

# A Hazy View

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A survey of public awareness, perceptions  
and attitudes on air quality in urban India

Shakti Sustainable Energy Foundation and Edelman India  
October, 2017



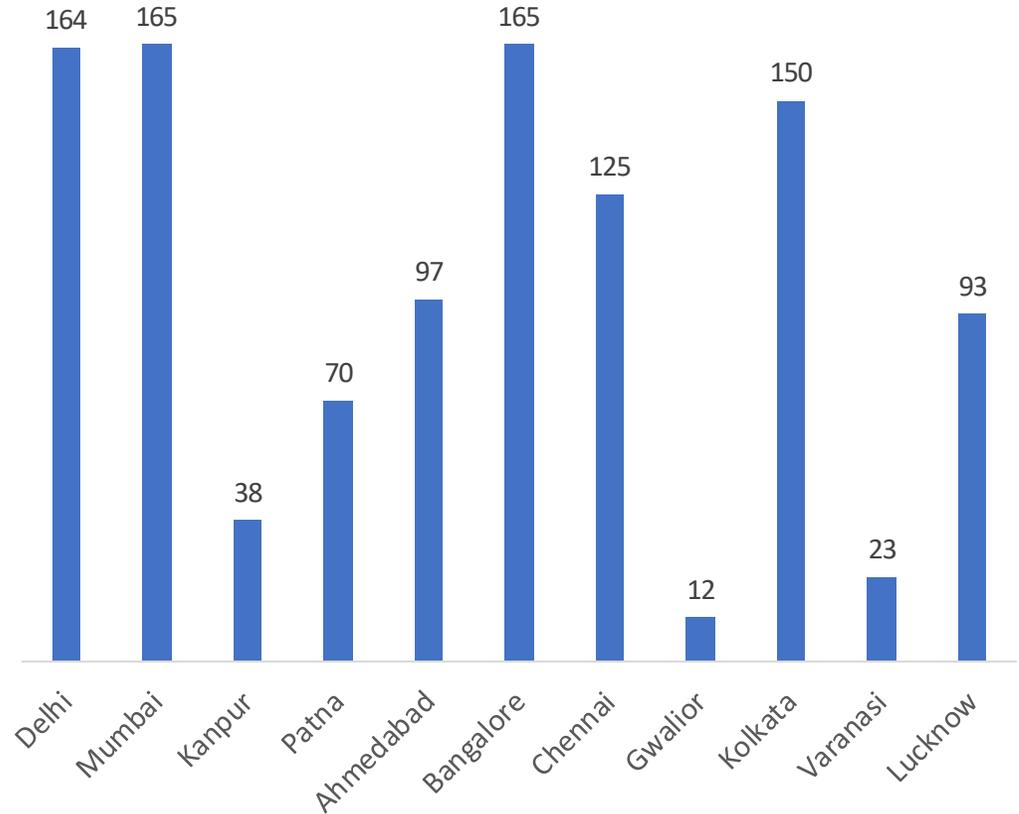
Successful interventions to improve air quality require public participation and/or public acceptance

Getting a sense of public perceptions can better inform and sharpen outreach and engagement

The current survey is intended to provide a initial assessment that can be further developed in breadth and depth

