



# 2024 Public Awareness Research

Presentation to Metropolitan Washington  
Air Quality Committee  
February 26, 2025

**Steve Raabe**  
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# OpinionWorks Credentials

## Long Island Sound Study Partnership

- Perceptions and behavior research

## Chesapeake Bay Program, EPA

- Baywide measurement of stewardship behavior

## *The Baltimore Sun*

- Elections and issues polling since 2007

## The Recycling Partnership

- Creation of national Recycling Confidence Index

## New York State Office of Parks

- Recreational demand survey

## Mid-Atlantic Regional Council on the Ocean/NOAA

- Behavior change related to marine debris

## National Wildlife Federation

- Attitudes about water protection in the Ohio River Basin

## Campaign for Tobacco-Free Kids

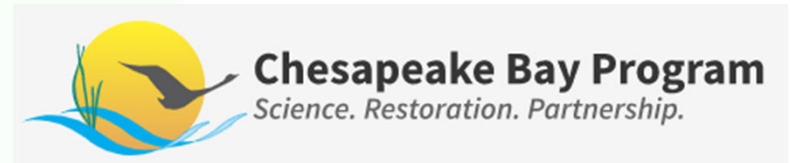
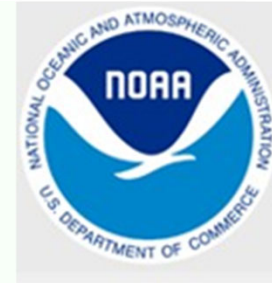
- Public attitudes about banning flavored tobacco products

## Hampton Roads Planning District Commission

- Attitudes and behavior related to recycling

## Johns Hopkins Health System/Horizon Foundation

- Comprehensive public health study in Howard County



# Survey Method

- Broad-based survey sample:
  - 2,434 interviews regionwide
  - Very good ability to segment the data, understand audience segments
  - Representative of region's population
  - $\pm 2.0\%$  sampling error, 95% confidence
  - English and Spanish
- Mixed-mode sampling
  - Online consumer panels
  - USPS mailed survey packet
  - Wireless and landline phone
- Fielded Oct 9 – Nov 11, 2024
- Comparable to Clean Air Partners' past surveys: 2015, 2018, 2021



Please respond in the next 7 days

Please take the survey online today at [www.CleanAirSurvey.org](http://www.CleanAirSurvey.org). Or you can return this survey in the enclosed envelope, postage-paid. Your responses are confidential and will not be tied back to you personally.

1. In what county or independent city do you live? \_\_\_\_\_
2. When you hear the phrase "Code Orange" or "Code Red," what is the first thing you think of? \_\_\_\_\_

Air pollution occurs when the air contains gases, dust, fumes or odor in harmful amounts. That is, amounts which could be harmful to the health or comfort of humans and animals or which could cause damage to plants and materials.

3. On a scale of 1 to 5, where 1 is *not at all a problem* and 5 is *a very big problem*, how much of a problem do you believe air pollution is in the metropolitan area where you live?
  - ☐ 1—not at all a problem    ☐ 2    ☐ 3    ☐ 4    ☐ 5—a very big problem    ☐ Not sure
4. How would you say that air pollution in the metropolitan area where you live has changed over the last five years?
  - ☐ Gotten a lot worse    ☐ Gotten somewhat worse    ☐ Stayed the same    ☐ Improved somewhat    ☐ Improved a lot    ☐ Not sure
5. How strongly do you agree or disagree with this statement? Air pollution affects the quality of life of my family.
  - ☐ Strongly disagree    ☐ Somewhat disagree    ☐ Neither agree nor disagree    ☐ Somewhat agree    ☐ Strongly agree    ☐ Not sure
6. How strongly do you agree or disagree with this statement? I can make a difference in improving air quality.
  - ☐ Strongly disagree    ☐ Somewhat disagree    ☐ Neither agree nor disagree    ☐ Somewhat agree    ☐ Strongly agree    ☐ Not sure
7. Which of these best describes you? (Please choose just one)
  - ☐ I own a motor vehicle    ☐ When I drive, I use a vehicle that belongs to someone else    ☐ I rarely or never drive
  - ☐ Other: \_\_\_\_\_    ☐ Not sure
8. Does your home have a grass lawn that you are responsible for maintaining?    ☐ Yes    ☐ No    ☐ Not sure
9. Which one of these best describes your home?
  - ☐ Single-family detached    ☐ Townhouse, duplex, or rowhouse
  - ☐ Apartment or condo    ☐ Other: \_\_\_\_\_
  - ☐ Not sure/ Prefer not to say

Q10 has two parts:

| Part 1—<br>Mark any you are<br>willing to do: | Part 2—<br>Mark any<br>you have done: |
|---|---------------------------------------|
| Willing to Do                                 | Have Done                             |
| <input type="radio"/>                         | <input type="radio"/>                 |
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| <input type="radio"/>                         | <input type="radio"/>                 |
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| <input type="radio"/>                         | <input type="radio"/>                 |

10. Which of the following behaviors are you *willing to do* to reduce air pollution? Please also indicate if you *have done it* to reduce air pollution.
  - A. Use electric lawn mowers/equipment instead of gas-powered equipment
  - B. Ensure regular maintenance of your motor vehicle.
  - C. Carpool, vanpool, take public transit, or bike instead of driving alone
  - D. Use a gas or electric grill instead of charcoal
  - E. Use only non-aerosol household products and cleaning solutions that are safer for the air
  - F. Limit pesticide use
  - G. Refuel your motor vehicles after dusk
  - H. Plant a tree to help improve the air
  - I. Switch to a higher-mileage vehicle or a hybrid or electric vehicle
  - J. Add solar panels to your home, or sign up to buy your electricity from a community solar farm
  - K. Conserve energy at home by turning off lights and electronics when not in use and adjusting your thermostat.
  - L. Avoid mowing on days with poor air quality.
  - M. What else are you willing to do or have done?

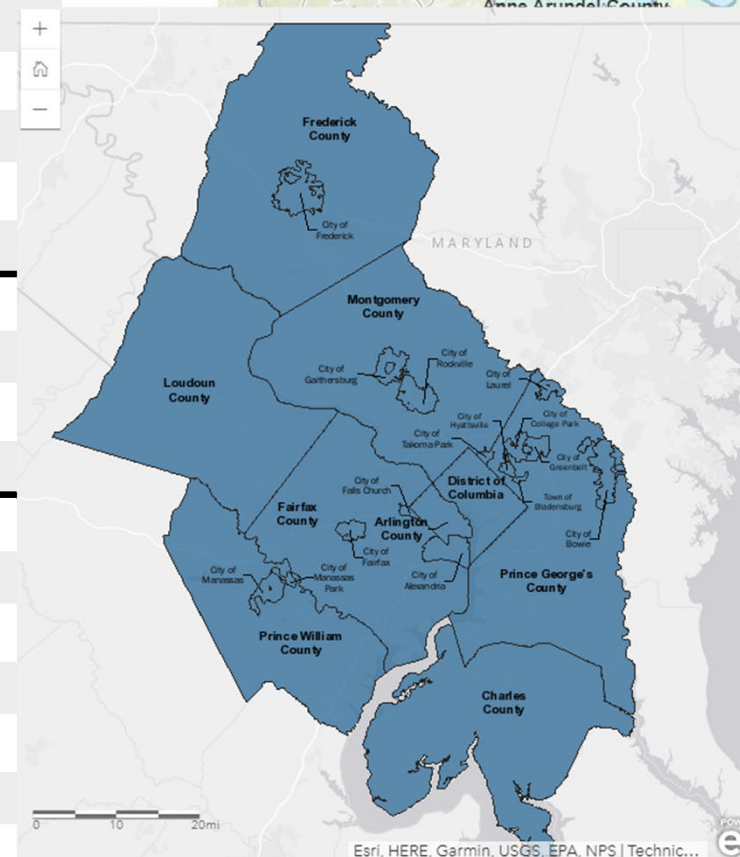
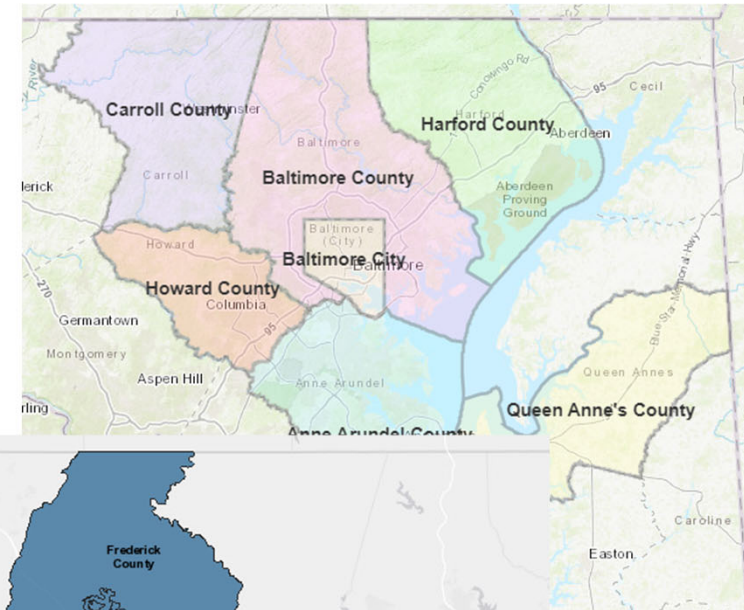
The Air Quality Index, also known as the AQI, uses a color code system.

11. Over the last few months, have you heard or seen any color codes used to refer to the air quality?
  - ☐ Yes    ☐ No    ☐ Don't know
12. What air quality codes did you hear or see in the last few months?
  - ☐ Green    ☐ Yellow    ☐ Orange    ☐ Red    ☐ Purple    ☐ None of these/ Not sure
13. If you hear "Code Orange" or "Code Red" do you take any actions? If so, what do you do differently?



