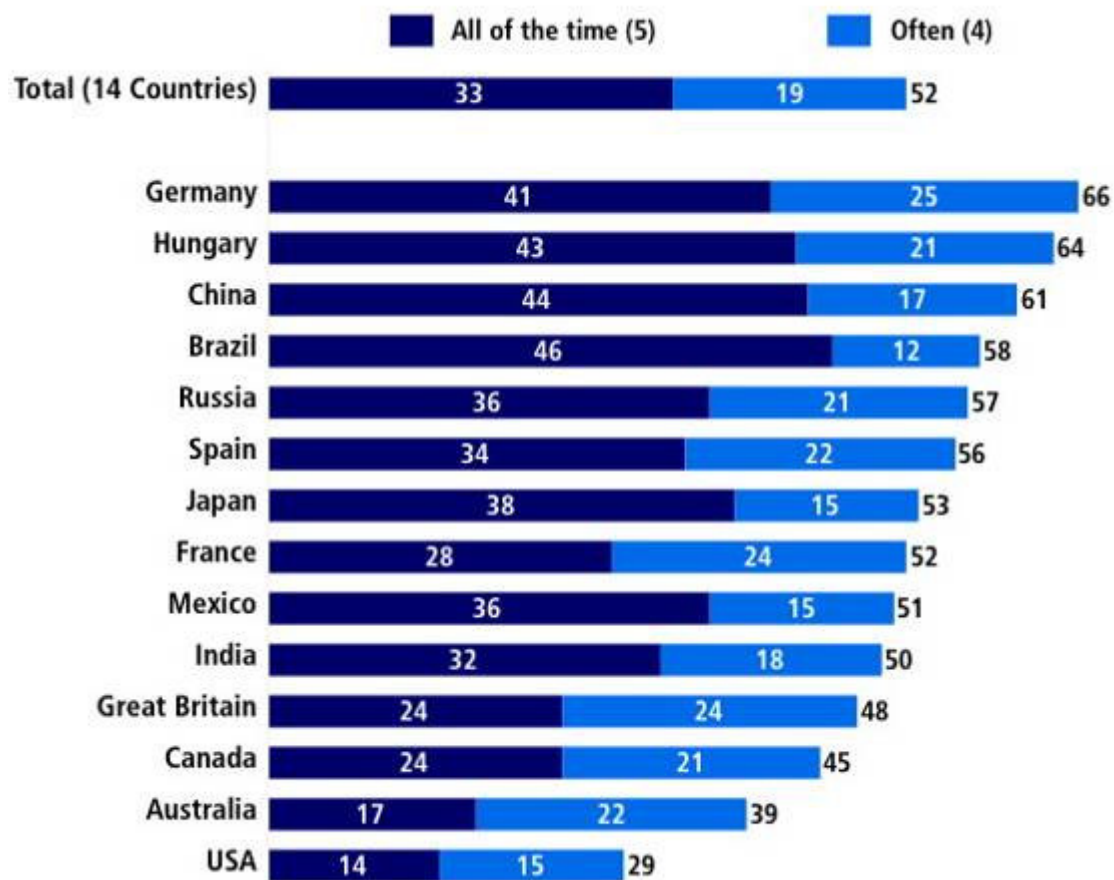


The white space in this chart represents "DK/NA."

Frequency of Walking or Riding Bike to Destination



"All of the time (5)" and "Often (4),"* by Consumers in Country



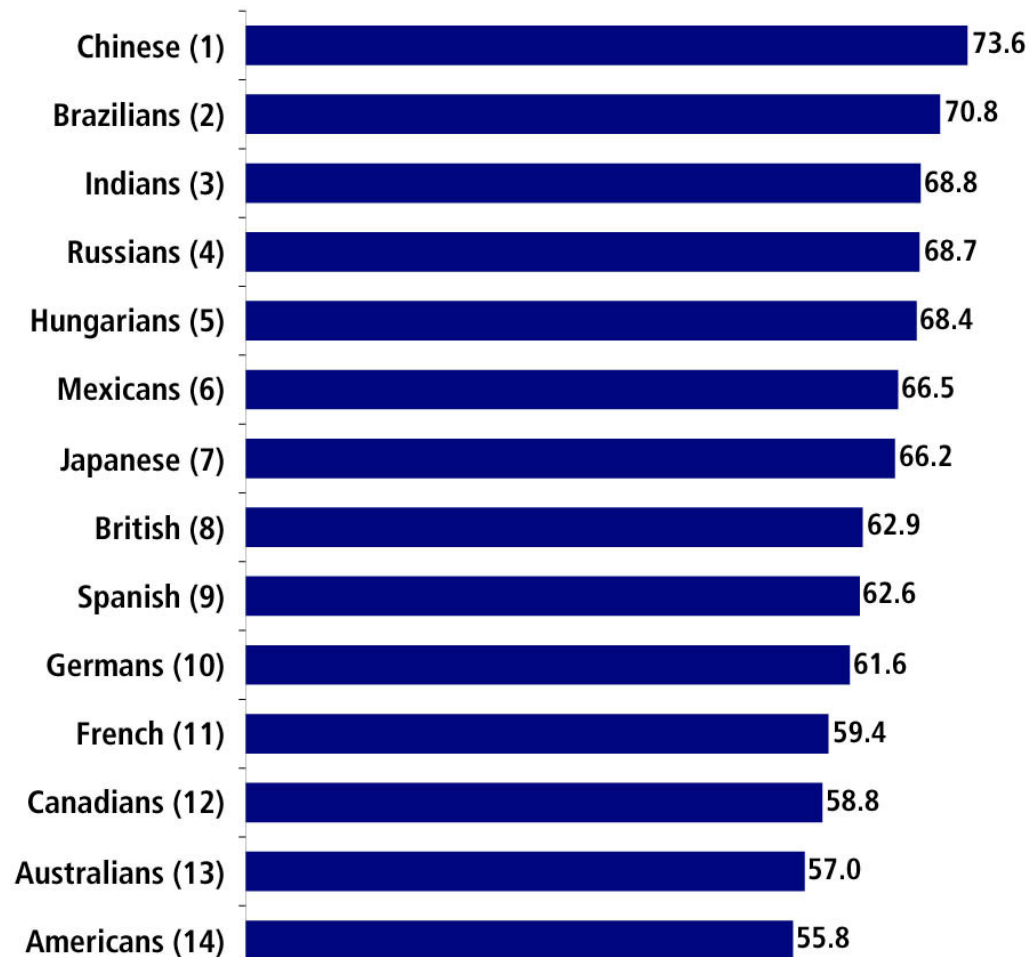
NG08_30I_walk

*On a scale where 1 means "never," 3 means "sometimes" and 5 means "all of the time"

Greendex Rankings: Transportation



Consumers in...



NGS09_new08_trans

High scores =
more sustainable

Low scores =
less sustainable

Transportation Highlights



- Chinese respondents receive the highest transportation Greendex scores for widespread usage of self-powered transportation and low (but increasing) automobile use.
- Consumers surveyed in the USA, where the use of public transit is rarer than in all other countries surveyed, score lowest. Respondents in Australia are not far ahead of those in the USA in this measure.
- Japanese consumers (ranked seventh), score better in this area than others (11th overall).
- Consumers surveyed in Mexico, on the other hand, ranked sixth, placing lower in the hierarchy than this country does on average.
- Respondents in Russia, a geographically large country like low-scoring Canada, Australia and the USA, rank fourth for transportation.

The Food Sub-Index



Sub-Index Content: Food



The Food sub-index consists of variables measuring the frequency of consumption of the following:

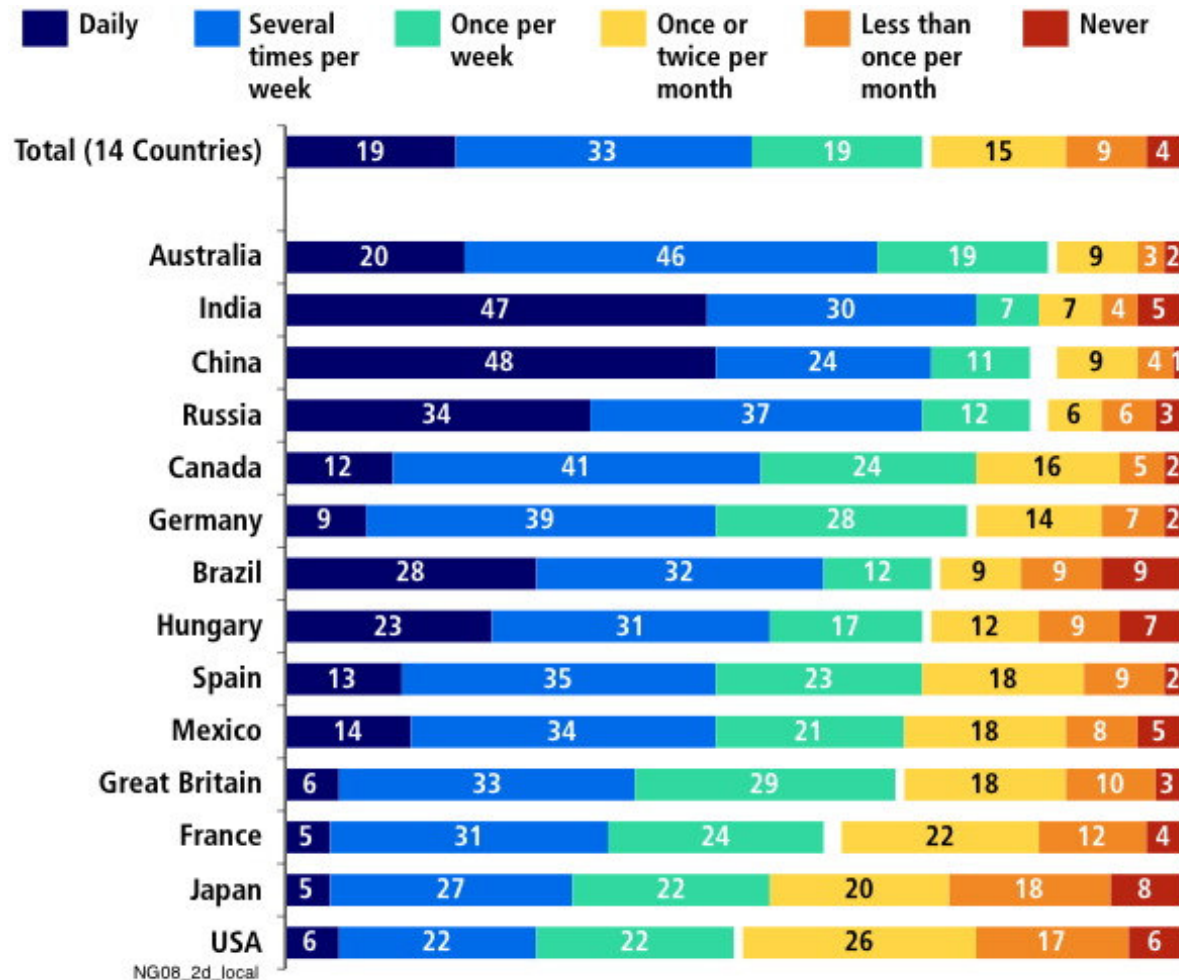
- Locally produced foods
- Foods grown or raised by oneself
- Fruits and vegetables
- Beef
- Chicken
- Seafood
- Bottled water
- Organic foods were not included in the sub-index due to high variability in the definition and understanding of “organic” from country to country

Sample results from several of the variables used to calculate the food sub-index follow.

Frequency of Consuming Locally Grown Foods



% By Consumers in Country

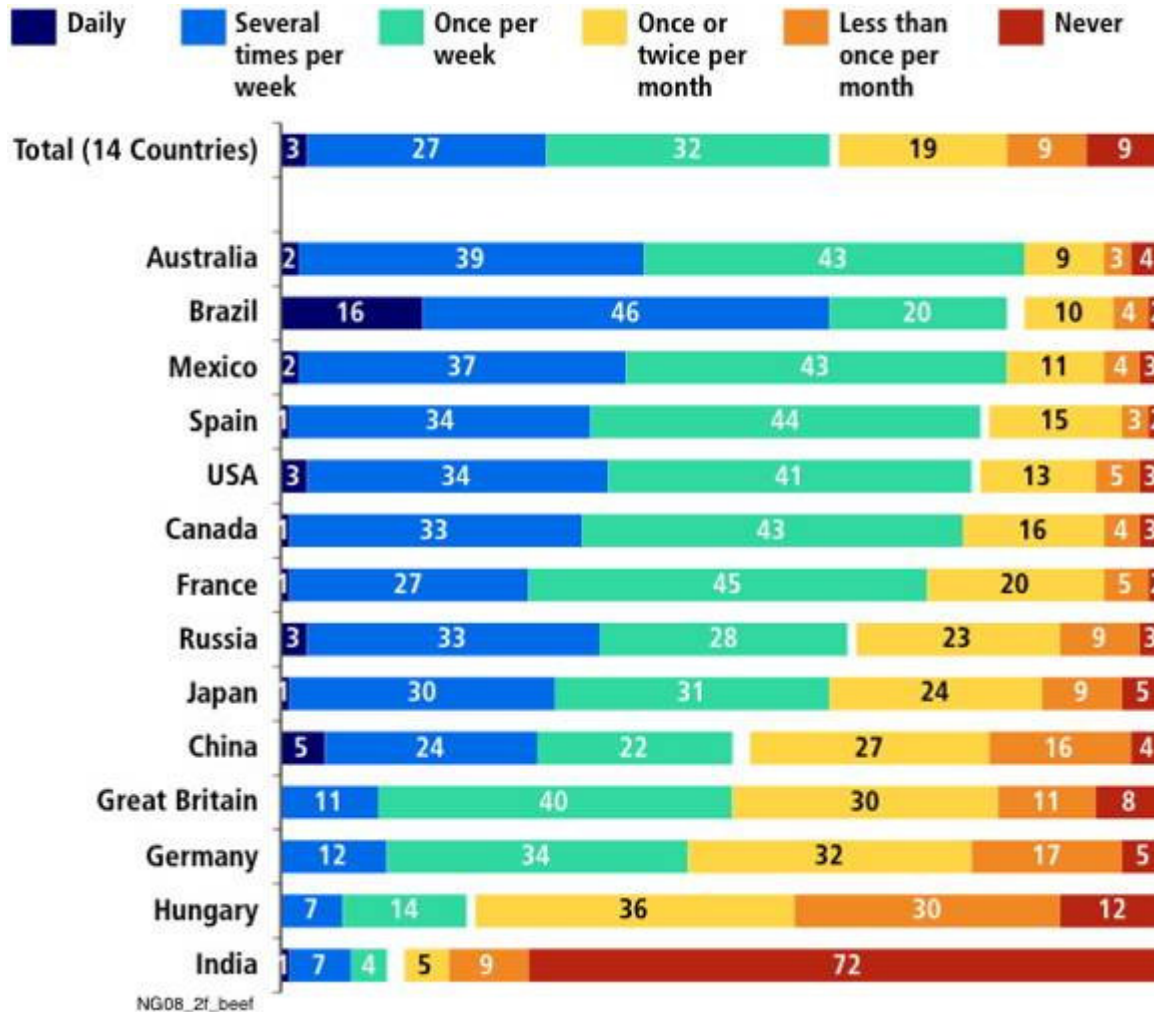


The white space in this chart represents "DK/NA."

Frequency of Consuming Beef



% By Consumers in Country

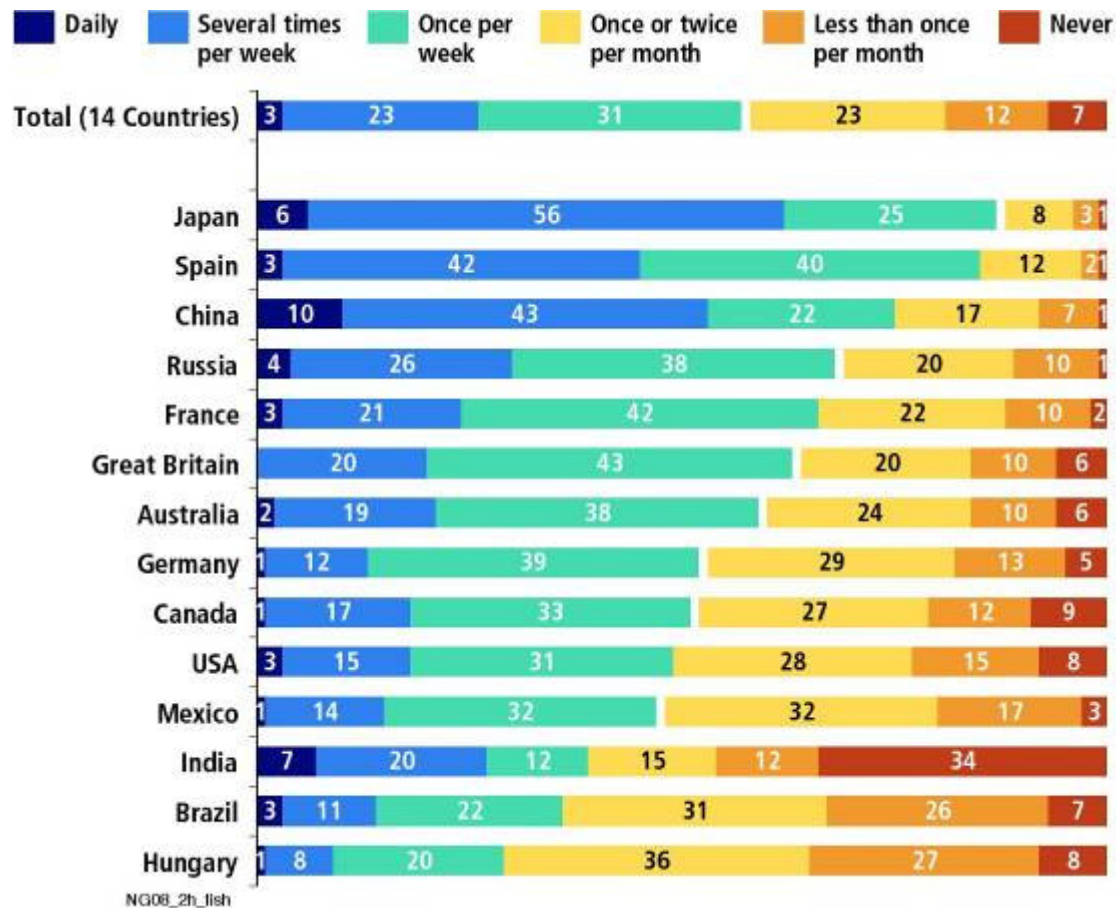


The white space in this chart represents "DK/NA."