# Composition of the survey

1,102 respondents across 11 cities

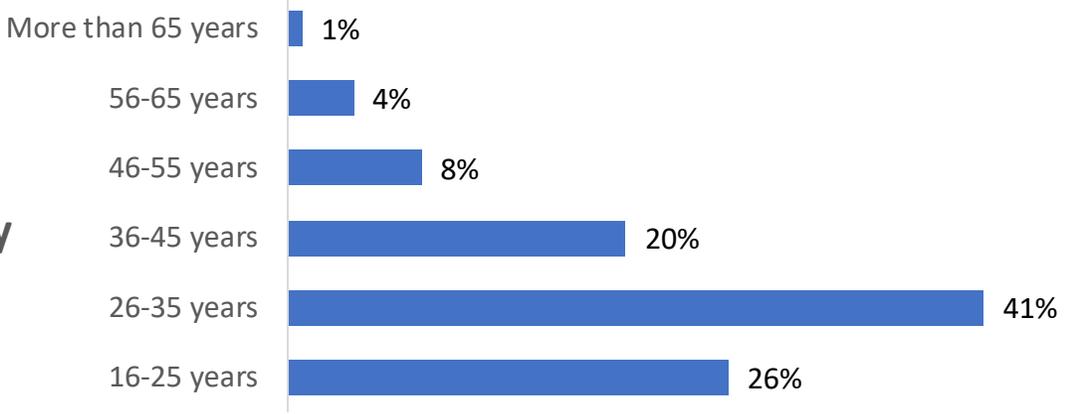


Male (64%)

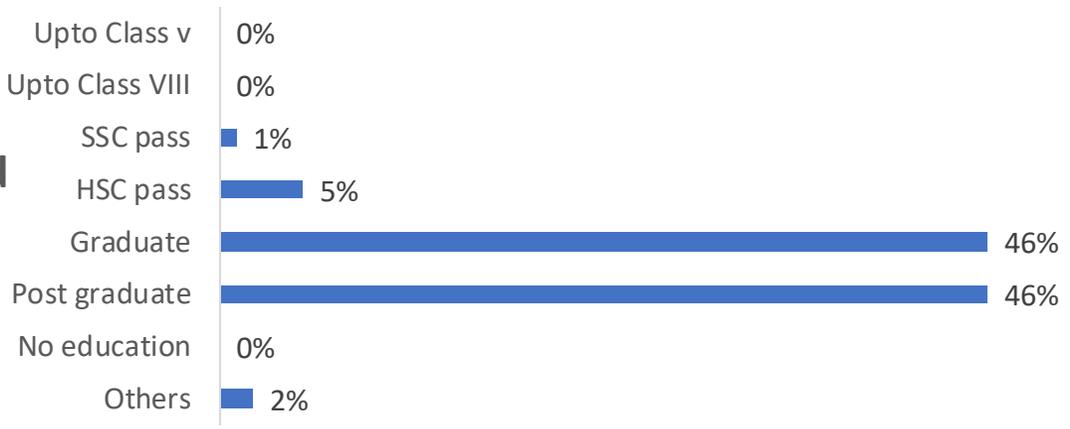


Female (36%)