# Survey Sample Composition

|                                |     |
|--------------------------------|-----|
| Under age 25                   | 11% |
| 20 to 34                       | 18% |
| 35 to 44                       | 18% |
| 45 to 54                       | 17% |
| 55 to 64                       | 16% |
| 65 or more                     | 19% |
| Prefer not to say              | 2%  |
| Caucasian or White             | 52% |
| African-American or Black      | 27% |
| Hispanic or Latino             | 12% |
| Asian                          | 10% |
| All other ethnicities or races | 4%  |
| Prefer not to say or not sure  | 3%  |
| Male                           | 48% |
| Female                         | 50% |
| Another gender category        | *0% |
| Prefer not to say              | 1%  |
| Less than \$25,000             | 15% |
| \$25,000 to \$49,999           | 17% |
| \$50,000 to \$74,999           | 20% |
| \$75,000 to \$99,999           | 13% |
| \$100,000 to \$149,999         | 14% |
| \$150,000 and over             | 14% |
| Prefer not to say or not sure  | 7%  |



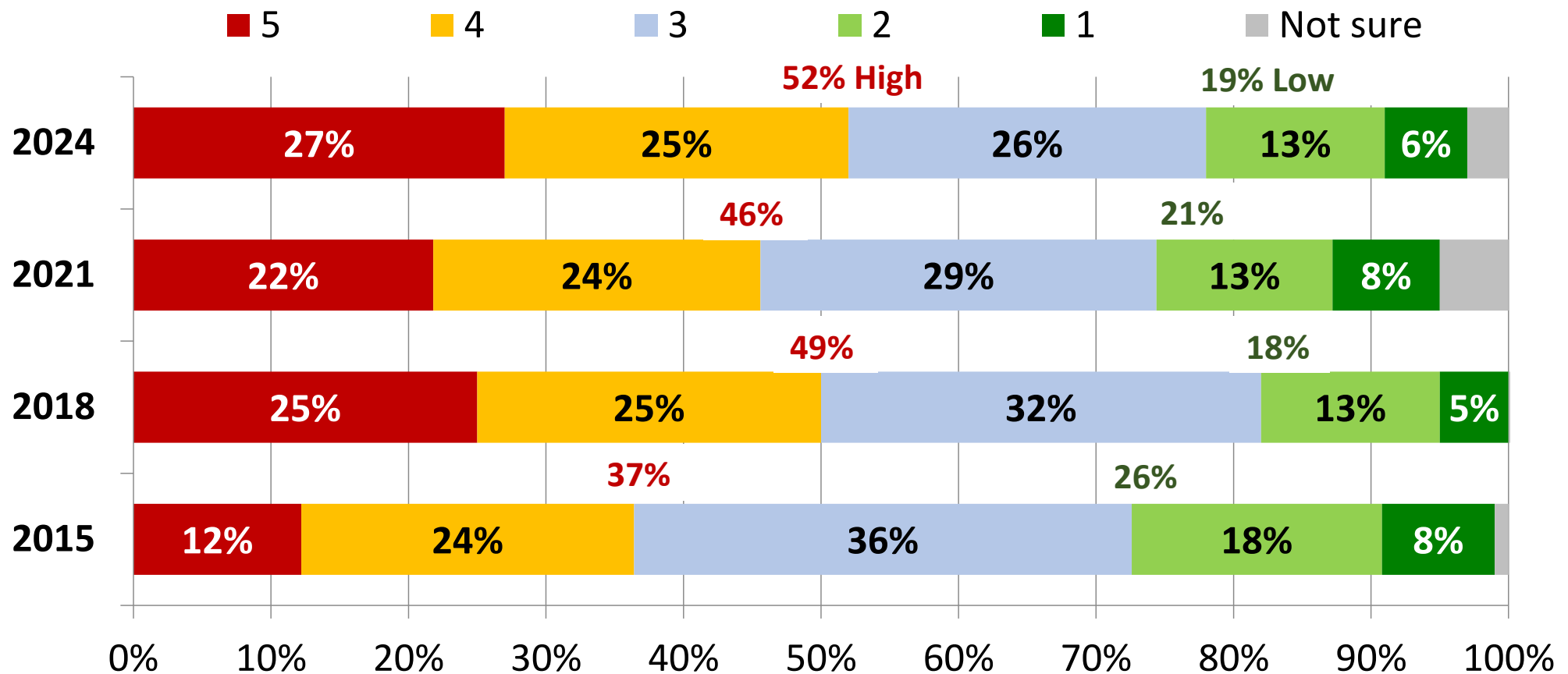
# In-Depth Interviews

- 45-minute virtual interviews
  - Perceptions of air quality
  - Sense of personal agency, effectiveness
  - Behaviors: Barriers & Motivators
- 15 participants
  - Selected from the survey sample
  - Perceptions we wanted to understand
  - Gap between intention and adoption of behaviors
  - Broad representation by geography, socio-economics, demography
- 3 professional interviewers
- Conducted Dec 29 – Jan 9



# **Impressions of Air Quality**

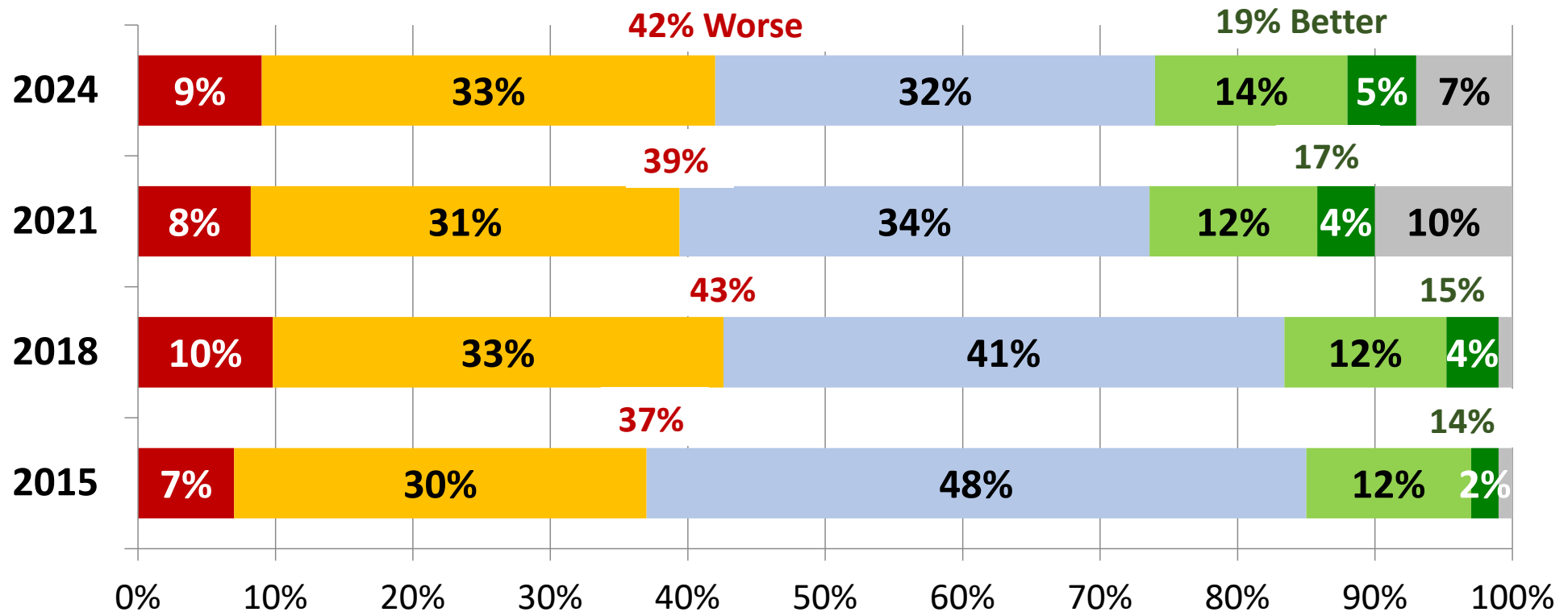
# Problem of Air Pollution



2. On a scale of 1 to 5, where 1 is not at all a problem and 5 is a very big problem, how much of a problem do you believe air pollution is in the metropolitan area where you live?

# Perception of Trend in Air Pollution

■ Gotten a lot worse ■ Gotten somewhat worse ■ Stayed the same ■ Improved somewhat ■ Improved a lot ■ Not sure