Frequency of Consuming Fish and Seafood



% By Consumers in Country

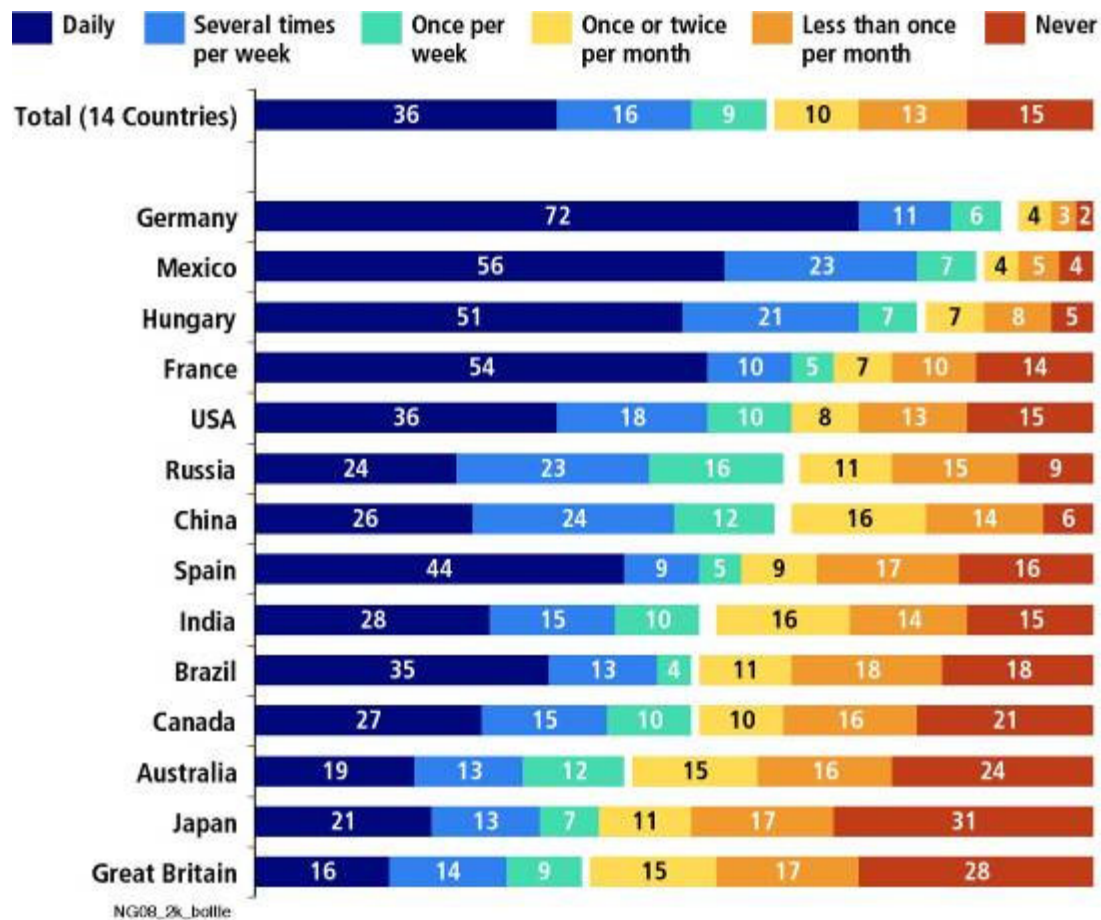


The white space in this chart represents "DK/NA."

Frequency of Consuming Bottled Water



% By Consumers in Country

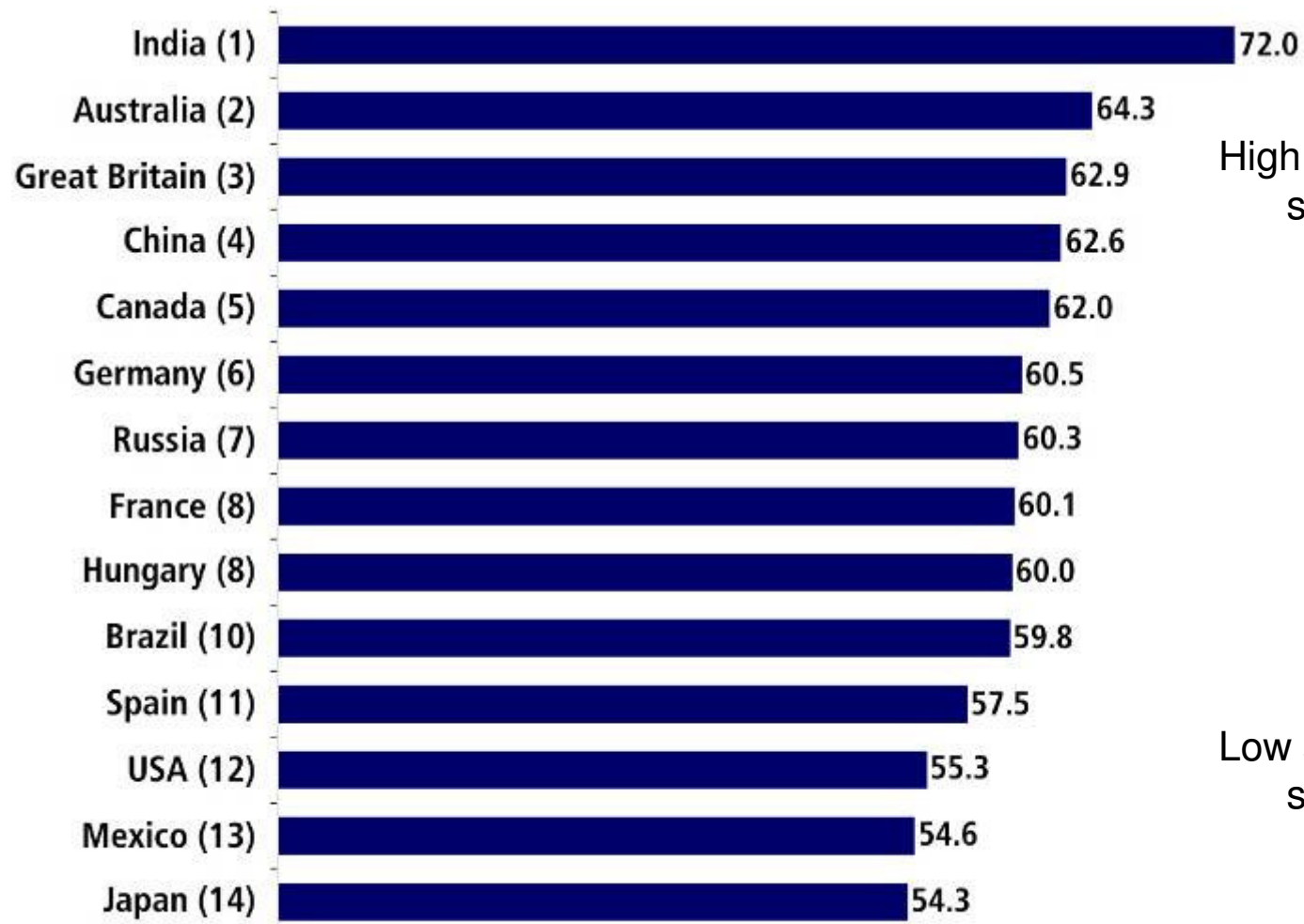


The white space in this chart represents "DK/NA."

Greendex Rankings: Food



Consumers in...



High scores = more sustainable

Low scores = less sustainable

NGS_GD_Food



Food Highlights



- Consumers surveyed in India receive by far the highest Greendex scores for food consumption by virtue of low levels of meat consumption and high volumes of fruits and vegetables eaten.
- Japanese respondents, on the other hand, score lowest for food consumption as both meat and seafood are large components of people's diets there.
- Respondents in Great Britain, Canada, Germany and especially Australia rank uncharacteristically well in the Food sub-index, with frequent consumption of locally produced food.
- Consumers surveyed in the USA and Canada differ more in the food category than in other areas, with the difference driven by higher levels of consumption of fruits, vegetables and local foods in Canada, and higher volumes of bottled water consumption in the USA.
- Despite its top-four ranking overall, Mexican respondents rank second last for food consumption.
- Consumers in the USA rank third last—the only instance in which consumers there do not rank beneath all other countries.

The Goods Sub-Index



Sub-Index Content: Goods



The Goods sub-index is a combination of everyday consumption and ownership of big-ticket items. It consists of 16 variables such as:

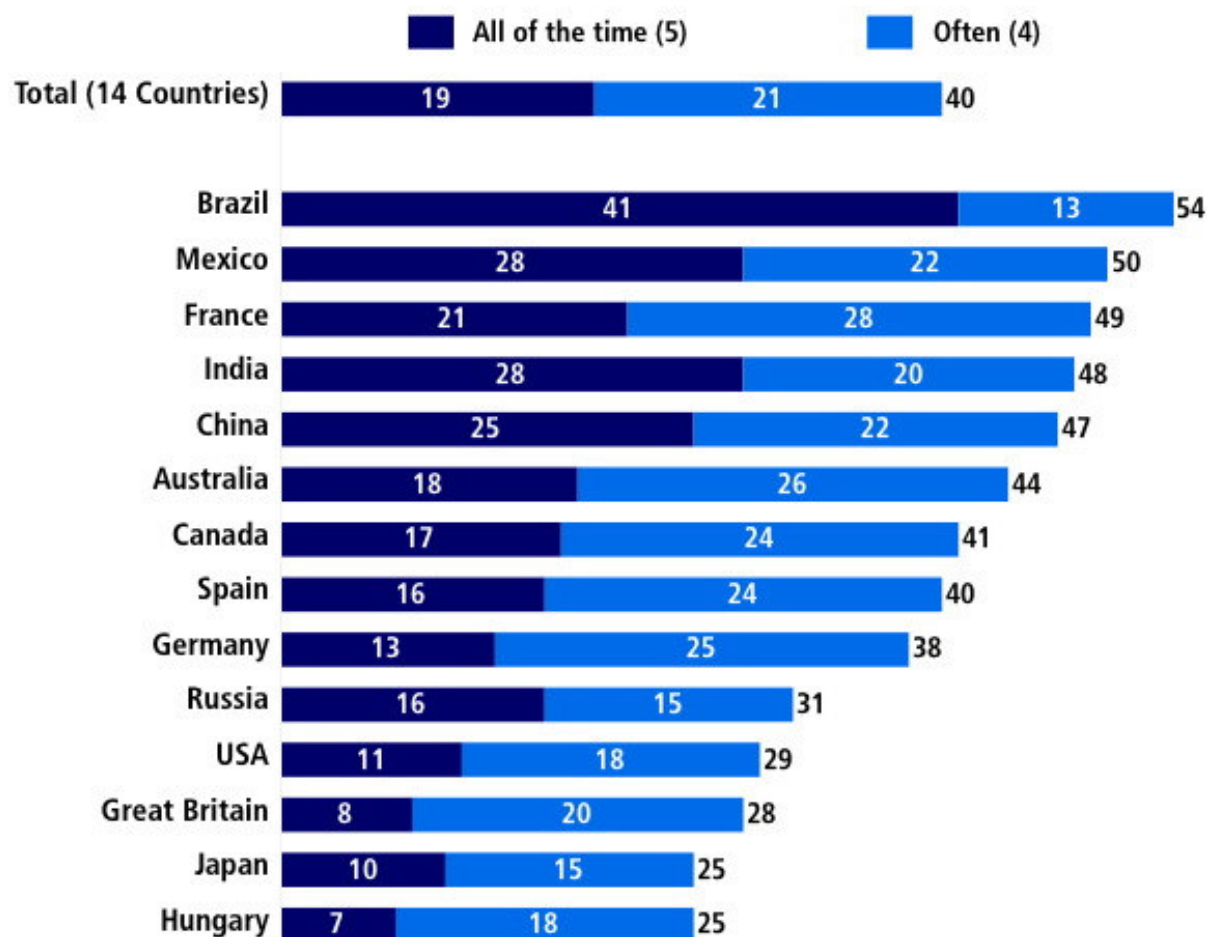
- Purchase and/or avoidance of specific products for environmental reasons
- Avoidance of excessive packaging
- Preference for reusable consumer goods over disposable products
- Willingness to pay an environmental premium
- Preference for used rather than new items
- Preference to repair rather than buy a replacement
- Recycling
- Number of TVs and PCs per household member
- Numbers of refrigerators, dishwashers, and laundry machines per household member
- Second homes, recreational vehicles, lawnmowers and other small engines

Sample results from several of the variables used to calculate the goods sub-index follow.

Frequency of Avoiding Environmentally Unfriendly Products



"All of the time (5)" and "Often (4),"* by Consumers in Country



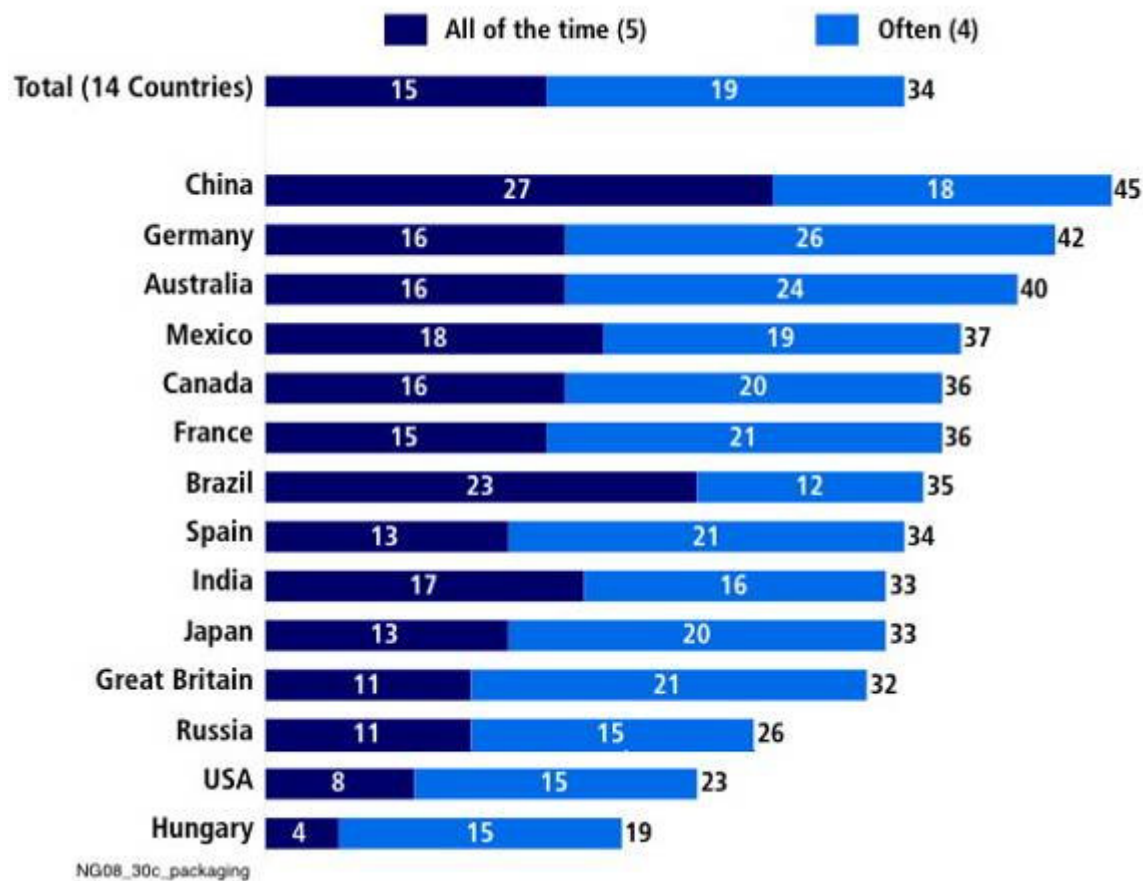
NG08_30b_avoid

*On a scale where 1 means "never," 3 means "sometimes" and 5 means "all of the time"