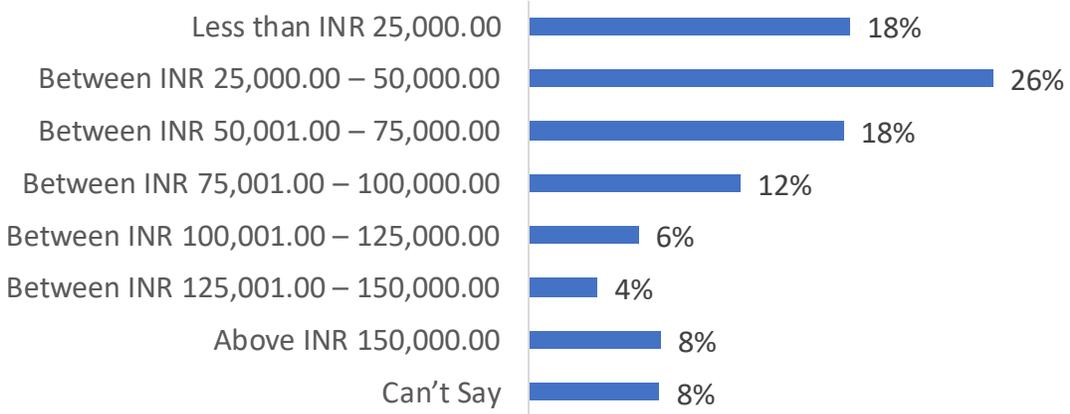
## Predominantly young



## Well educated

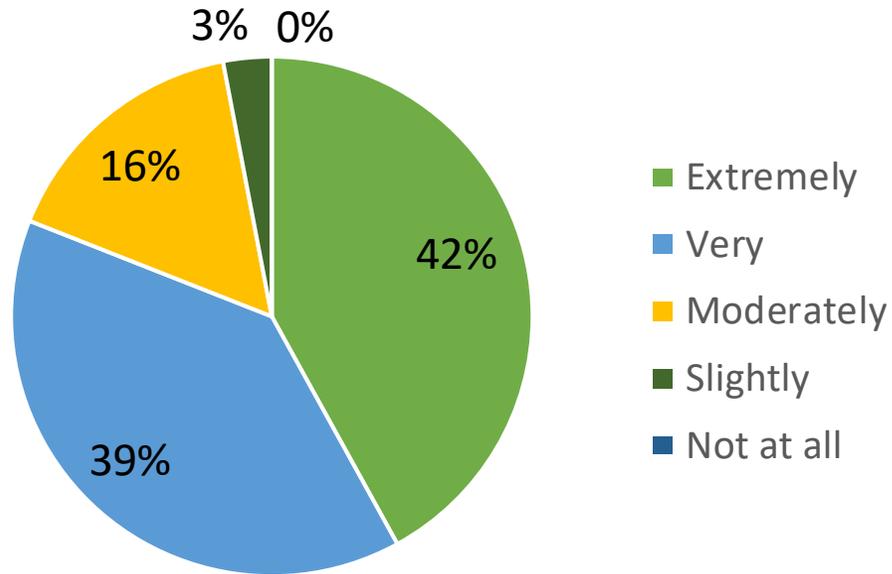


## Middle class

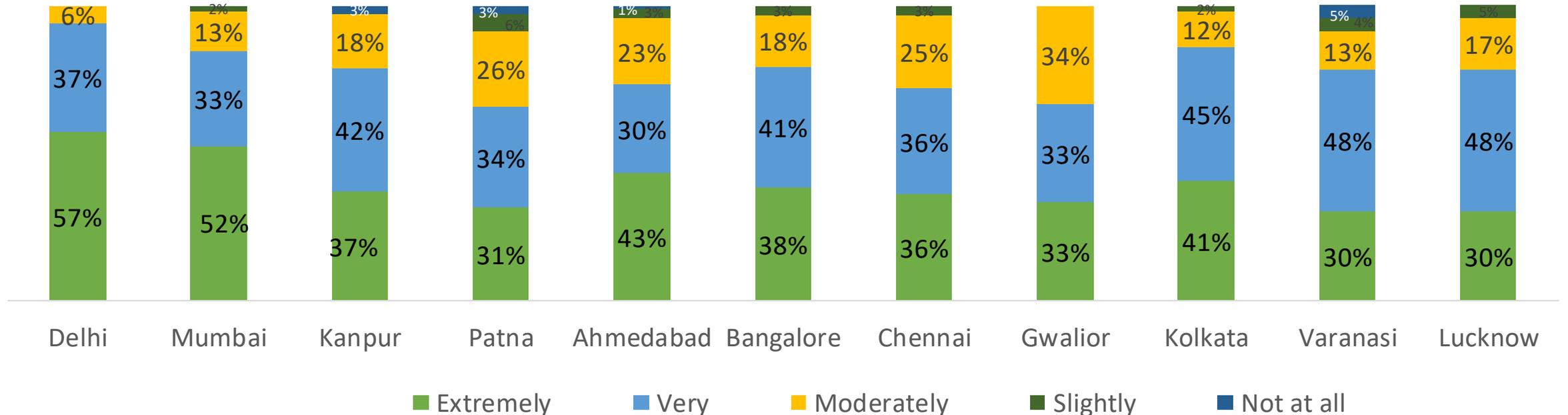


# Levels of knowledge and awareness

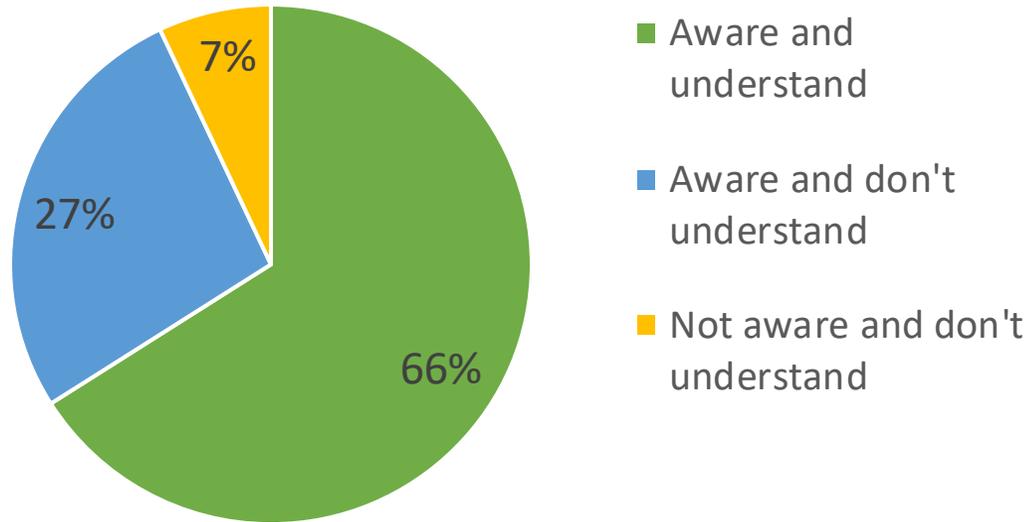