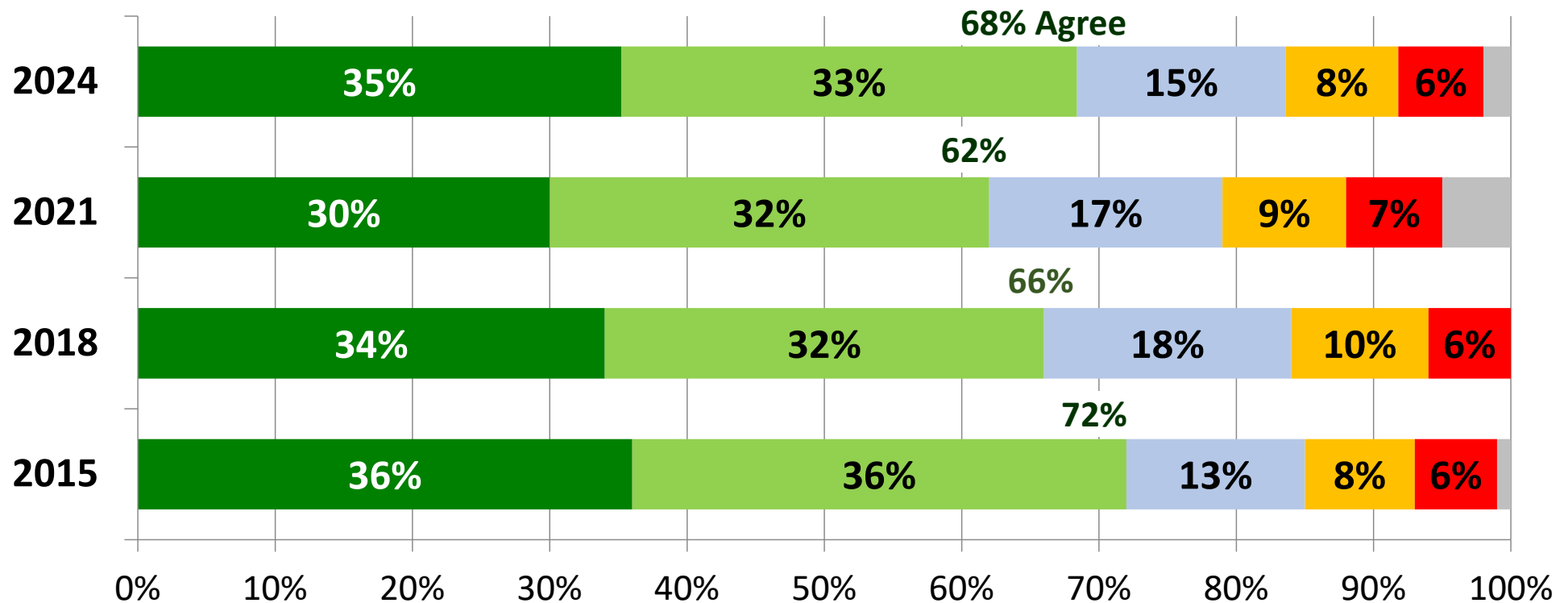
**By 2-to-1, people perceive a worsening.  
After improvement in 2021, a return to 2018 levels.  
But the number saying “better” is inching upward.**

3. How would you say that air pollution in the metropolitan area where you live has changed over the last five years?



# Air pollution affects the quality of life of my family.

Strongly agree   Somewhat agree   Neither agree nor disagree   Somewhat disagree   Strongly disagree   Not sure



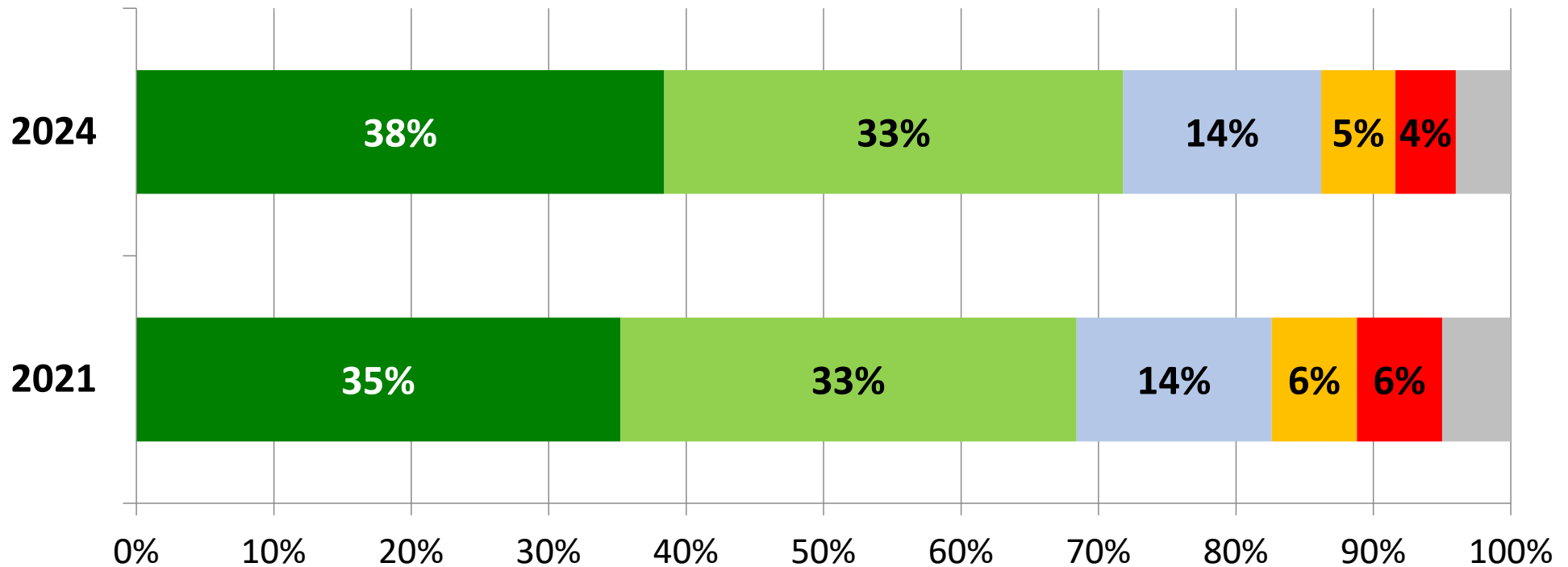
4. How strongly do you agree or disagree with this statement?

Air pollution affects the quality of life of my family.

# **Inequitable Impacts**

# Air pollution impacts some groups of people more than others.

Strongly agree   Somewhat agree   Neither agree nor disagree   Somewhat disagree   Strongly disagree   Not sure

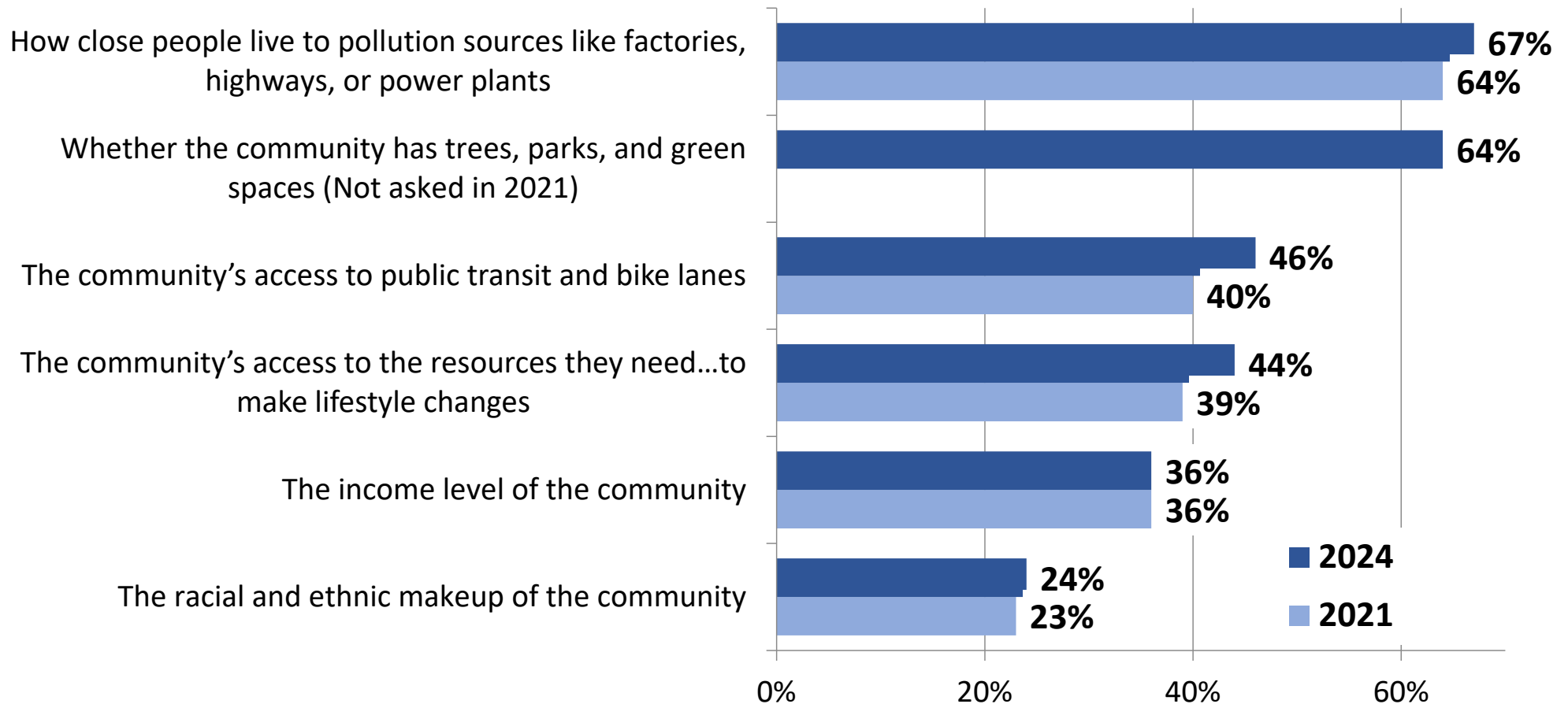


**Widespread awareness of unequal impacts.**

12. How strongly do you agree or disagree with this statement?  
Air pollution impacts some groups of people more than others.