Frequency of Avoiding Excessively Packaged Products



"All of the time (5)" and "Often (4),"* by Consumers in Country

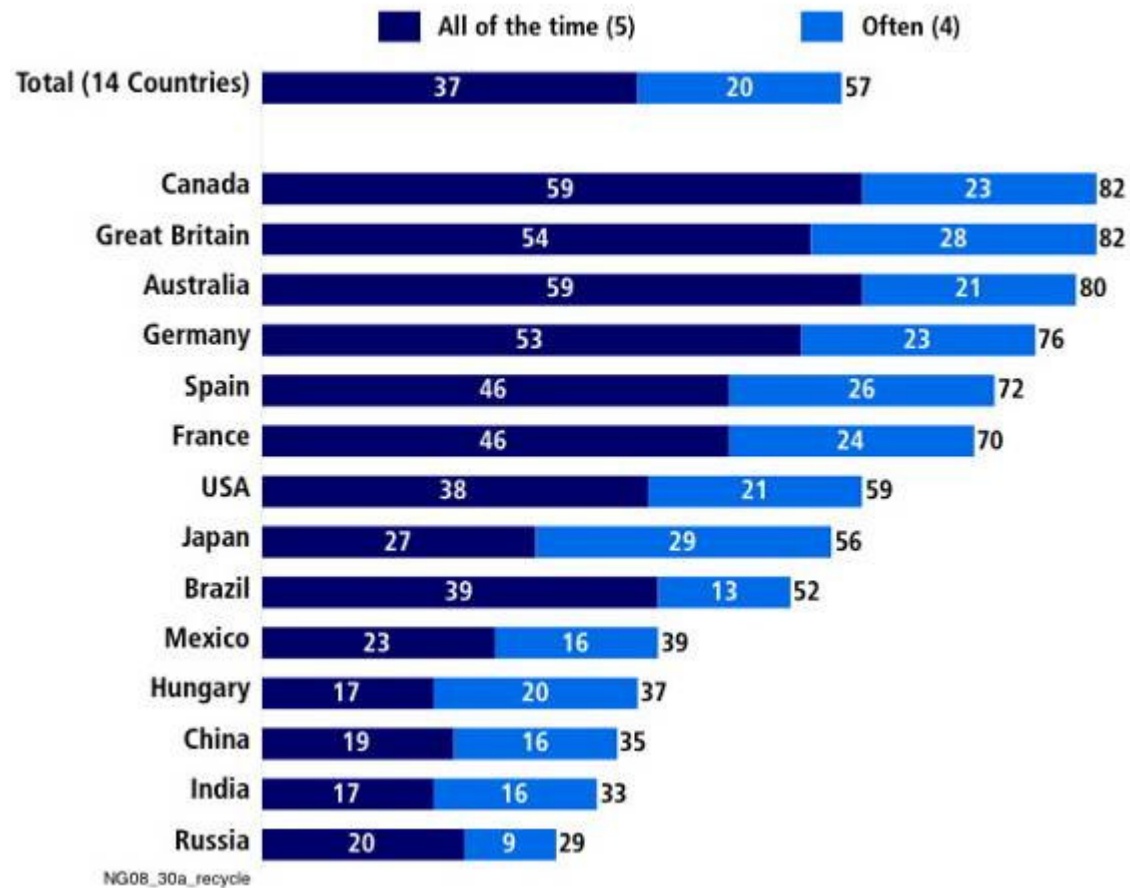


*On a scale where 1 means "never," 3 means "sometimes" and 5 means "all of the time"

Frequency of Recycling Materials



"All of the time (5)" and "Often (4),"* by Country

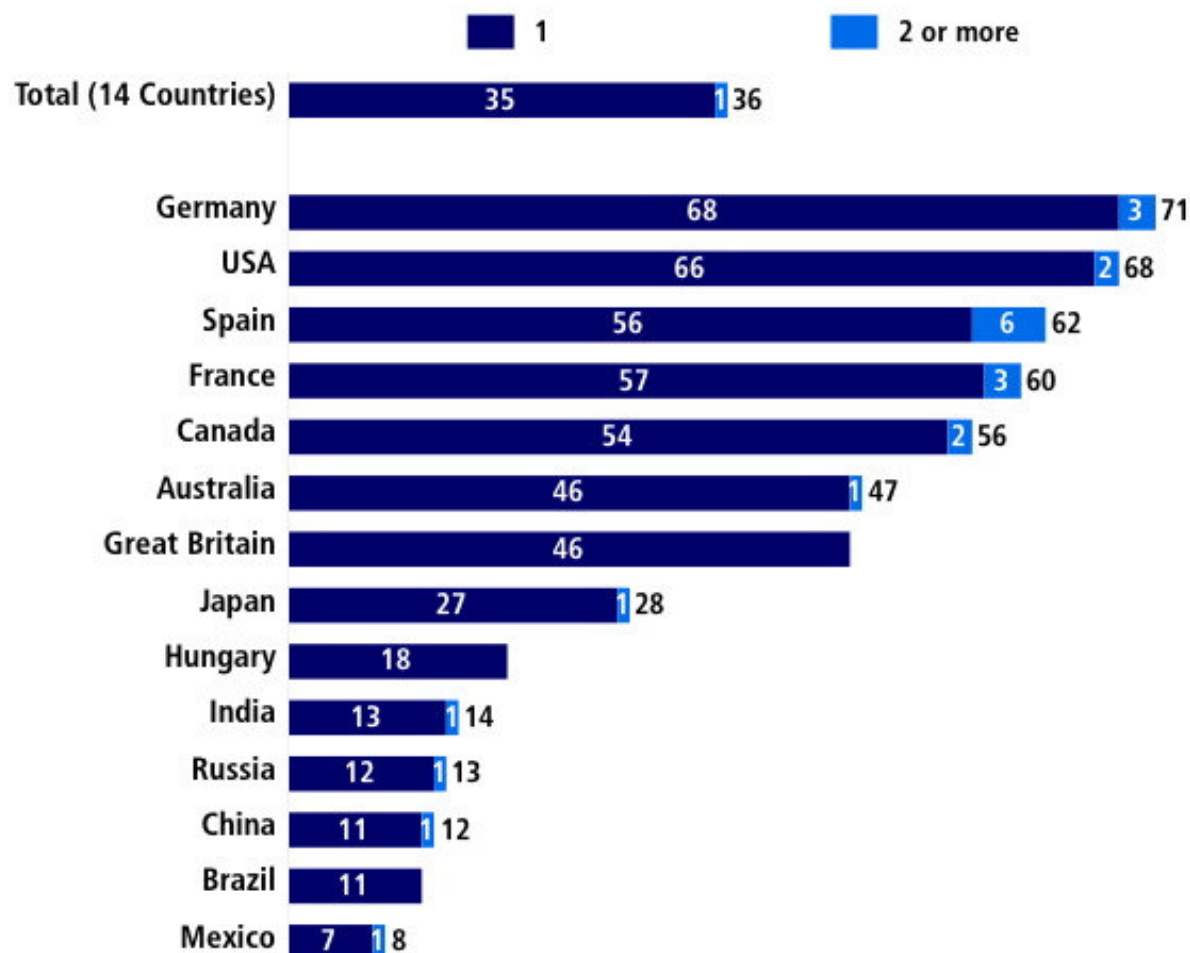


*On a scale where 1 means "never," 3 means "sometimes" and 5 means "all of the time"

Average Number of Dishwashers Owned, Rented, or Leased by Household Members



% By Consumers in Country



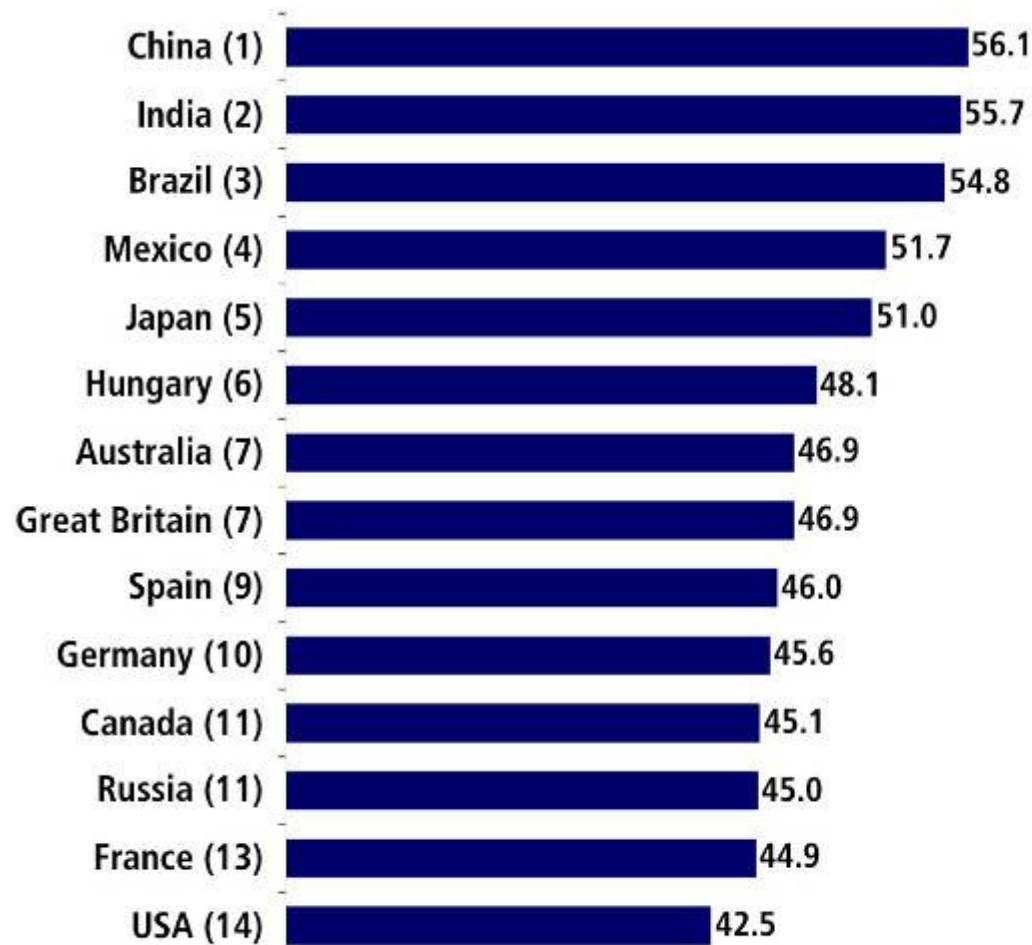
NG08_15i_dishwash



Greendex Rankings: Goods



Consumers in...



NGS_GD_GOODS

High scores = more sustainable

Low scores = less sustainable

Goods Highlights

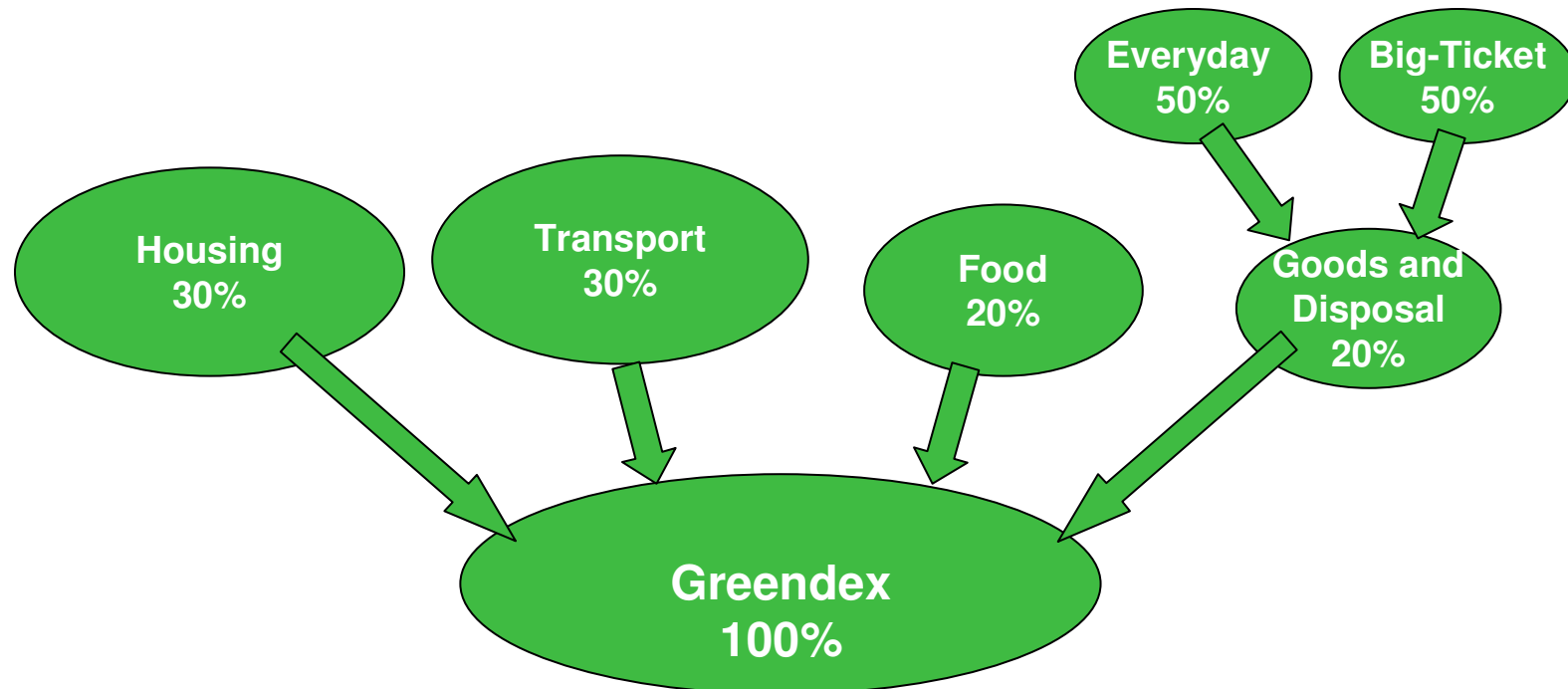


- The Goods sub-index is a composite of everyday consumption patterns and per capita possession of big-ticket items like appliances.
- Consumers in China, India and Brazil decisively top the ranking with widespread preference for green products and ownership of relatively few appliances and expensive electronic devices.
- Among wealthy countries, Japanese respondents receive the highest Greendex scores for goods despite low levels of consumption of green household products; Japanese respondents much prefer reusable to disposable items and tend to own moderate numbers of big-ticket items.
- Consumers in Russia score well below its cross-index average as people here report low levels of interest in green household products.
- USA consumers rank last with low levels of avoidance of environmentally unfriendly products and excessive packaging, infrequent selection of green products and high number of televisions and dishwashers in the typical American household.

Greendex Overall Rankings



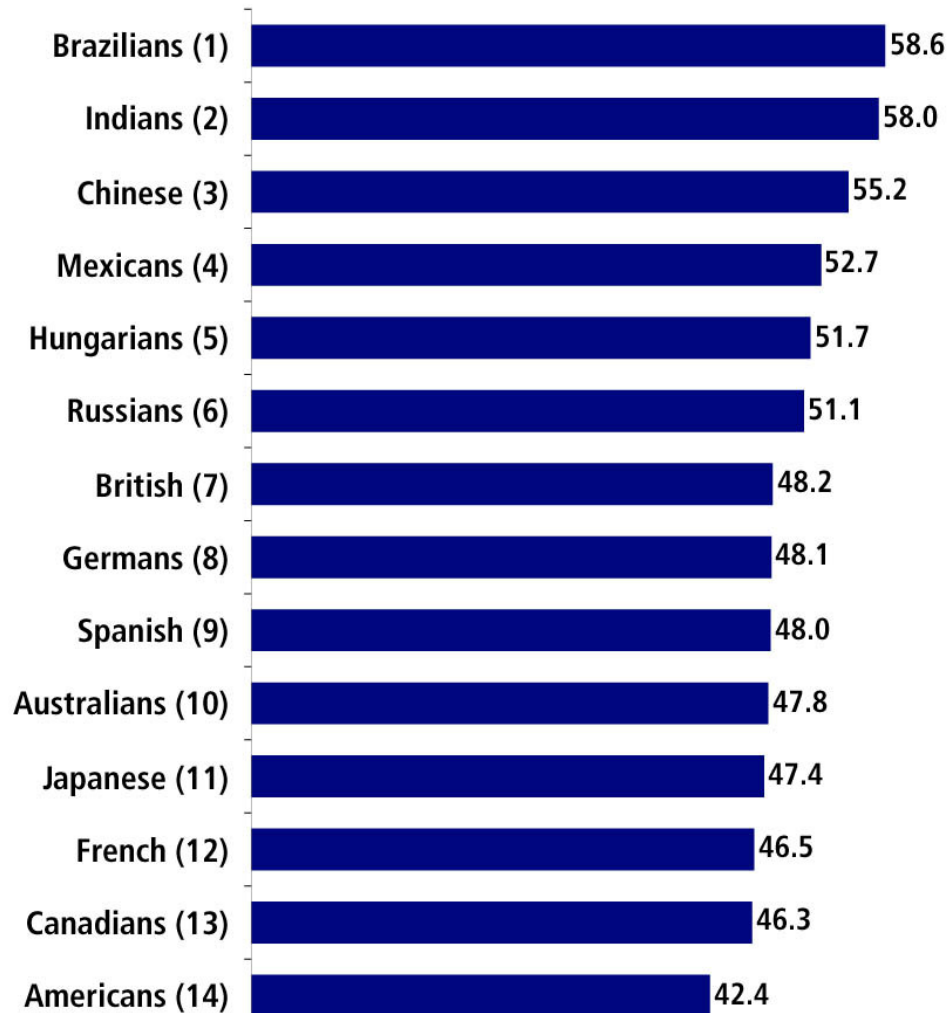
- Each respondent earns a weighted overall score that reflects the environmental impact of their consumption patterns across the four sub-indexes: housing, transportation, food, and goods. The average Greendex score for consumers in each of the 14 countries is shown on the next page.



Consumer Greendex: Overall Rankings



Consumers in...



NGS09_new08_overall

High scores =
more sustainable

Low scores =
less sustainable



Greendex Overall Rankings



- Consumers in Brazil and India achieve the highest Greendex scores for environmentally sustainable consumption (scoring 58.6 and 58.0, respectively).
- Respondents in the USA receive the lowest Greendex scores in total and across three of the four sub-indexes. Neighboring Canada places second last.
- Among developed countries, average consumers in Great Britain, Germany, Spain, and Australia receive the highest (and very similar) scores. French consumers, however, score lowest among Europeans included in the Greendex.
- Generally, the Greendex rankings reflect economic development, GDP per capita and climate; people in less developed countries where individual consumption volumes are lower, and where climate negates the need for energy-intensive home heating receive the highest scores. However, individual consumer choices figure prominently in the Greendex results.

Developed vs. Developing Countries



- While the survey found encouraging signs that individuals in all the surveyed countries feel empowered when it comes to the environment and are taking some action in their daily lives to reduce consumption and waste, it also found that those in developing countries are the most concerned and that the behavior and choices of consumers in developing countries are more environmentally friendly than those in developed countries.
- Regardless of why they behave as they do -- whether it be driven by health concerns, culture, climate, income, environmental concerns, or a conscious decision to be more “green” -- on average, individual consumers in developing countries have less impact on the environment than the average consumer in wealthy countries. From this perspective, it doesn’t matter *why* they behave as they do; all measured behavior has an environmental impact, and consumers anywhere can change many of their behaviors for better or for worse.

Developed vs. Developing Countries



- Consumers in **developing** countries feel more responsible for environmental problems than those in developed countries, and are twice as likely to report that environmental problems are negatively affecting their health. They feel strongest that global warming will worsen their way of life in their lifetime, are the most engaged in talking and listening about the environment, feel the most guilt about their environmental impact and are willing to do the most to minimize it. These consumers are more likely to:
 - Live in smaller residences
 - Prefer green products and own relatively few appliances or expensive electronic devices
 - Walk, cycle, or use public transportation, and choose to live close to their most common destination.

Developed vs. Developing Countries



- By contrast, consumers in **developed** countries, who have more environmentally friendly options to choose from, often don't make those choices.
 - They have larger homes and are more likely to have air-conditioning.
 - They generally own more cars, drive alone most frequently and use public transport infrequently.
 - They are the least likely to report buying environmentally friendly products and avoiding environmentally unfriendly products.
 - U.S. consumers scored worse than those in any other country, developing or developed, on housing, transportation and goods. They are by far the least likely to use public transportation, to walk or bike to their destinations or to eat locally grown foods. They have among the largest average residence size in the survey. Only 15 percent say they minimize their use of fresh water.

How to Raise One's Greendex Score



- Consumers can raise their Greendex scores and adopt more sustainable consumption habits by doing any of the following:
 - Eating less meat, more locally produced foods, more fruits and vegetables, and drinking less bottled water
 - Improving the energy efficiency of their residences by sealing drafts, upgrading windows, installing more efficient water heaters and other appliances, etc.
 - Keeping air heating or cooling at lower settings
 - Using only cold water to wash laundry and minimizing water use overall
 - Driving alone less often (e.g., car pooling)
 - Driving less overall
 - Driving smaller or more fuel-efficient vehicles
 - Having fewer vehicles per household member
 - Walking or riding a bicycle when distance allows

How to Raise One's Greendex Score, continued



- Consumers can raise their Greendex scores and adopt more sustainable consumption habits by doing any of the following:
 - Maximizing the life-span of household items and minimizing disposal
 - Avoiding environmentally harmful products and packaging and seeking out environmentally friendly alternatives
 - Recycling where possible
 - Using re-usable shopping bags rather than accepting new ones
 - Having fewer televisions and personal computers per household member

Drivers of Greendex Scores

Greendex Drivers



- GlobeScan used regression analysis to reveal the beliefs and attitudes that most determine Greendex scores among individual consumers. These beliefs and attitudes can be leveraged to improve Greendex scores and hence promote environmentally sustainable consumption.
- The following slide identifies the most important drivers of consumers' Greendex score, in rank order of importance.
- Sample data from attitudinal questions that were found to be drivers of Greendex scores are also shown.

Greendex Drivers in Rank Order of Importance



- The following beliefs *increase* Greendex scores:

1	Level of overall environmental concern
2	Belief that environmental problems are negatively affecting one's health
3	Support pricing that reflects full product lifecycle costs
4	Having recently learned something that had a major impact on environmental views
5	Belief that global warming will worsen one's way of life in own lifetime
6	Having been encouraged by friends or family to be environmentally responsible
7	Belief that society needs to consume much less for future generations
9	Guilt
11	Perception that government is working hard on the environment

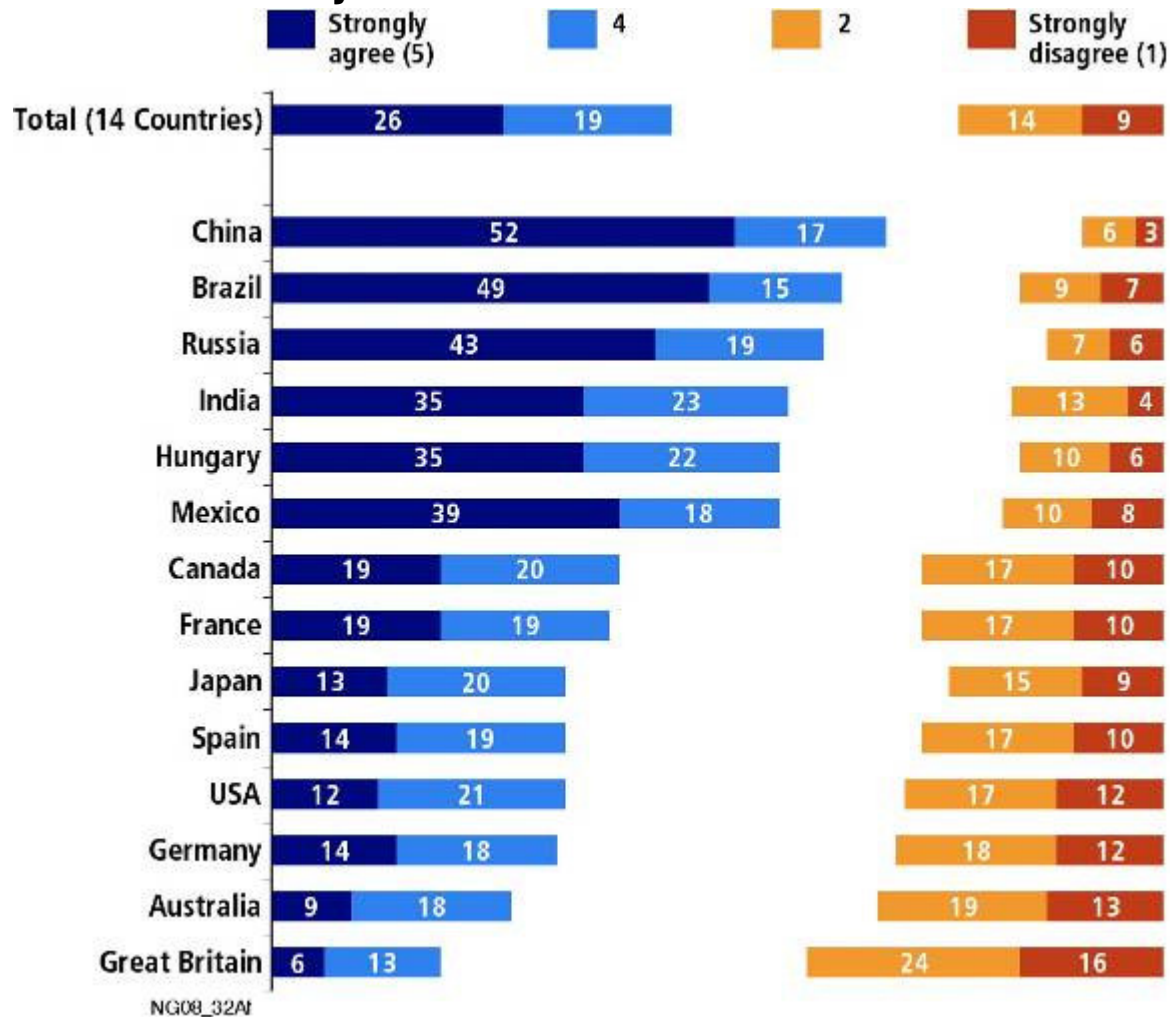
- The following beliefs *decrease* Greendex scores:

8	Belief that green products do not work well
10	Belief that the seriousness of environmental issues is exaggerated
12	Perception that individual action is a waste of time because others won't act in concert
13	Owning a luxury car as an important goal in life

Environmental Problems Are Having A Negative Impact on My Health Today



% By Consumers in Country

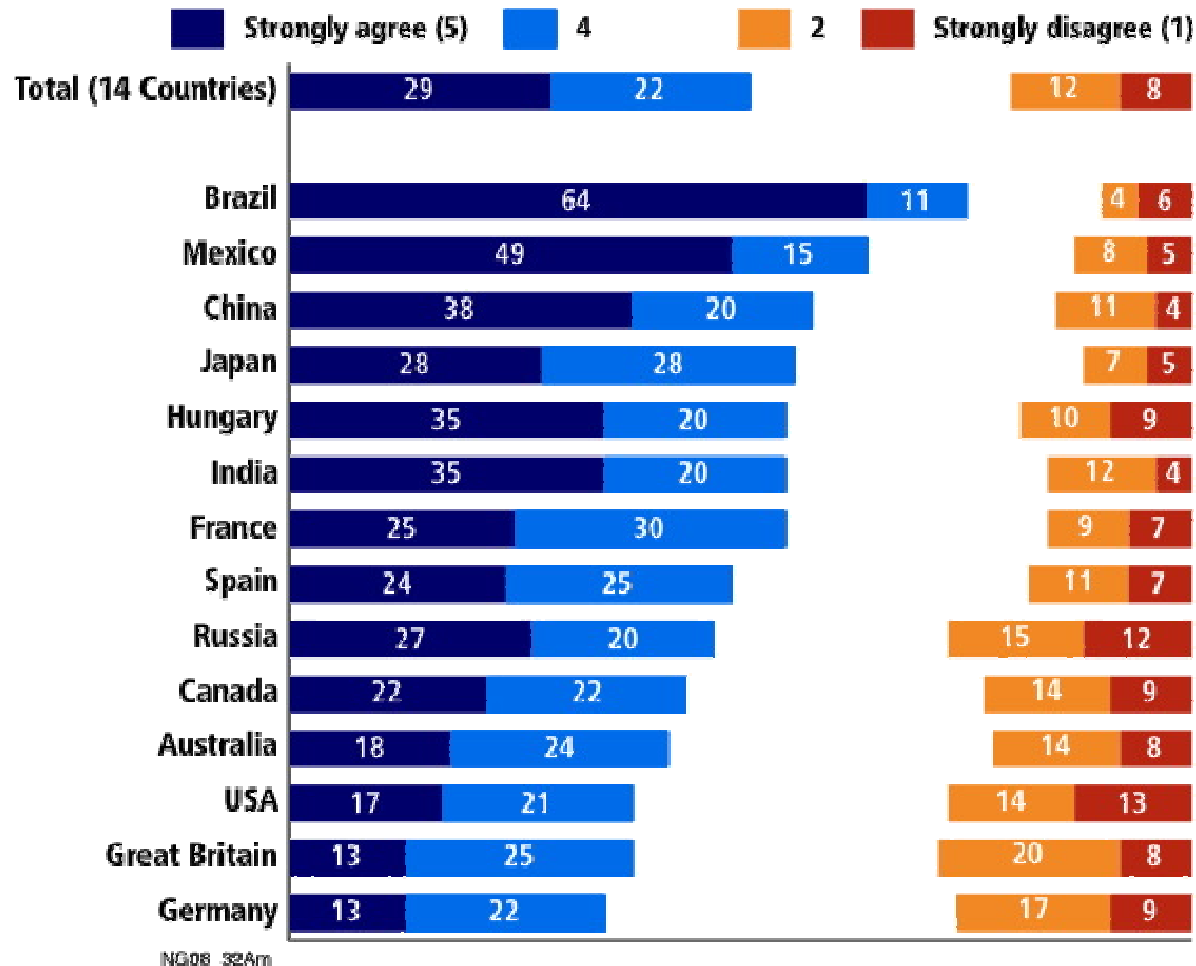


The white space in this chart represents “3” (on a scale of 1 to 5 where 1 means that you “strongly disagree” and 5 means that you “strongly agree” with the statement) and “DK/NA.”

Global Warming Will Worsen My Way of Life within My Own Lifetime



% By Consumers in Each Country



Looking Forward

Looking Forward



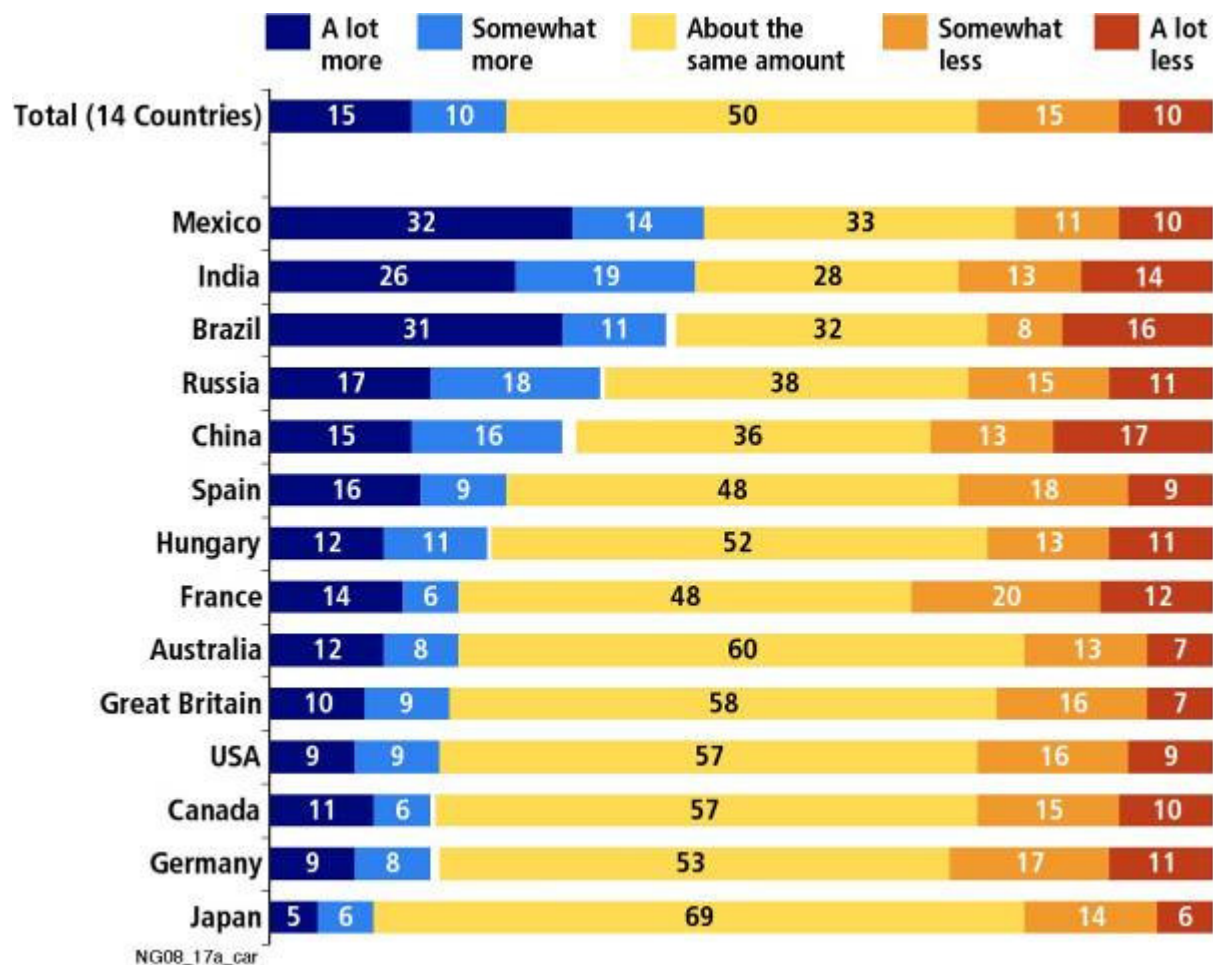
- There are signs that index rankings are set to change as people in developing countries become more economically successful and adopt more consumptive behaviors. In fact, the survey reveals some of these changes are already taking place.
- Findings show that consumers in countries with emerging economies aspire to higher material standards of living and believe people in all countries should have the same living standards as those in the wealthiest countries.