# Factors That Might Influence Differences in Air Pollution

Asked of Those Who Perceive Differences



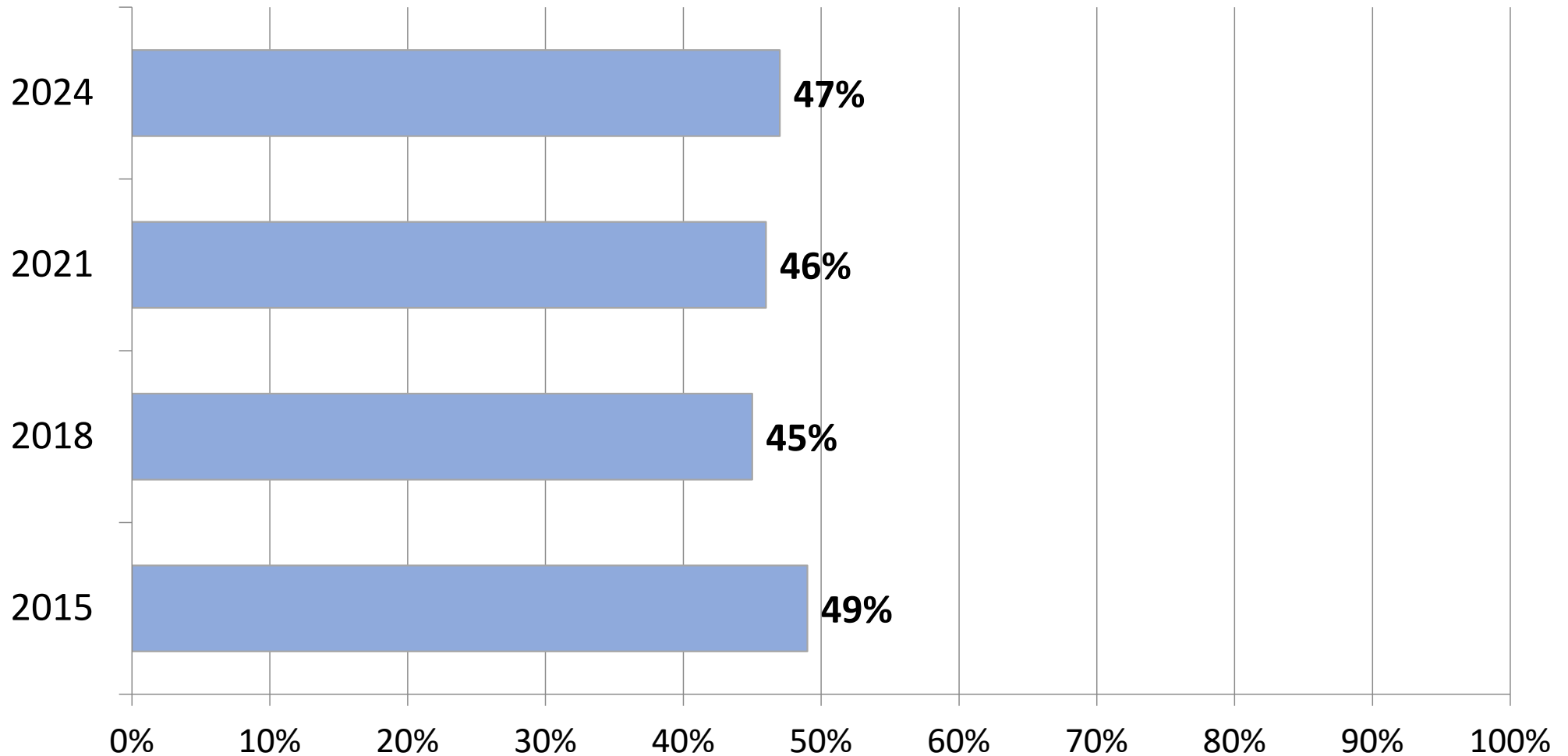
**People are more likely to relate proximity and conditions to inequities, rather than the demographic or socio-economic makeup of the neighborhood.**

13. Following are some factors that might influence differences in air pollution across communities. For each one, please say if you think it has a strong impact, some impact, or no impact on differences in air quality.

**AQI**



# Have Heard or Seen Air Quality Color Codes

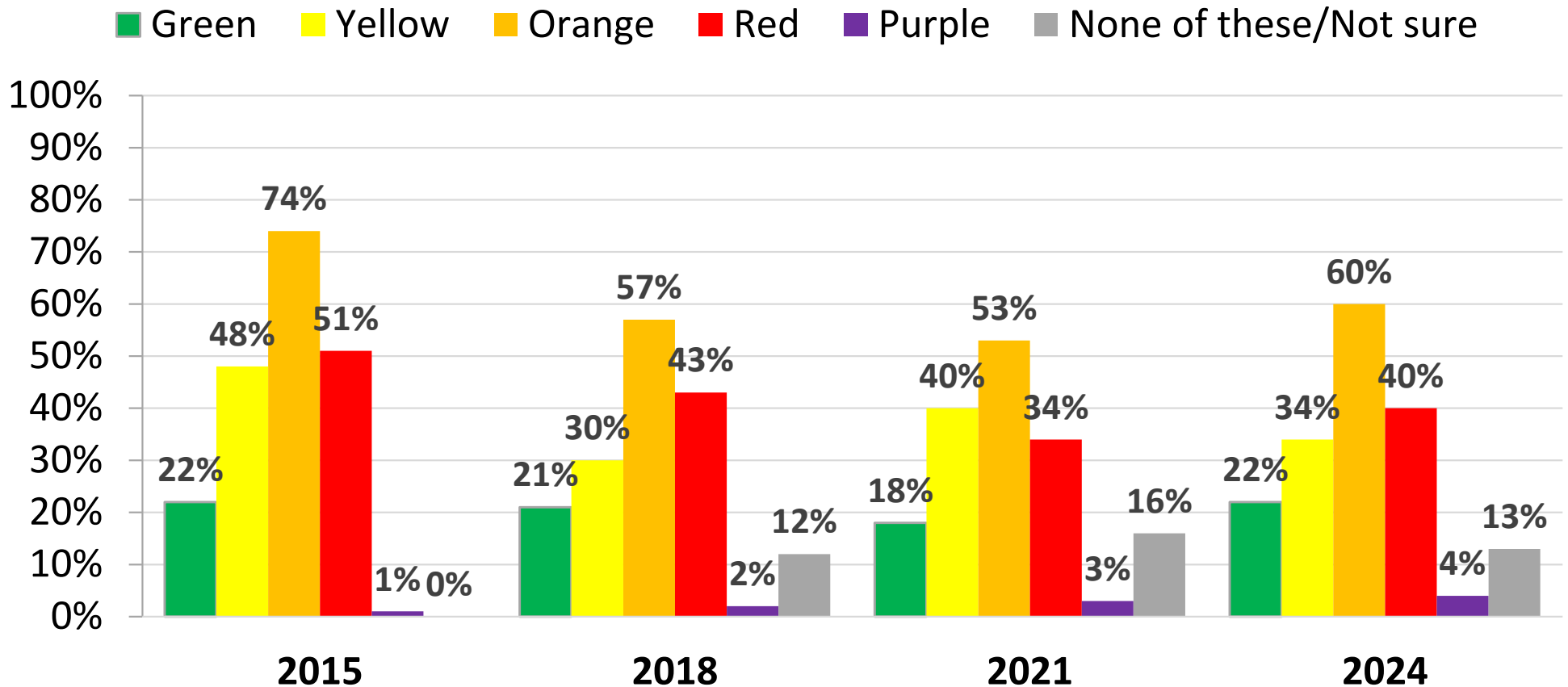


**Awareness of color codes holding steady at about half the population.**

7. The Air Quality Index, also known as the AQI, uses a color code system.  
Over the last few months, have you heard or seen any color codes used to refer to the air quality?

# Recall of Color Codes

Among Those Who Remember Seeing Any Codes



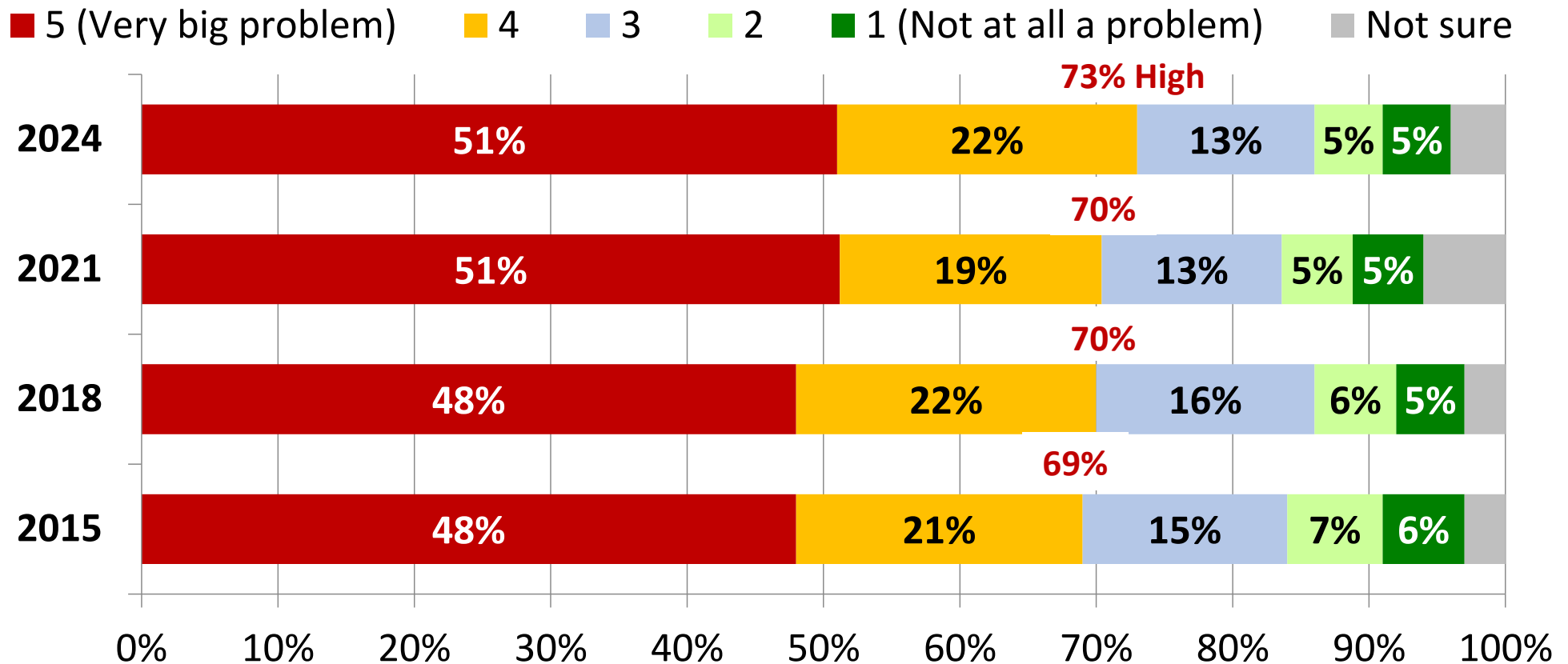
**Current recall similar to 2018.**

(If remember seeing or hearing color codes):