Frequency of Driving Alone in a Car/Truck Compared to One Year Ago



% By Consumers in Country



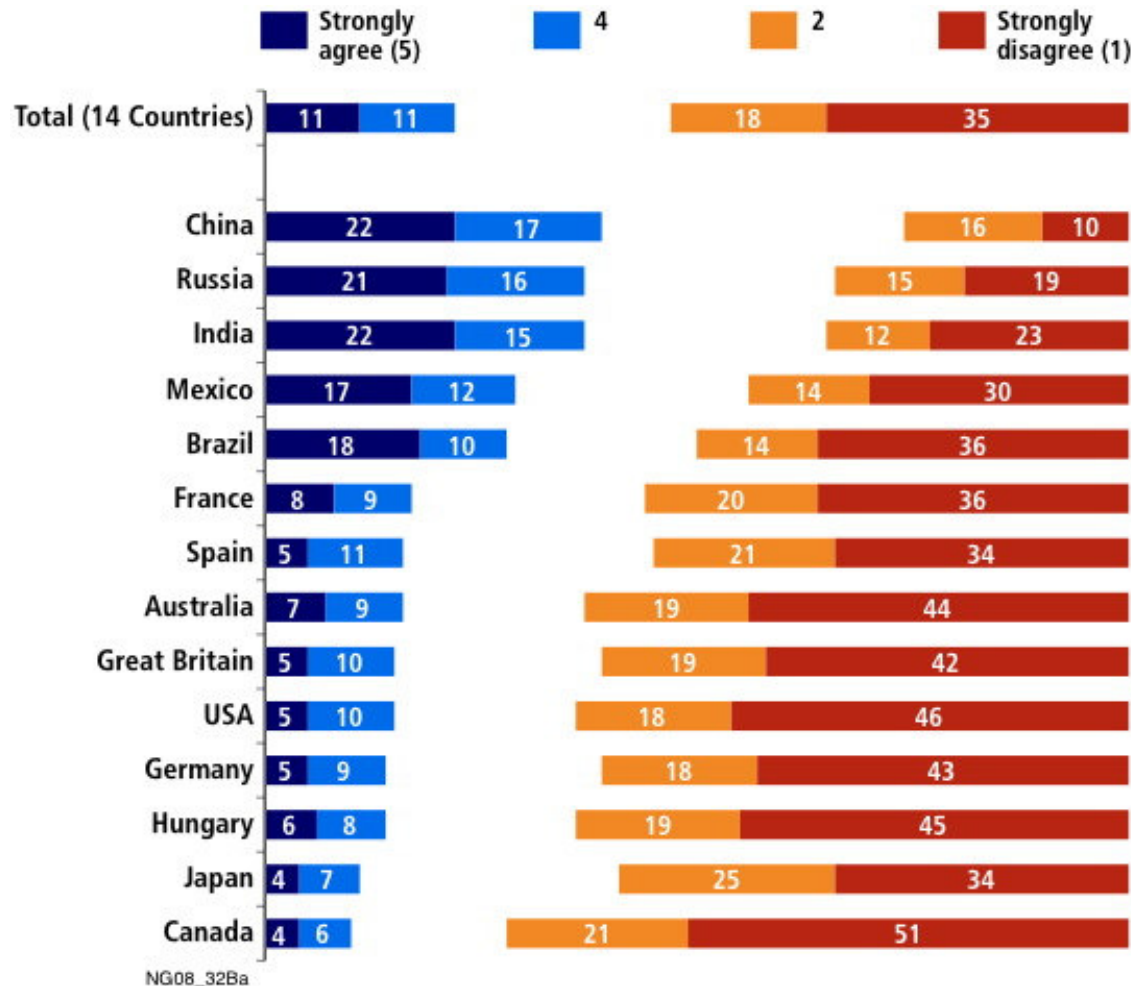
The white space in this chart represents "DK/NA."

Subsample: Those who answered 02-06 in Q16a (i.e. drive alone in car/truck)

Owning A Big House Is A Very Important Goal in My Life



% By Consumers in Country

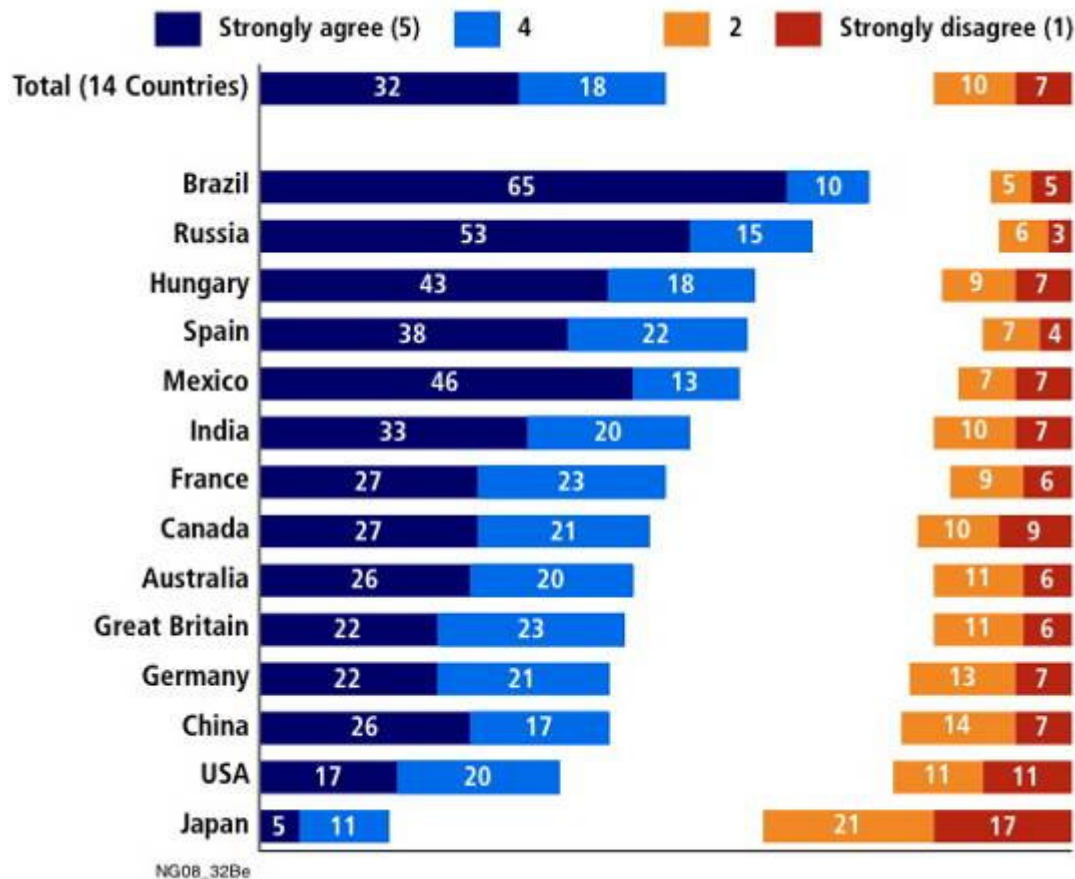


The white space in this chart represents "3" (on a scale of 1 to 5 where 1 means that you "strongly disagree" and 5 means that you "strongly agree" with the statement) and "DK/NA."

People in All Countries Should Have the Same Standard of Living as People in the Most Wealthy Countries



% By Consumers in Country



The white space in this chart represents "3" (on a scale of 1 to 5 where 1 means that you "strongly disagree" and 5 means that you "strongly agree" with the statement) and "DK/NA."

Greendex Conclusions



- There is evidence of emerging environmentalism in developing countries.
- However, this is coupled with emerging consumerism as measured in both recent changes in consumption (e.g., increased ownership and use of cars for transportation) and a desire for a more material standard of living.
- Currently, consumers in developing countries have a more sustainable footprint, but is the rate of growth sustainable?
- Consumers in the United States remain the 'elephant in the room' despite several years of re-engagement on environmental issues.
- As a result of all of these factors, the index rankings are set to change in future waves of this research.
- These results pose a challenge to governments and companies to make more sustainable choices available to consumers, and to consumers to adopt more environmentally friendly behaviors.
- It is important to remember that the volume of consumption is important as well as the type of consumption.
- Economic development is expected, but a desirable standard of living can still be green.

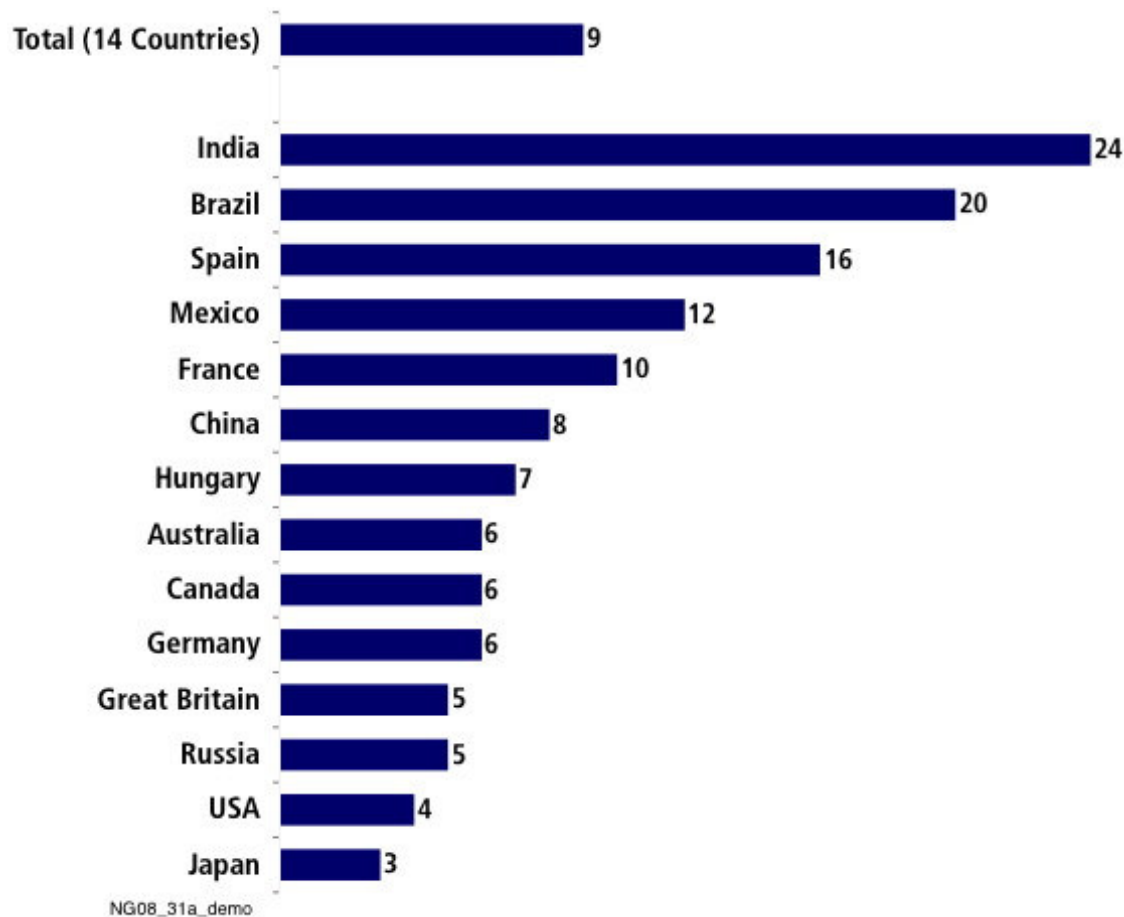
Citizen Behavior

- In addition to answering questions about their behavior as consumers (the inputs to the Greendex scores), survey respondents were asked about their citizen behaviors. These types of behavior include basing one's voting decisions on environmental concerns, attending environmental demonstrations, supporting environmental groups, and so forth.
- Consistent with their high levels of environmental concern, Brazilian and Mexican respondents report frequent to regular environmental behavior and activism. Indian respondents are also more likely than others to have recently attended a demonstration, supported an environmental group, or voiced environmental concern to a company or government.
- Consumers surveyed in China and Russia display more moderate levels of citizen behavior and low levels of activism, reflecting low faith in the value of individual action at least among Russian respondents.
- American respondents, and to a lesser extent Canadians and Europeans, are generally less likely than respondents in emerging economies to engage in activism.

Attended Demonstration/Protest about Environmental/Social Issues



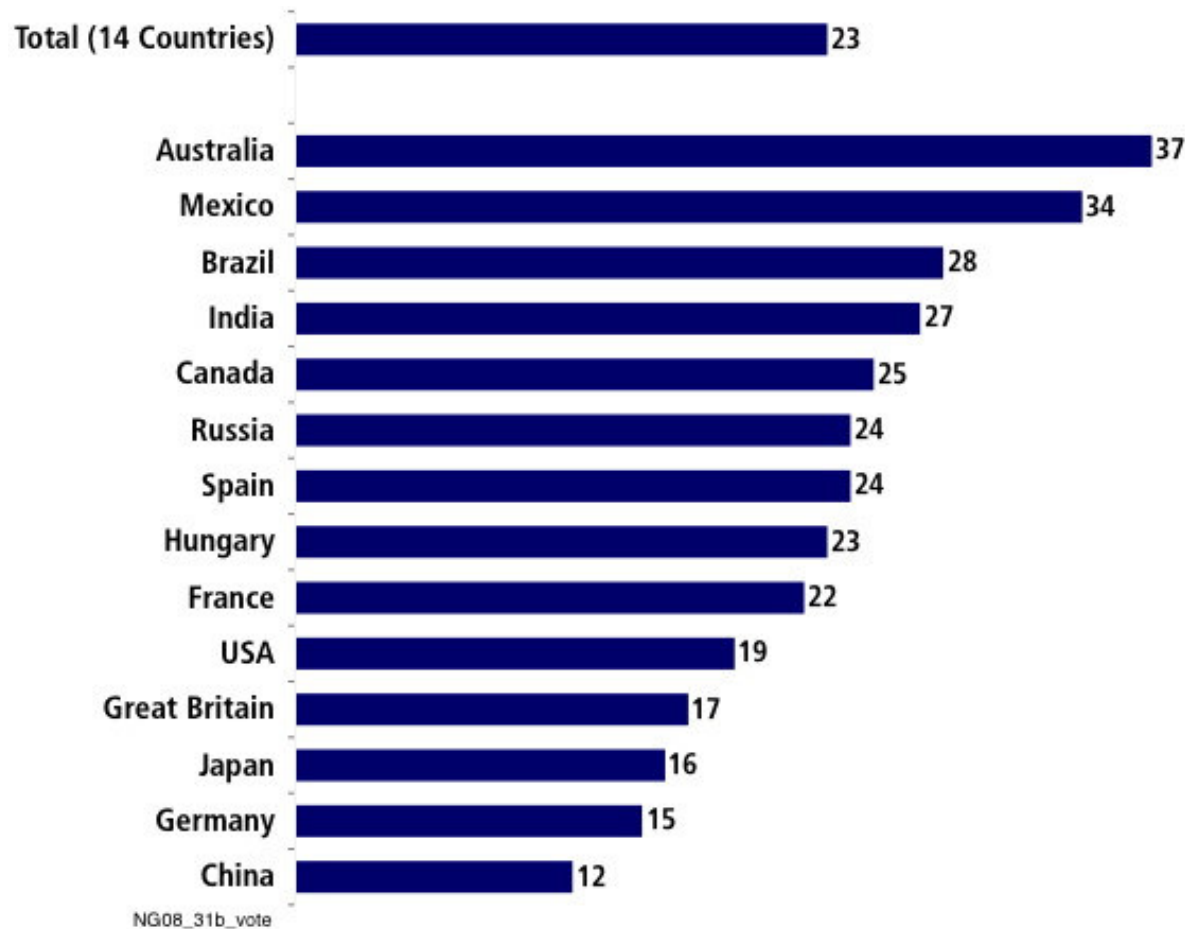
"Yes, have done in past year," by Consumers in Country



Based Voting Decision on Environmental Concerns



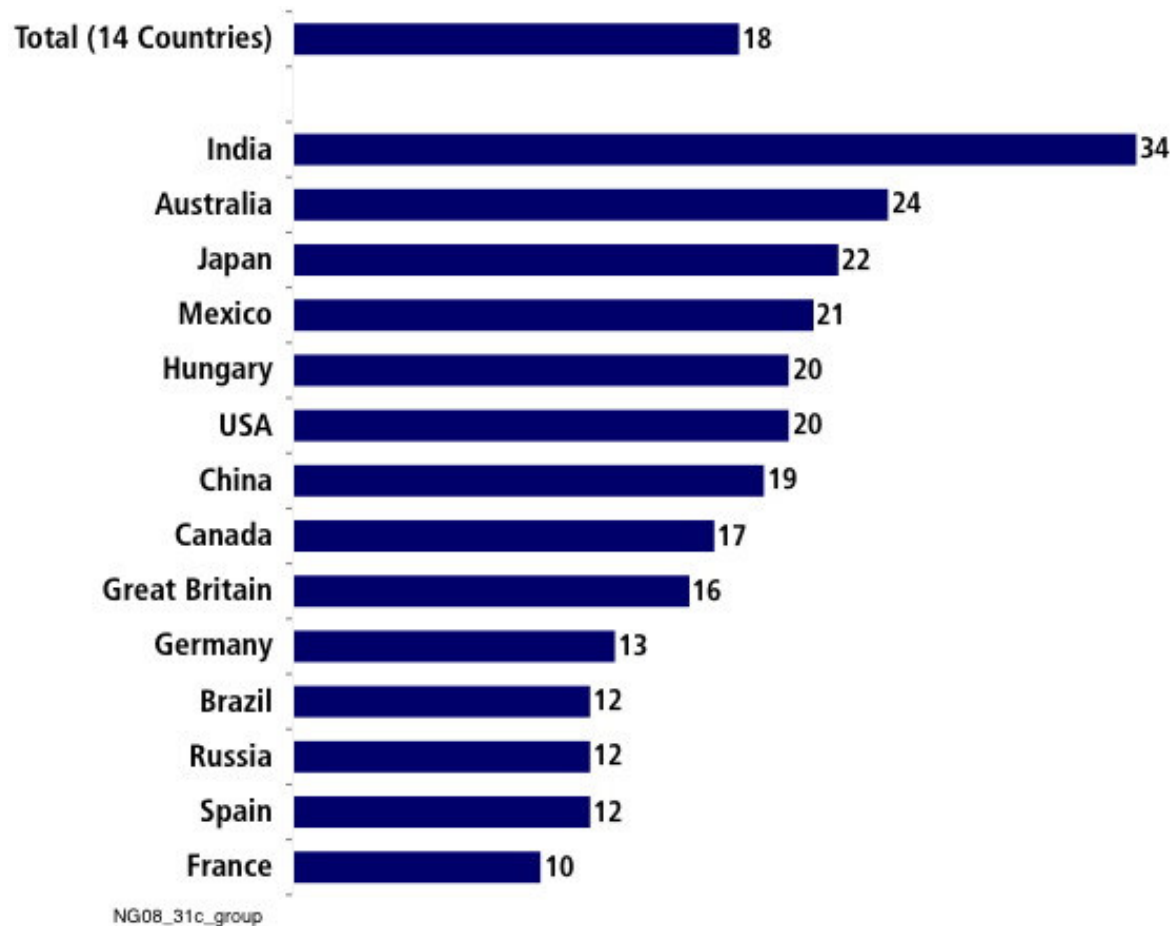
"Yes, have done in past year," by Consumers in Country