8. What air quality color codes did you hear or see in the last few months?

# **Climate Change**

# Problem of Climate Change



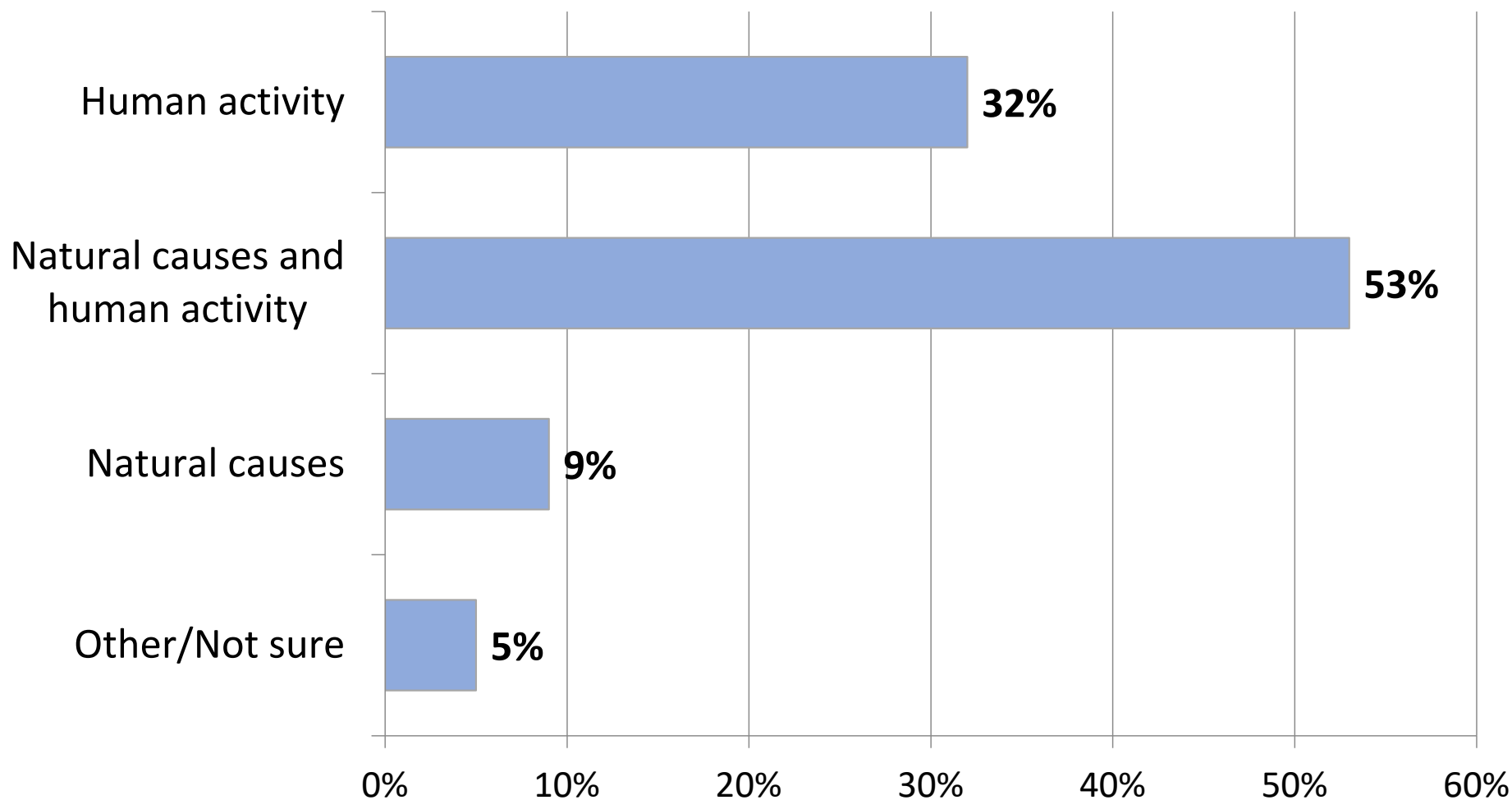
**Climate change concern slowly increasing.**

Climate Change refers to any significant change in the measures of climate lasting for an extended period of time.

Climate change includes major changes in temperature, wind patterns, and frequency and severity of storms.

10. On a scale of 1 to 5, where 1 is not at all a problem and 5 is a very big problem, how much of a problem do you believe climate change is?

## Human Role in Climate Change



**An animating concern: 85% in current survey believe humans have a role.  
Little shift in these numbers in recent surveys.**

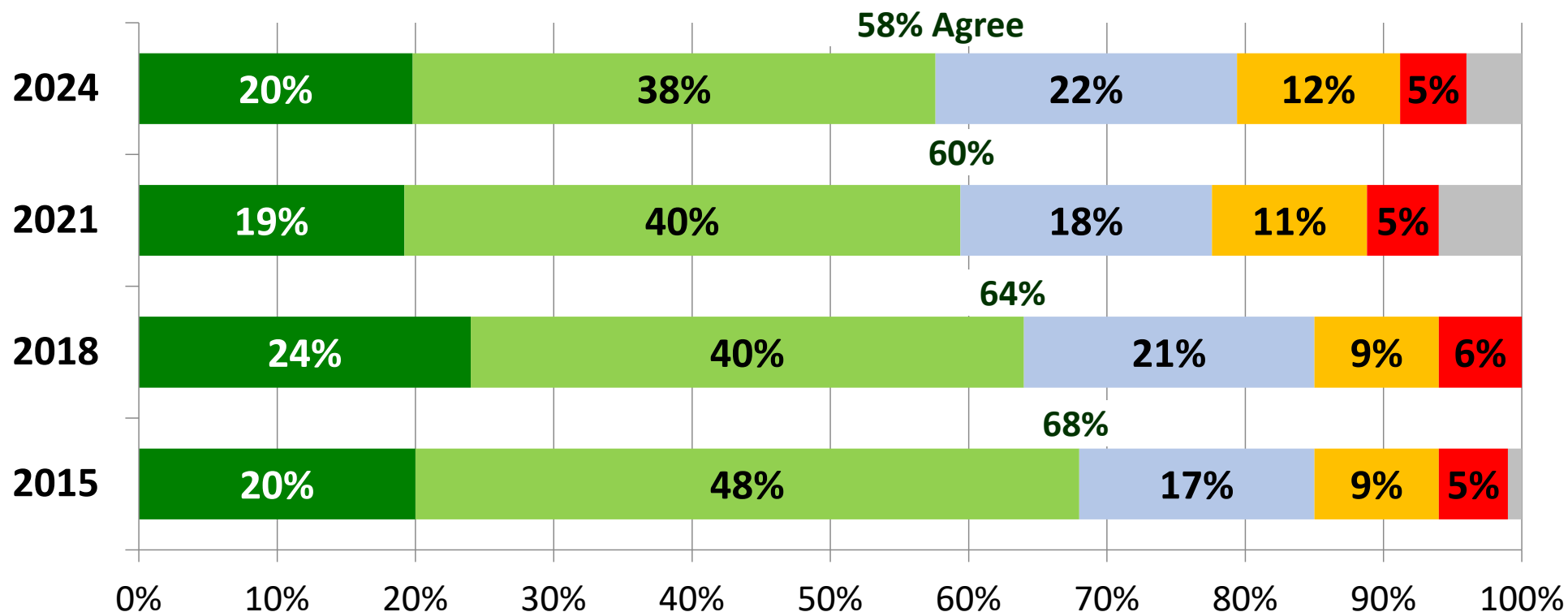
11. What do you think causes climate change? Please select just one.