Supported Environmental Group by Donating Money / Volunteering



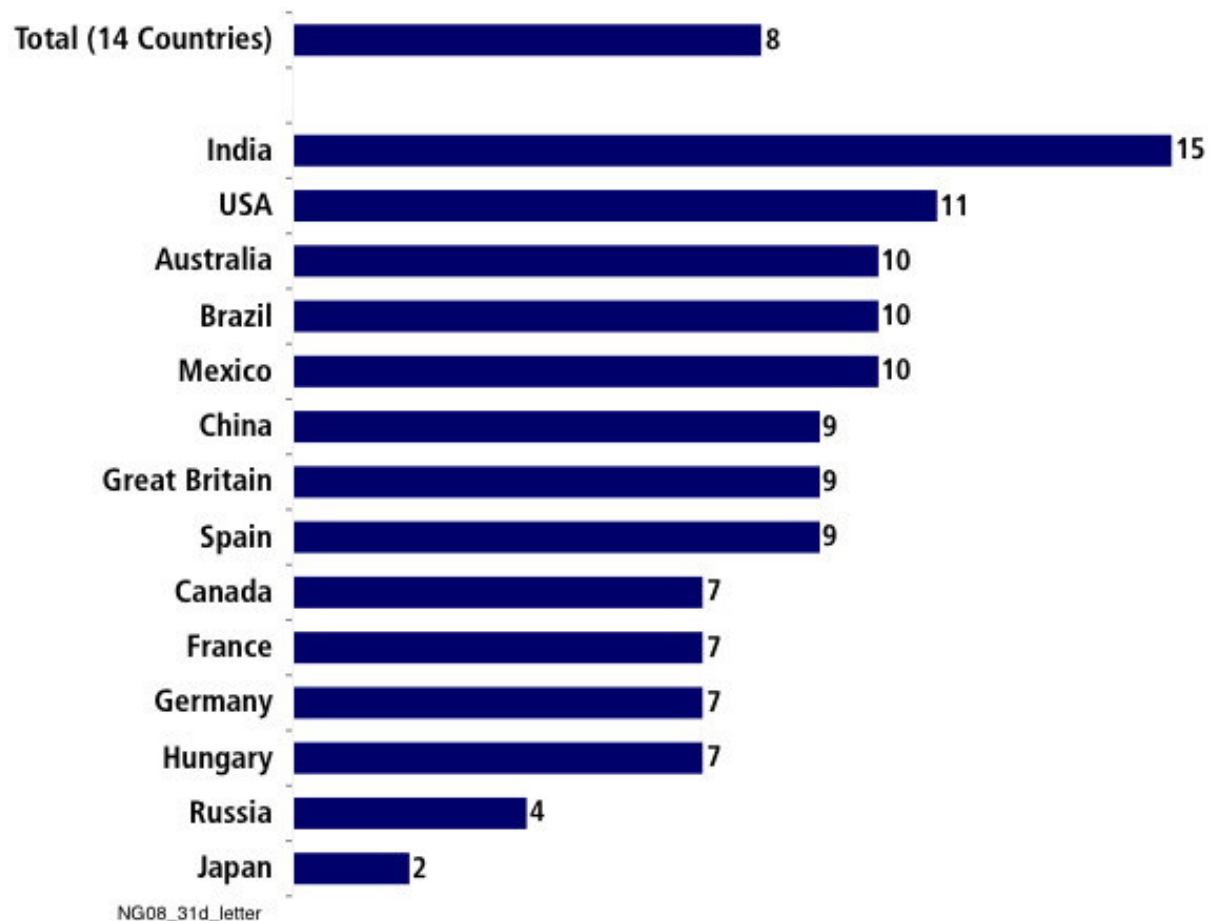
"Yes, have done in past year," by Consumers in Country



Wrote Letter to Company/Government about Environmental Concerns



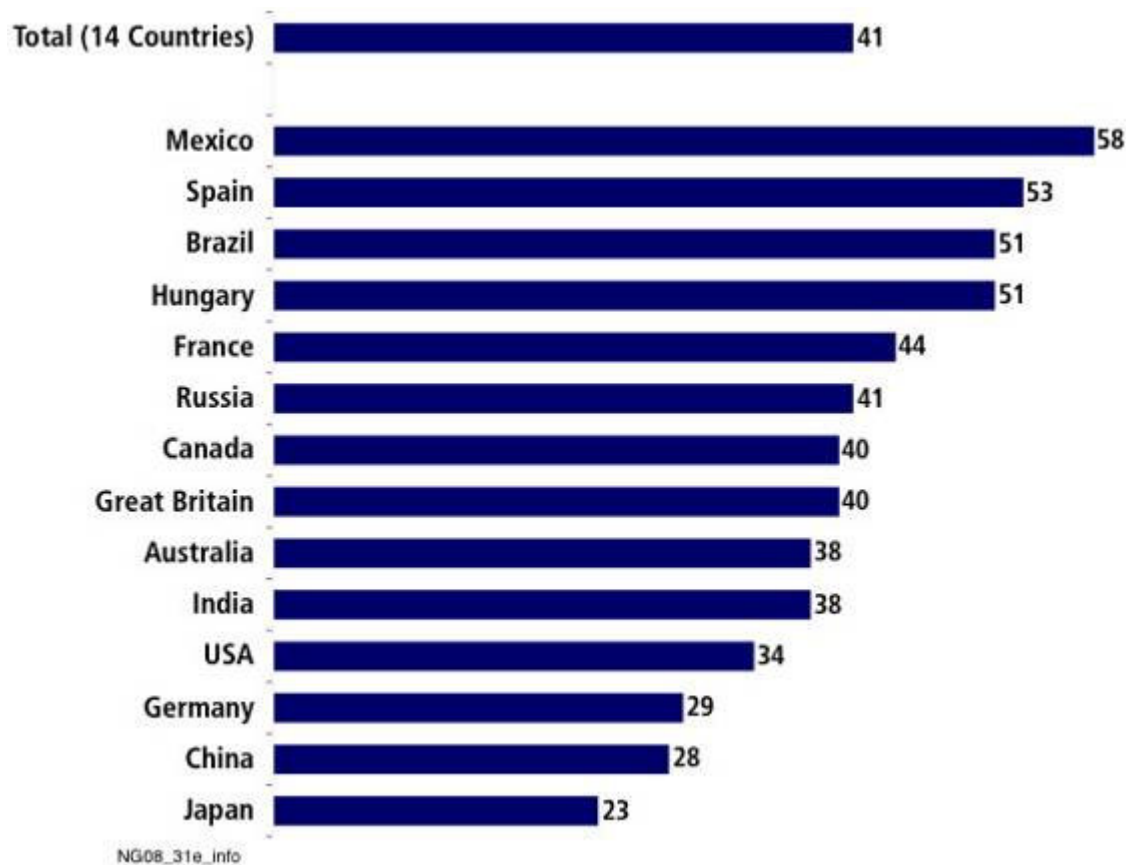
"Yes, have done in past year," by Consumers in Country



Sought Out More Information about Environmental Issues



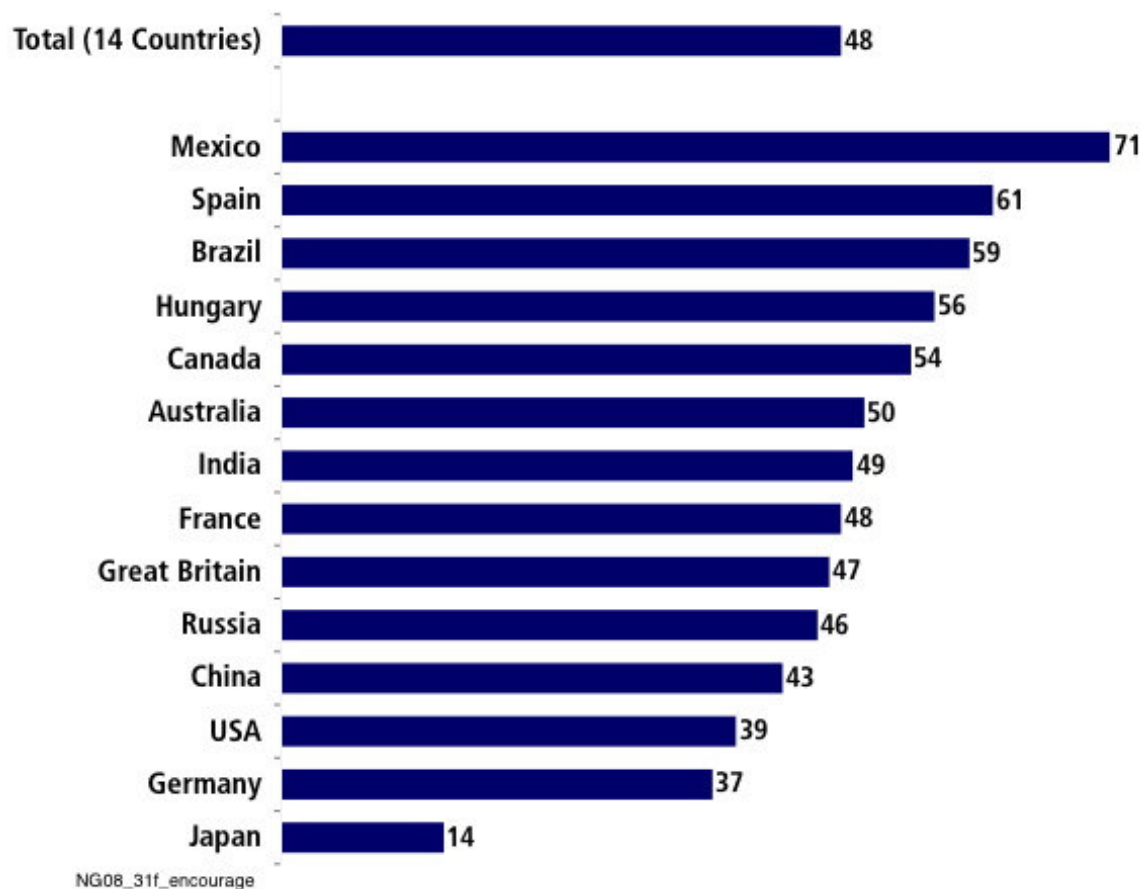
"Yes, have done in past year," by Consumers in Country



Encouraged Others to Be More Environmentally Responsible



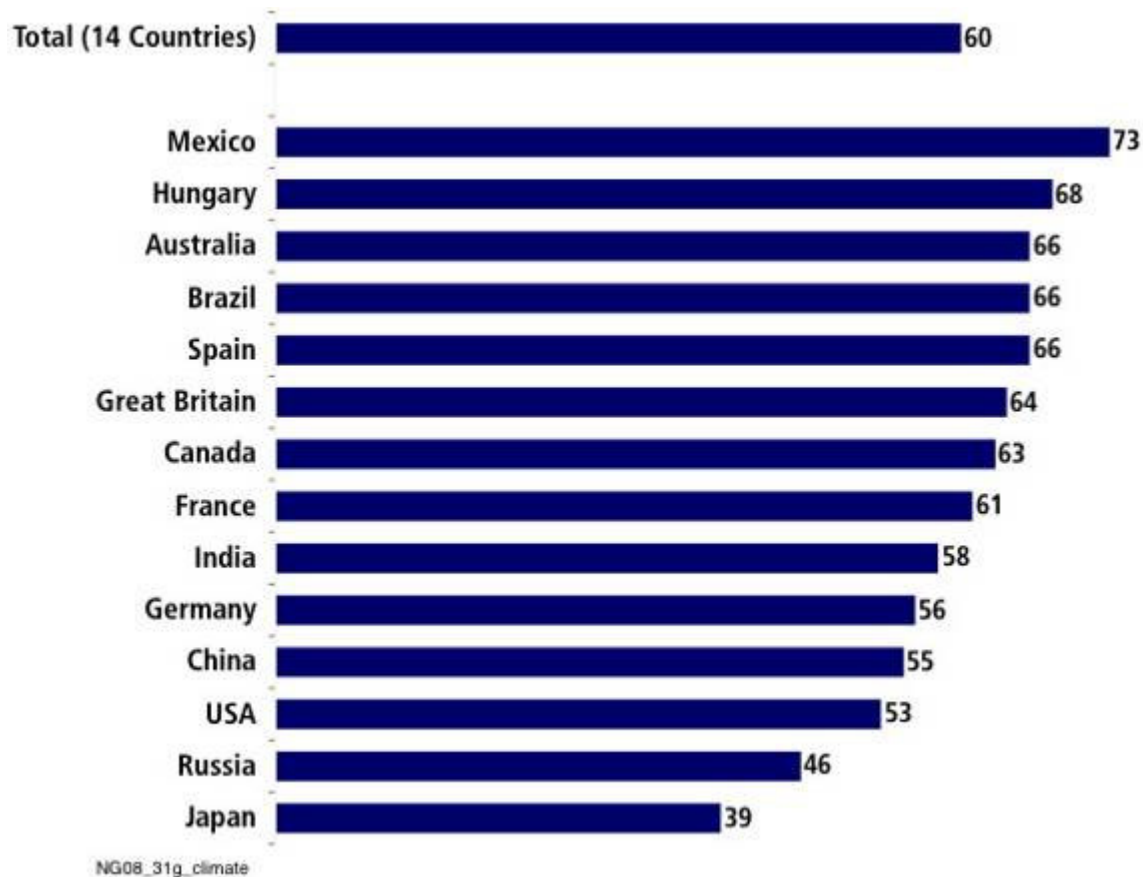
"Yes, have done in past year," by Consumers in Country



Talked about Global Warming / Climate Change with Others



"Yes, have done in past year," by Consumers in Country



Knowledge

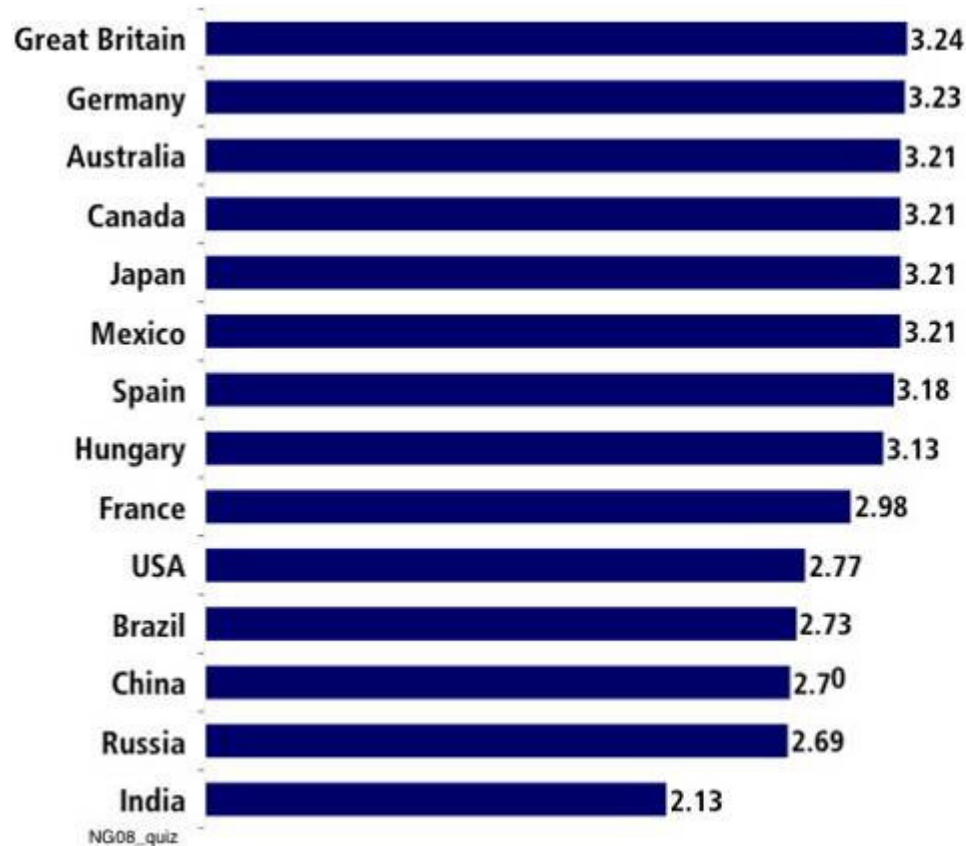
- In the final portion of the survey, respondents were asked to answer a series of questions to assess overall environmental knowledge. Across the 14 countries surveyed, respondents on average answer fewer than half of the questions correctly.
- British respondents, followed by Germans, display the highest average number of total correct answers on the environmental knowledge quiz. Australians, Canadians, Japanese, and Mexicans follow closely behind with roughly the same average number of correct answers among them. Spanish and Hungarian respondents also answer more than half of the six questions right.
- Consumers surveyed in Brazil, China, Russia, and especially in India, demonstrate the lowest average knowledge level. French and American respondents also tend to fail the quiz.