# **Air-Friendly Behaviors**

# I can make a difference in improving air quality.

Strongly agree   Somewhat agree   Neither agree nor disagree   Somewhat disagree   Strongly disagree   Not sure



**A steady drop in feelings of personal agency.**

5. How strongly do you agree or disagree with this statement?

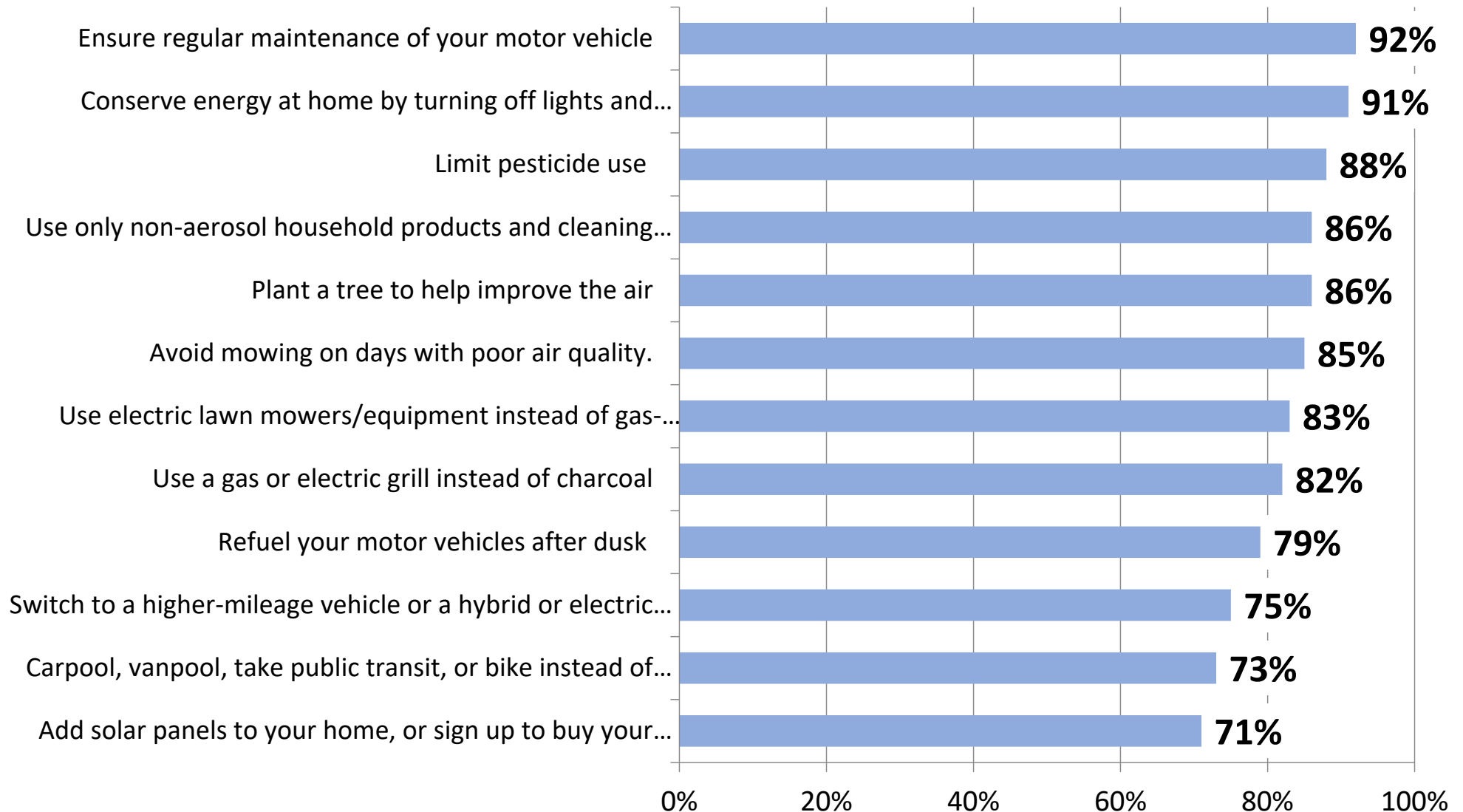
I can make a difference in improving air quality.

# Insight from the In-Depth Interviews

## Bigger Forces at Work

*“I can try to make my little environment better, but there is nothing I can do about air pollution, water pollution, the lack of any resources we need, global warming, climate change, there's nothing I can do. I can talk about it all day long. I can be very passionate about it. But **the people who make the laws or have the money to give to the people who make the laws, they need to do the things.**”— Lyra*

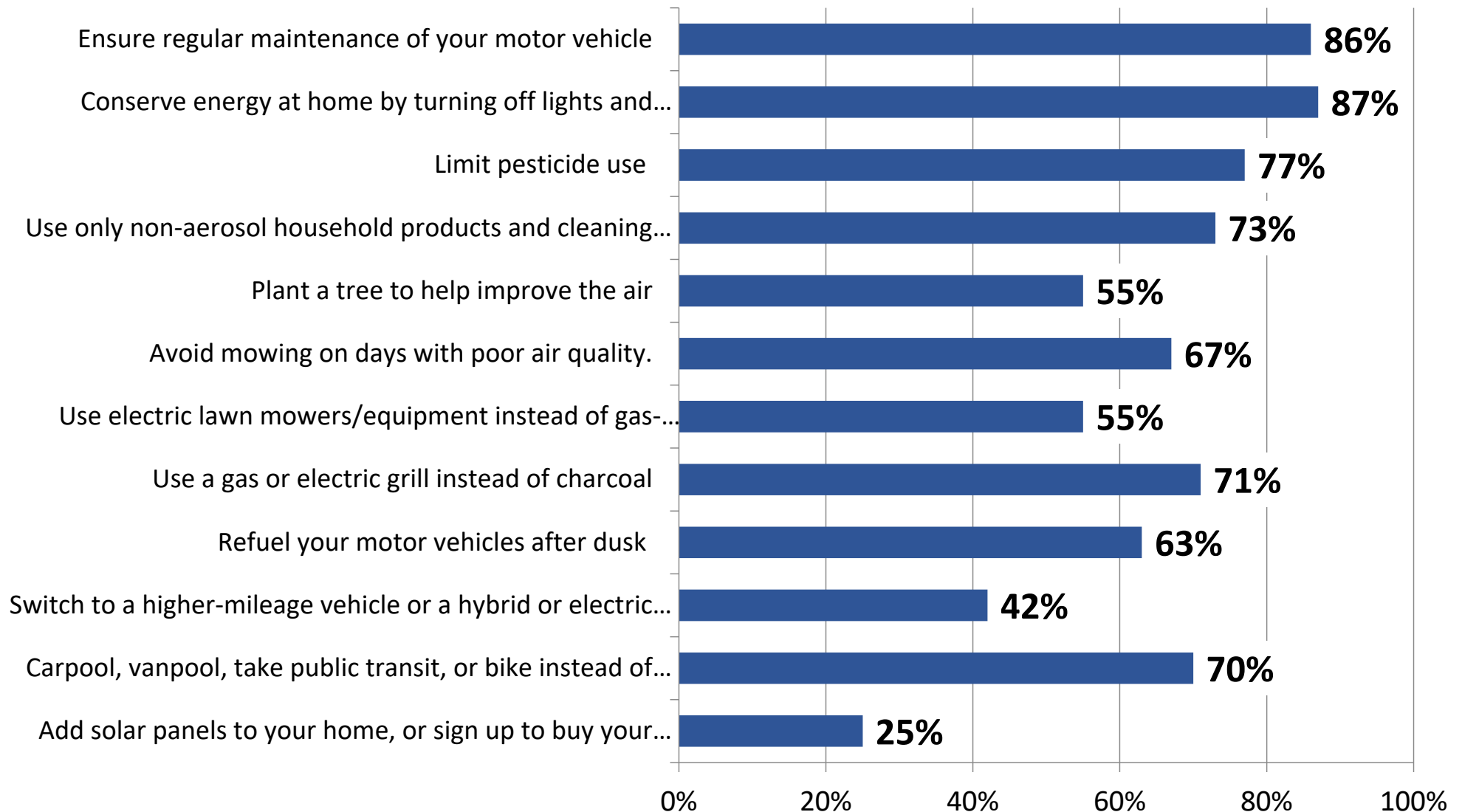
# What People Are Willing to Do to Reduce Air Pollution



**Broad willingness to take actions.**

6. Which of the following behaviors are you willing to do to reduce air pollution?

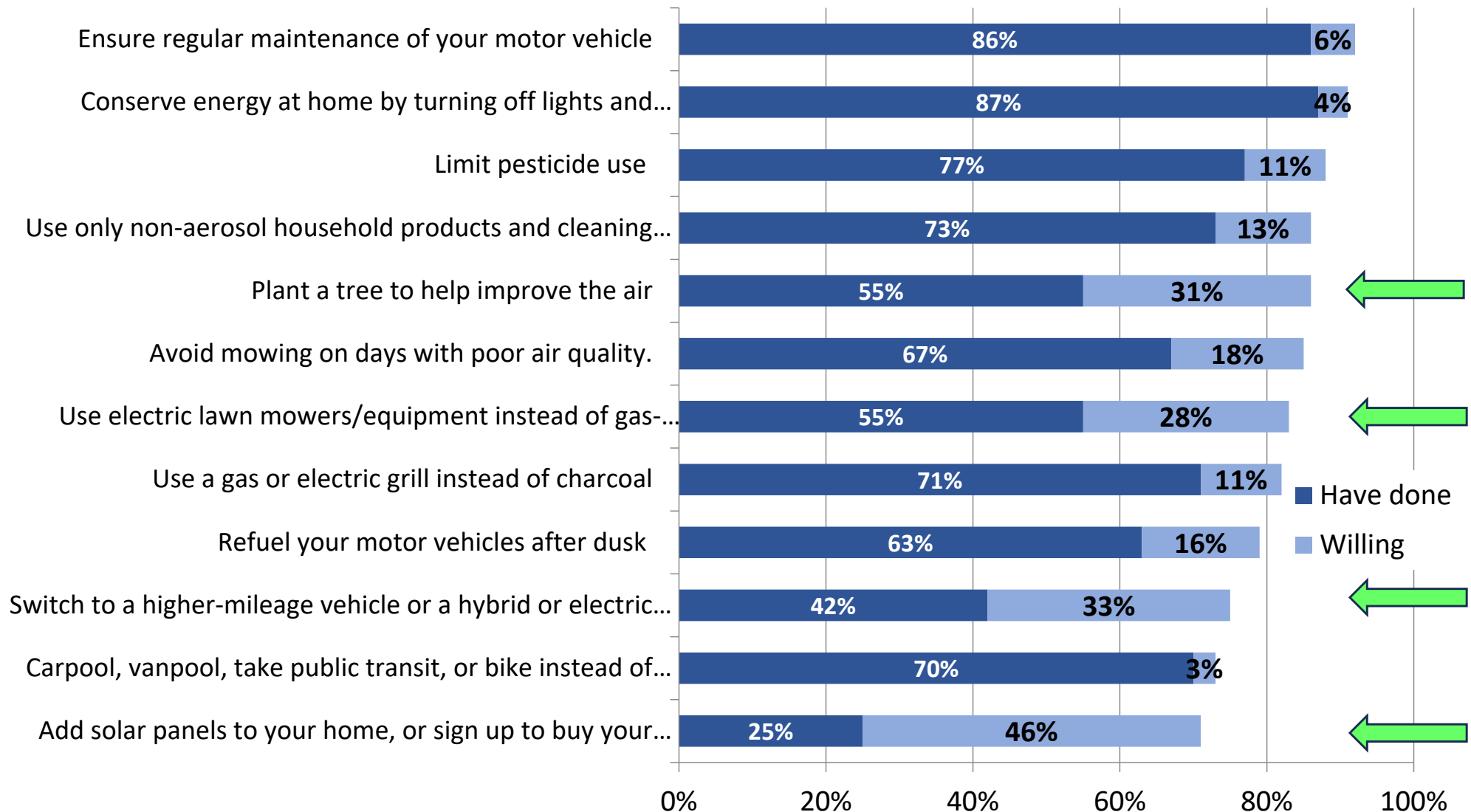
# What People Have Done to Reduce Air Pollution



6. Please also indicate if you have done it to reduce air pollution.



# Where Are the Greatest Opportunities?



**Several behaviors show a large opportunity gap between willingness and adoption.**

6. Which of the following behaviors are you willing to do to reduce air pollution?  
Please also indicate if you have done it to reduce air pollution.