- Slightly more than half of respondents know that increased levels of carbon dioxide gas in the atmosphere is the primary cause of recently measured increases in the Earth's temperature, with the lowest number of correct answers occurring among American and Indian respondents. Brazilian respondents score the second-highest proportion of correct answers to this question (after the Japanese), corresponding to their higher than average concern about climate change.
- Awareness that coal produces the most carbon dioxide among common fuels when burned is lower across all the countries, with Brazilian consumers being much less aware than respondents in other countries. Chinese respondents, who are much more likely than those in other countries to use coal to heat their homes, do tend to give the correct answer. They are also more likely than others to accurately answer a question about projected population increases.

Total Correct Answers on Six-Question Quiz



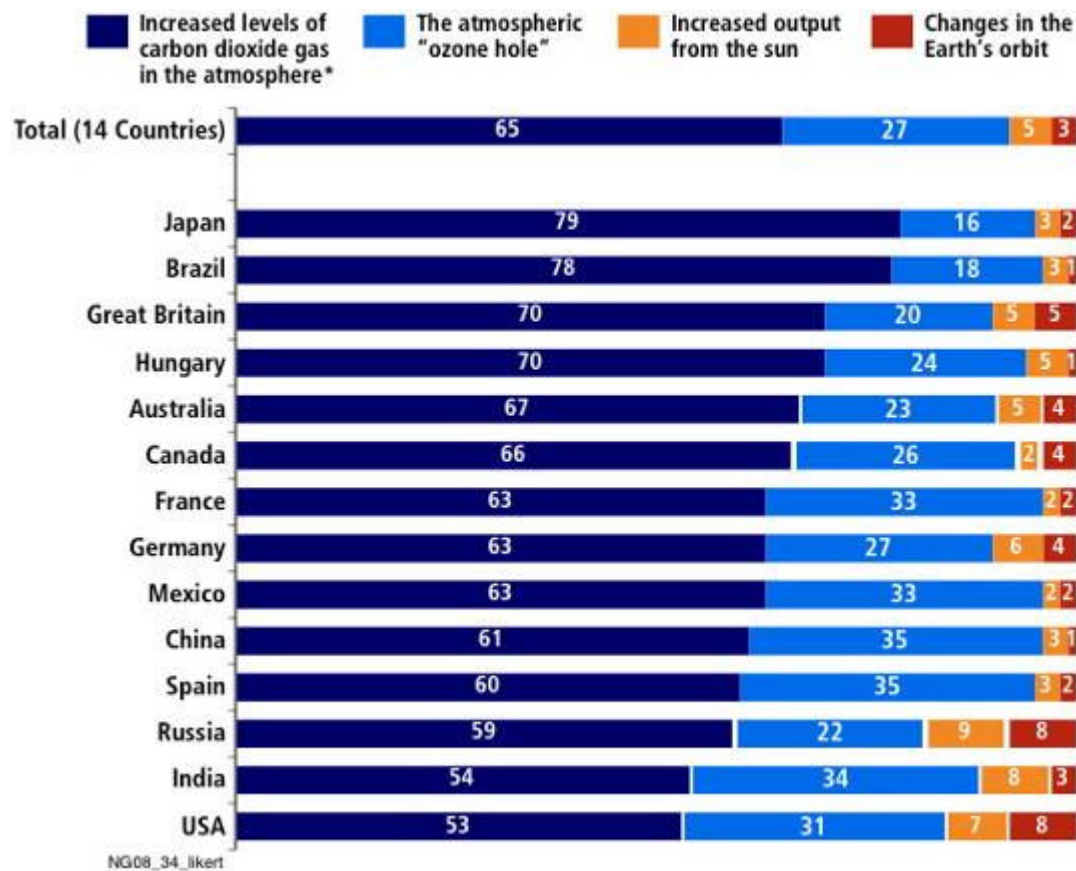
Average Correct Answers, by Consumers in Country



What is the Primary Cause of Recently Measured Increases in Earth's Temperature?



Answers by Consumers in Country



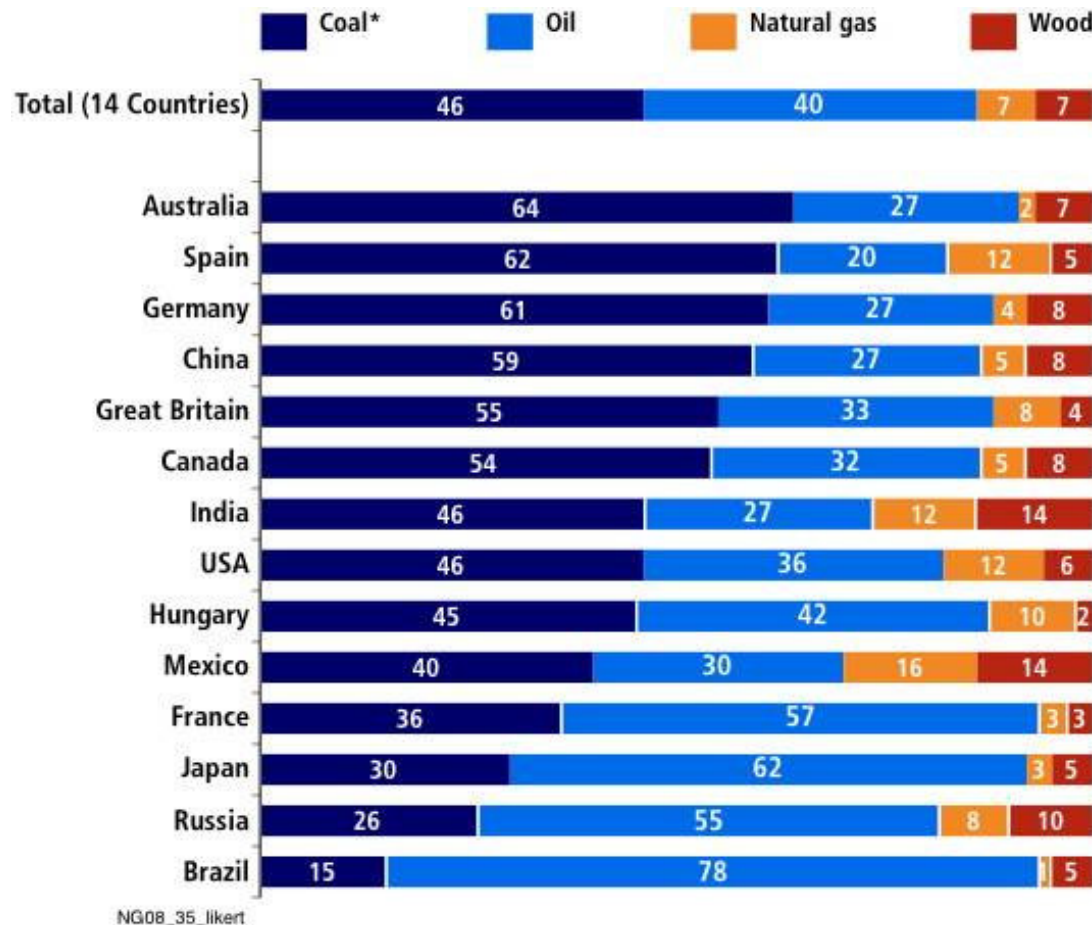
The white space in this chart represents "DK/NA."

*Correct answer

In General, which Fuel Produces the Most Carbon Dioxide Gas when Burned?



Answers by Consumers in Country



NG08_35_likert

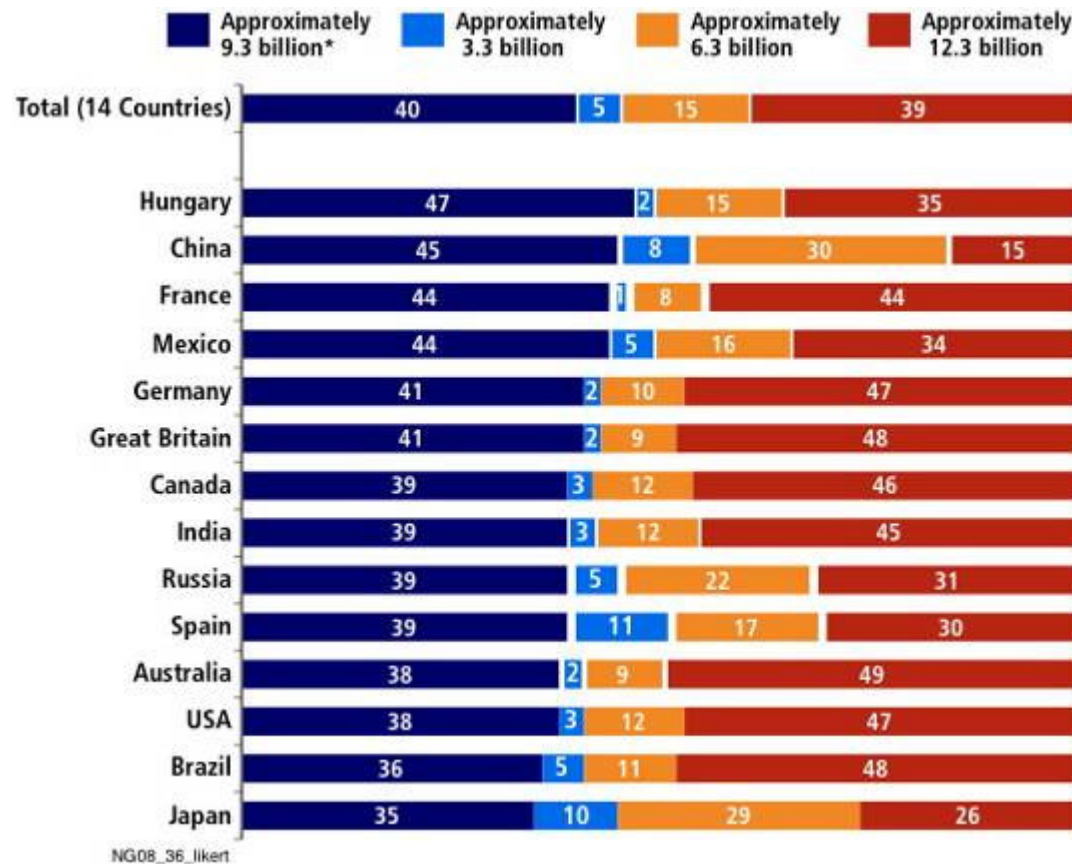
The white space in this chart represents "DK/NA."

*Correct answer

What Is the Projected Population of the Earth in the Year 2050?



Answers by Consumers in Country



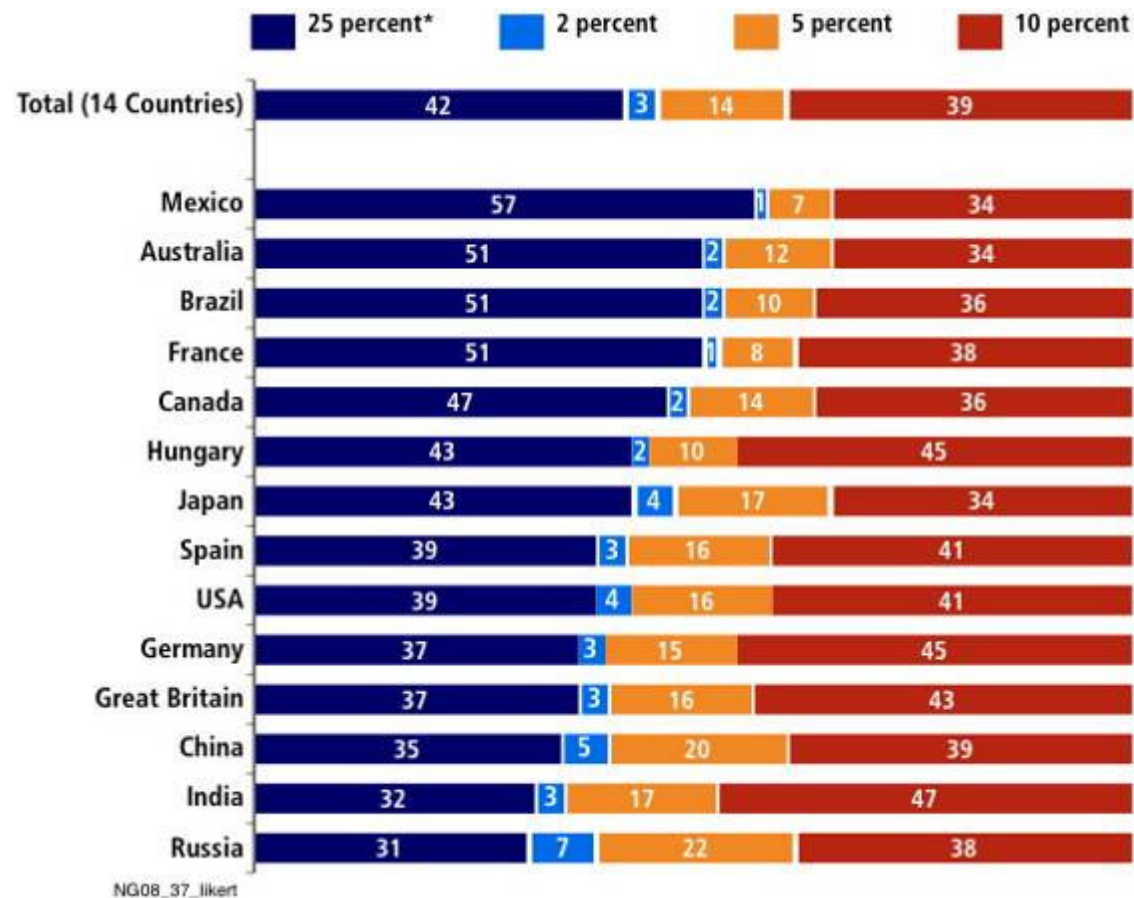
The white space in this chart represents "DK/NA."

*Correct answer

Approximately what Percentage of the World's Mammals Do Experts Believe Are Currently Threatened with Extinction?



Answers by Consumers in Country



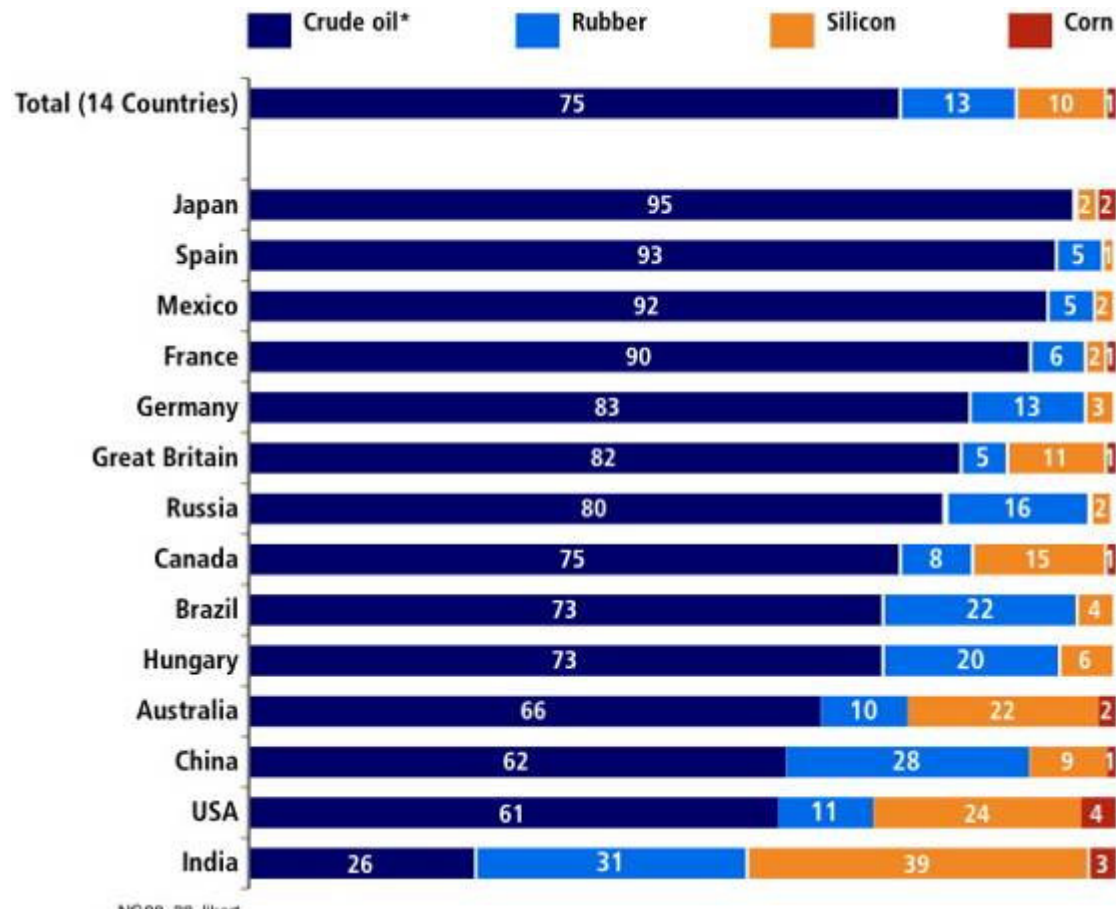
The white space in this chart represents "DK/NA."