# Insight from the In-Depth Interviews

Encouraged by Other People, and Knowing the Reason *Why*

*“So, I guess if you're seeing people take action...and you're seeing the reason why they're doing it and you start to follow along in those steps, it causes a domino reaction. **The more people that you see doing it, the more you're likely to follow along**, especially if you see the reasons why.” – Remi*

*“I'd be curious to know more of the scientific things behind it because I'm not just going to do something blindly, I guess.”  
– Kristina (referring to refueling after dusk)*

# Insight from the In-Depth Interviews

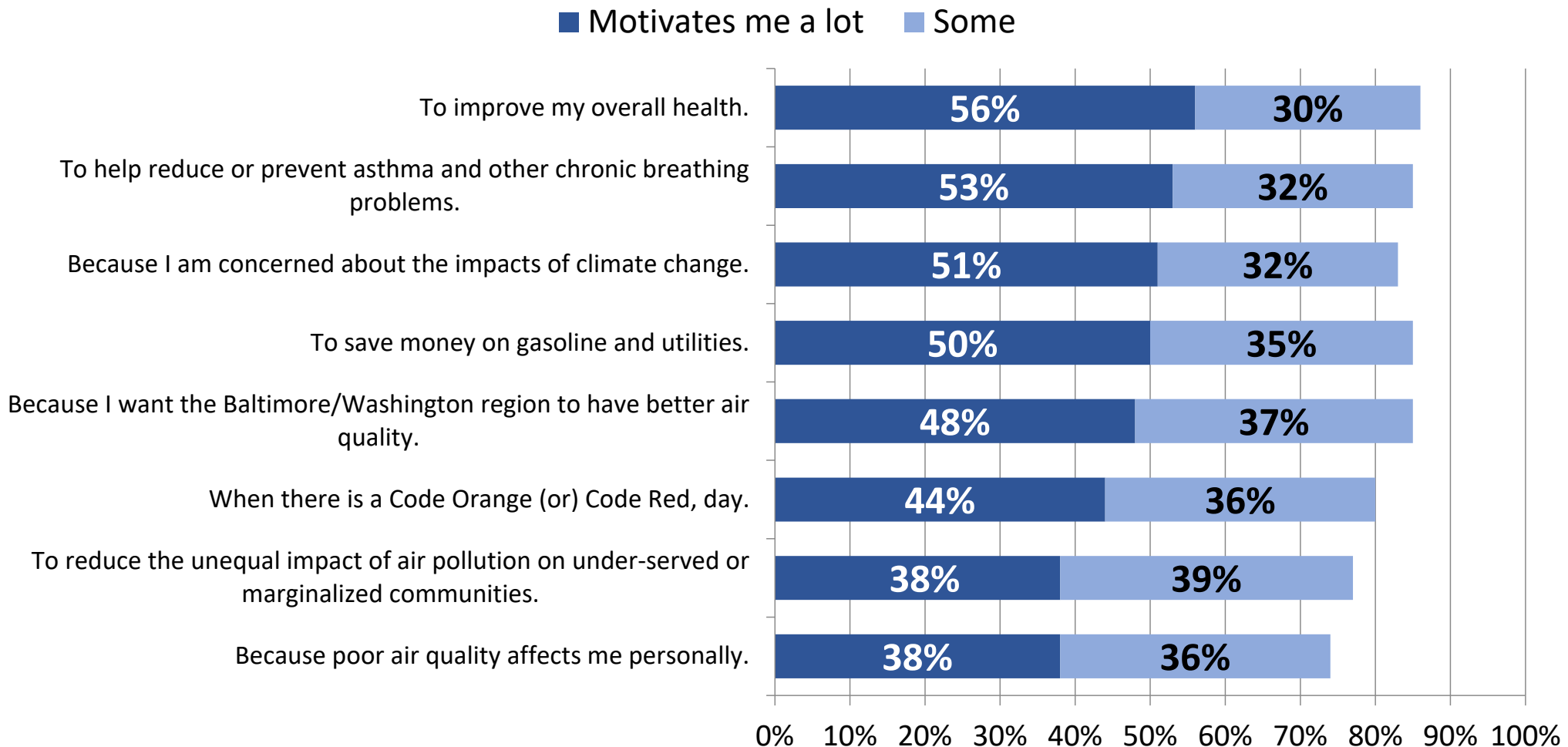
An Easy Action and New Awareness

*“Well, solar panels I couldn't do here because this is an apartment complex, but a community solar farm, I would definitely look into it and get more information for it.” – Denise*

*“I have not heard of that yet. That is something that I will probably look into at the end of this call.”  
– Shelton (referring to community solar)*

# **Motivating Attitudes**

# Top Motivations to Improve Air Quality

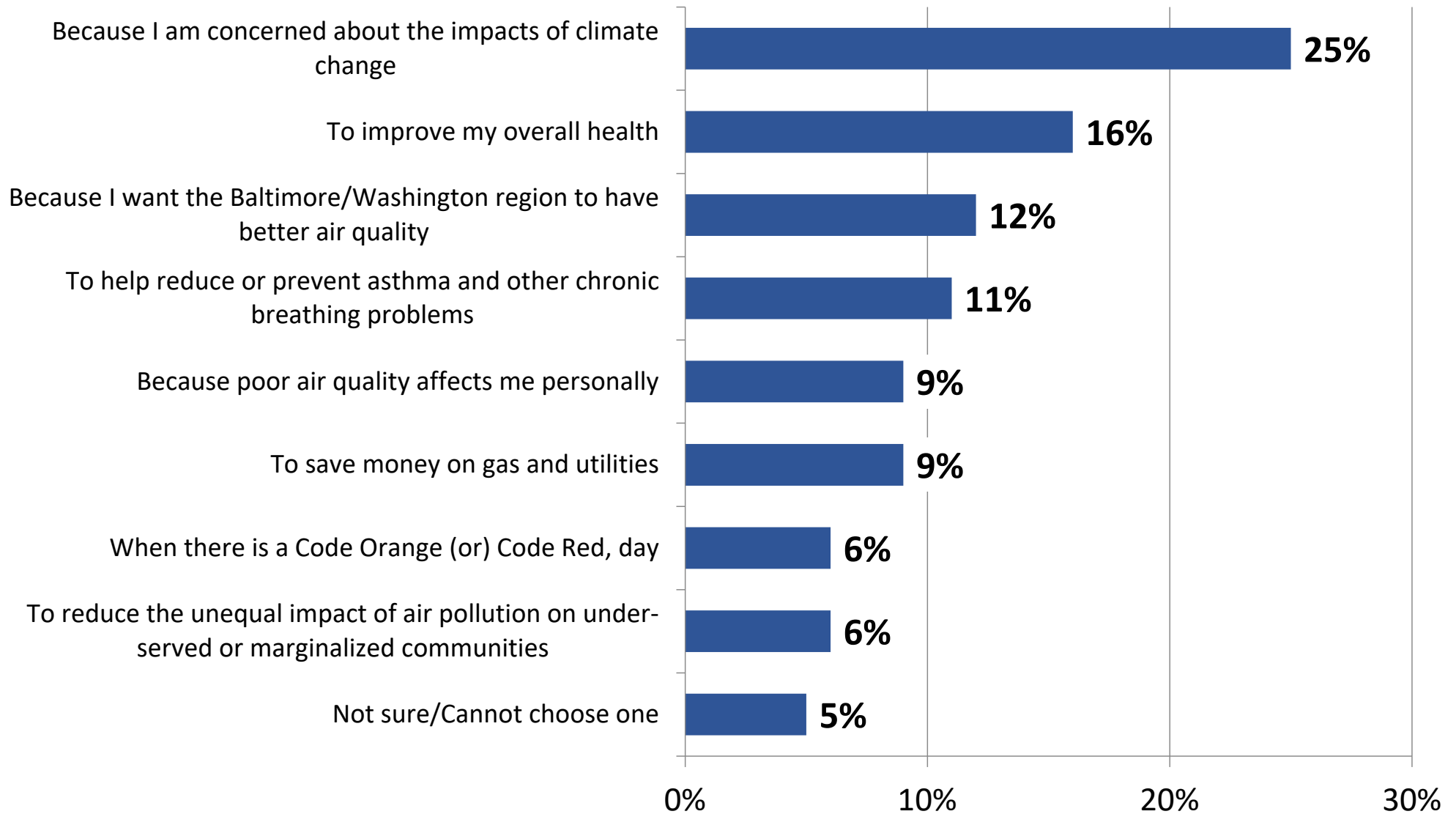


## Health, Climate Change, Money

16. Please rate how much the following statements would motivate you to do more in your daily life to help reduce air pollution and improve air quality. For each one, please say if it motivates you a lot, some, not much, or not at all.