*Correct answer

What is Nearly All Plastic Originally Made From?



Answers by Consumers in Country



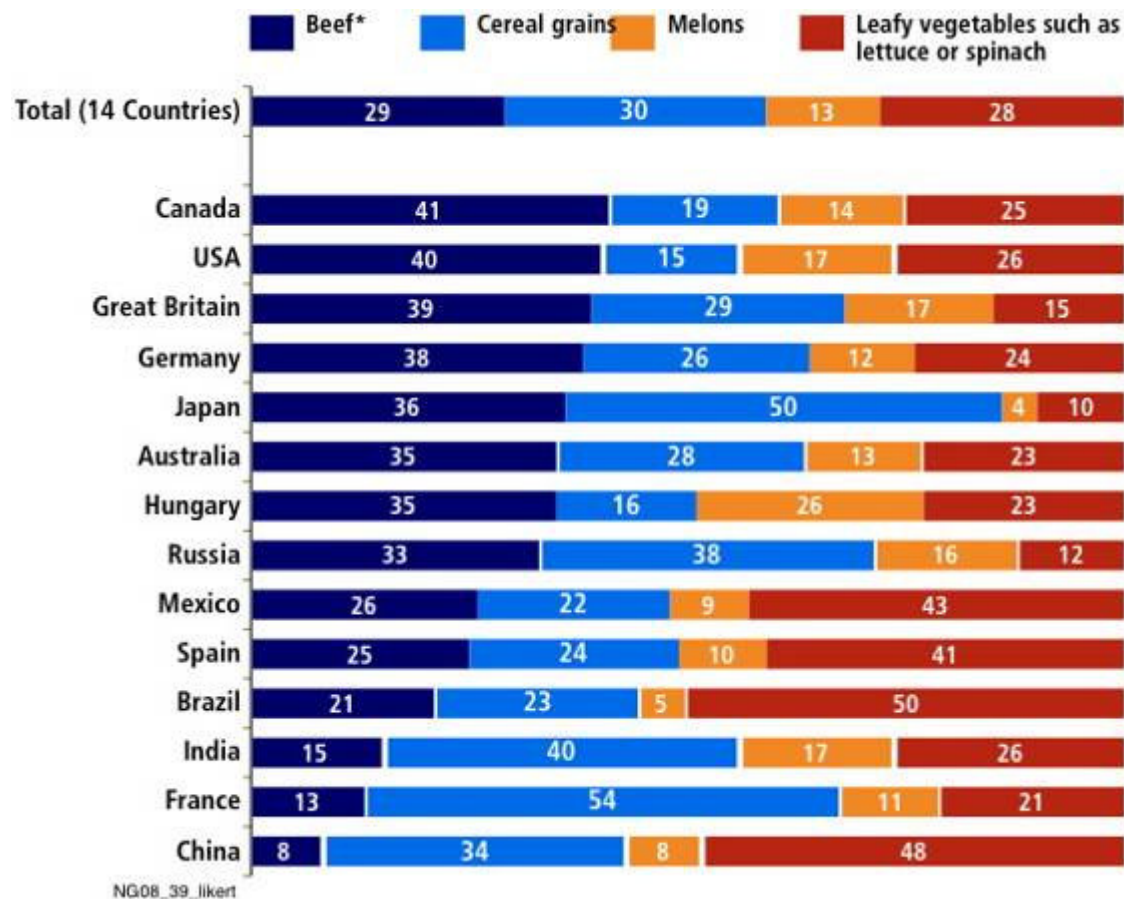
The white space in this chart represents "DK/NA."

*Correct answer

Which One of the Following Foods Requires the Most Water to Grow or Raise for a Typical Serving?



Answers by Consumers in Country



The white space in this chart represents "DK/NA."

*Correct answer

About National Geographic

The National Geographic Society is one of the world's largest nonprofit scientific and educational organizations. Founded in 1888 to "increase and diffuse geographic knowledge," the Society works to inspire people to care about the planet. It reaches more than 300 million people worldwide each month through its official journal, National Geographic, and other magazines; National Geographic Channel; television documentaries; music; radio; films; books; DVDs; maps; school publishing programs; interactive media; and merchandise. National Geographic has funded more than 8,800 scientific research, conservation and exploration projects and supports an education program combating geographic illiteracy. For more information, visit nationalgeographic.com.

About GlobeScan

GlobeScan Incorporated is a global public opinion and stakeholder research consultancy with offices in Toronto, London and Washington. GlobeScan conducts custom research and annual tracking studies on global issues. With a research network spanning 60+ countries, GlobeScan works with global companies, multilateral agencies, national governments and non-government organizations to deliver research-based insights for successful strategies.

Appendix: Quality Assurance

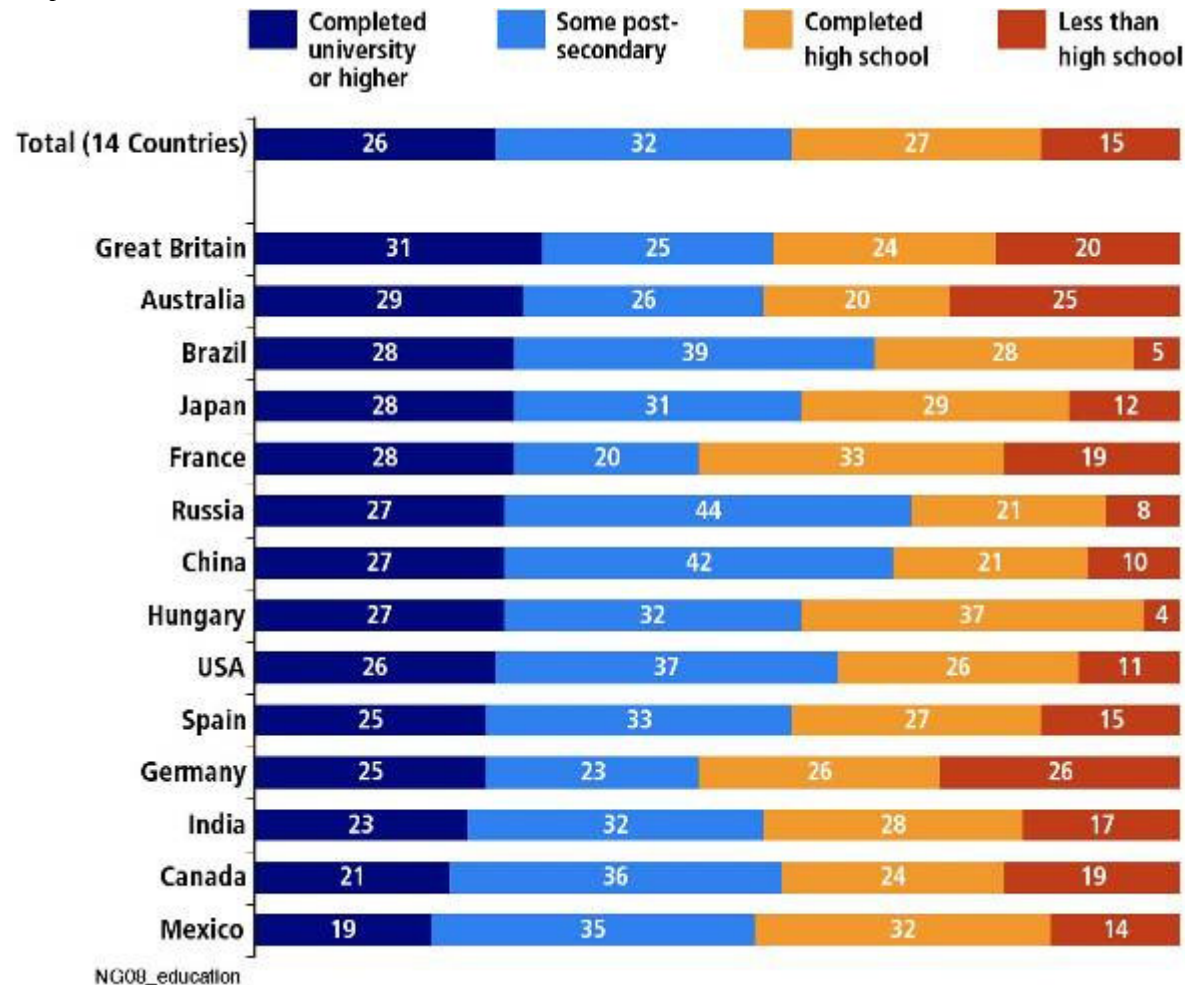


- GlobeScan systematically follows strict research quality management procedures in compliance with its ISO 9001 registration and its ESOMAR membership requirements.
- Among other elements, for this study compliance required rigorous translation, fieldwork and data quality controls.
- Questionnaire translations were conducted by native speakers and then back-translated by additional independent translators.
- Quotas were applied to each country's survey sample and results were weighted according to the latest census data.
- Respondents who completed the questionnaire in unrealistically short times or who illustrated clearly and consistently contradictory response patterns were removed from the database.
- All statements and figures in this report have been fact-checked and proofed by individuals other than the report authors.

Respondent Demographics: Education



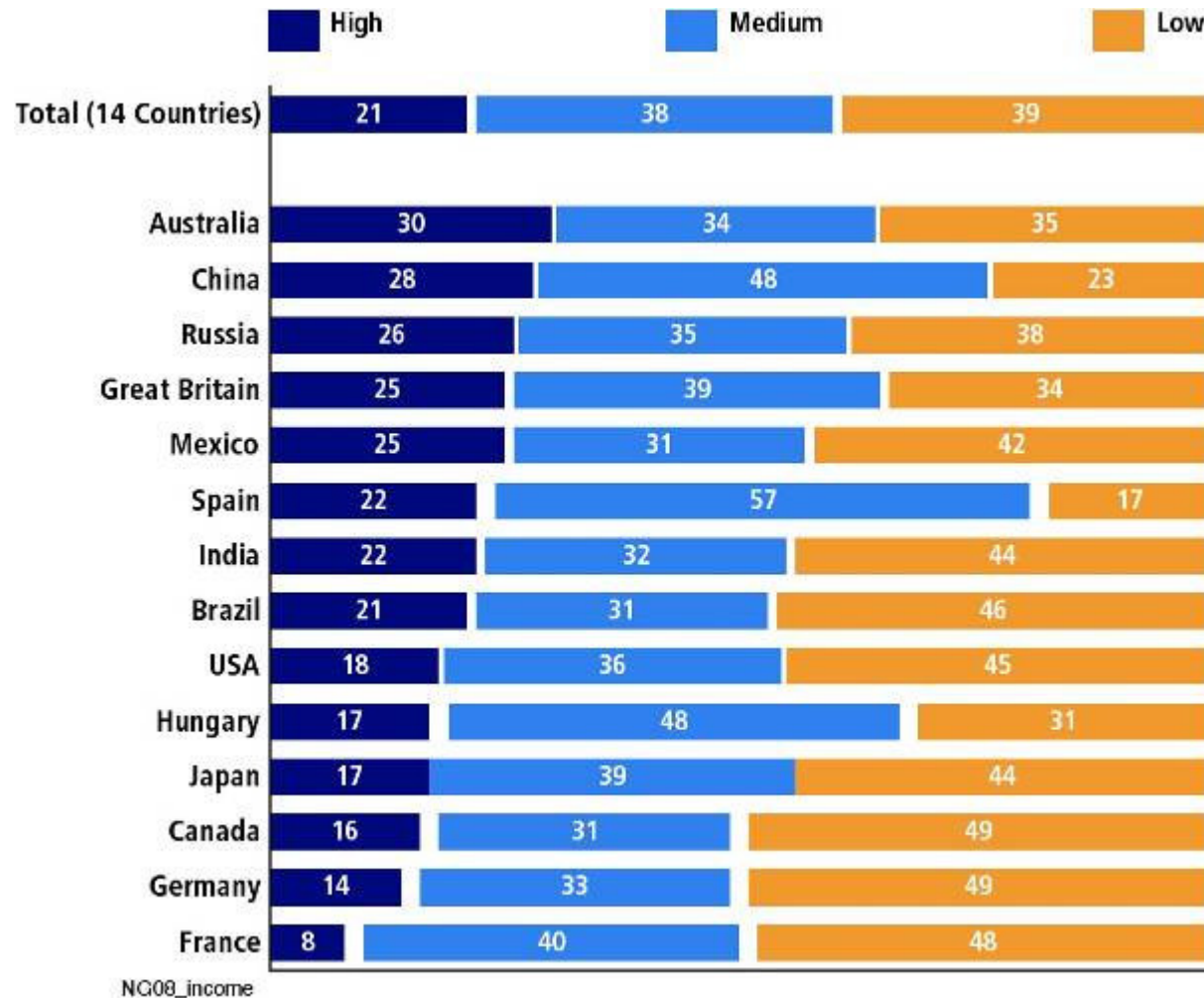
By Country



Respondent Demographics: Income



By Country

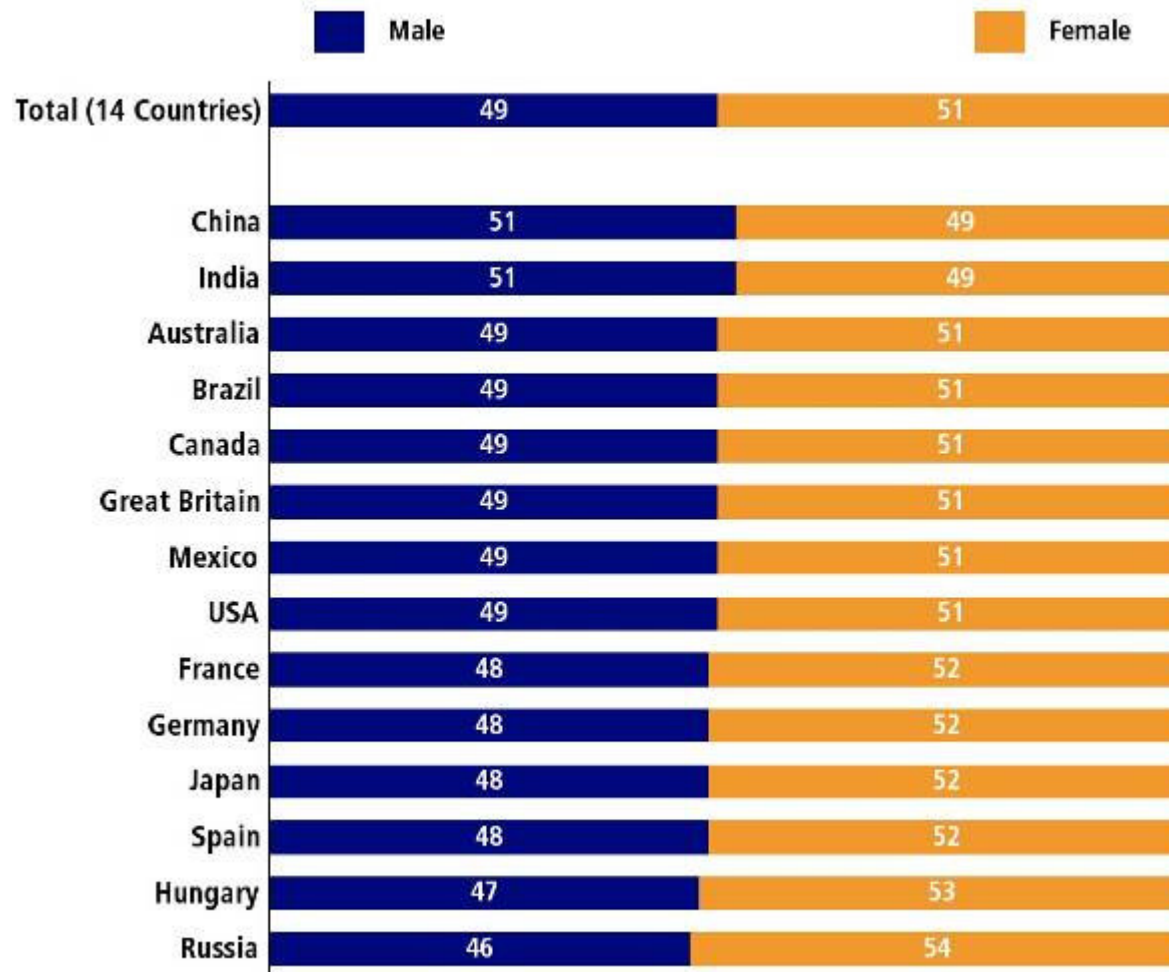


The white space in this chart represents "DK/NA."

Respondent Demographics: Gender



By Country



NG08_gender

Respondent Demographics: Age



By Country