# The One Most Motivating Reason



## Climate Change, Health

17. Please choose the ONE statement that motivates you the most.

# Insight from the In-Depth Interviews

## Speaking of Climate and Health

*“Just personally, I’m concerned about the impact of climate change. I want the next generation, my kid’s kids, to be able to enjoy this beautiful green and blue marble in the cosmos.*

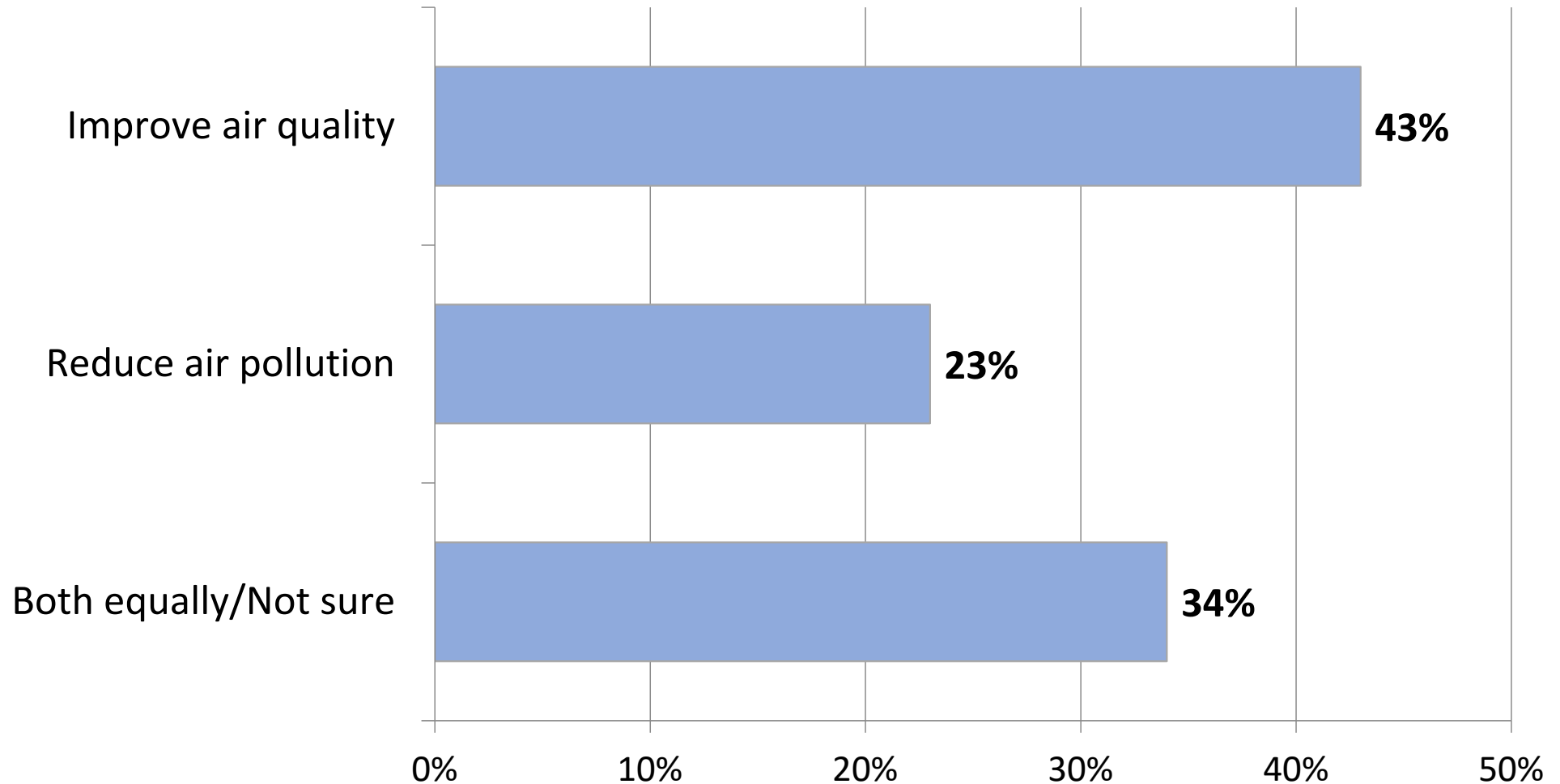
***And if we don’t do something, ...and I don’t know what that something is going to be....” – Quentin***

*“Both my children have asthma, so that's a big factor to me.”  
– Denise*

*“I have a lot of friends and family members that actually have asthma...So I mean...if I'm using charcoal, it may not make it hard for me to breathe, but my neighbors or anybody else that's suffering from breathing problems such as COPD or asthma, that’s huge.*

*– Todd*

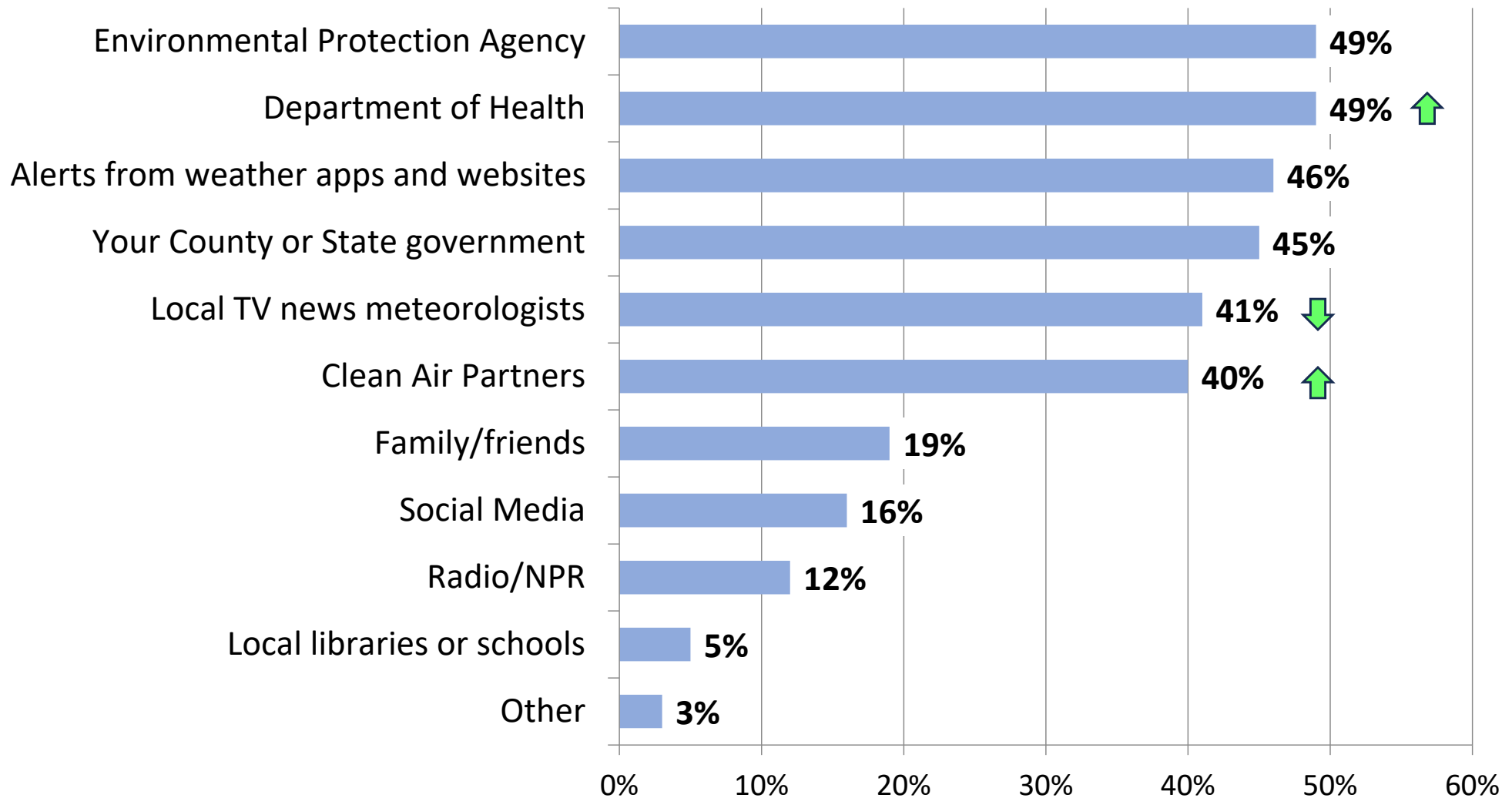
## More Motivating Framing



**More aspirational framing is more motivating.  
Little shift in these numbers in recent surveys.**

18. Which phrase motivates you more, “reduce air pollution” or “improve air quality?”

# Trusted Sources of Information about Air Quality



**Very positive trust in public agencies.**  
**Local meteorologists have dropped steadily from 57% in 2018.**  
**Clean Air Partners has doubled from 21% in 2018.**

19. What are the top 3 or 4 sources of information about local air quality that you would prefer to rely on? Choose up to 4.

## 2024 Public Awareness Research: Summing up

- Air quality has widespread impact.
- People see clear causation, mainly due to transportation.
- Worry about family, neighbors, inequities.
- Climate change and health highly motivating.
- Clear gaps between willingness and action on several behaviors.
- Explain reasons why; make the action accessible.
- Show momentum and shared commitment.
- People look to public agencies for their cues on air quality.<sup>33</sup>