# Awareness about air pollution



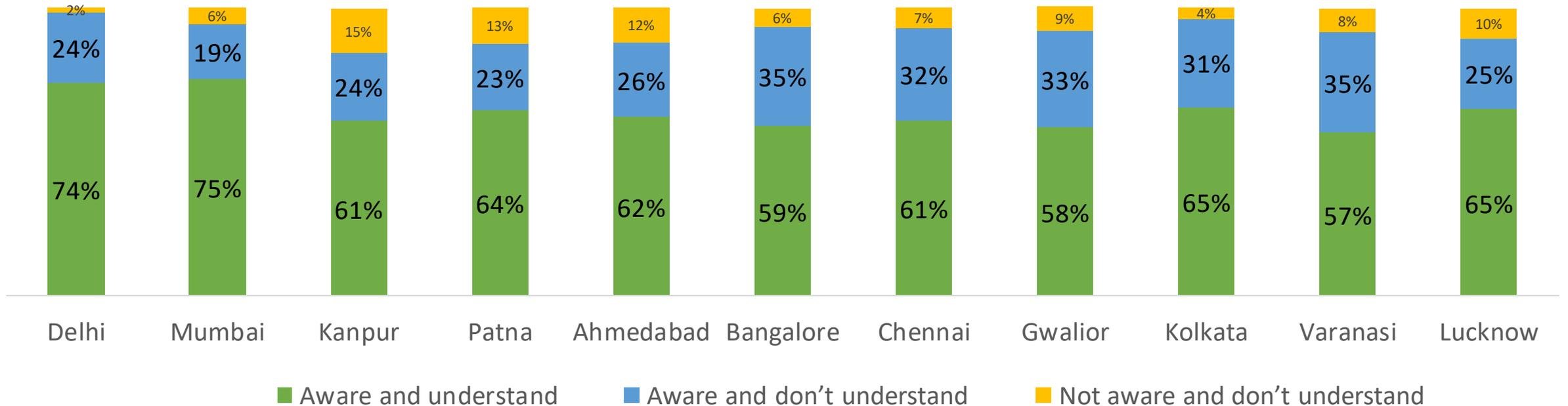
- Three fourths of all respondents say they are well aware about air pollution
- Delhi shows a very high level of awareness. No one says they are unaware
- Consistently high levels of awareness claimed across cities



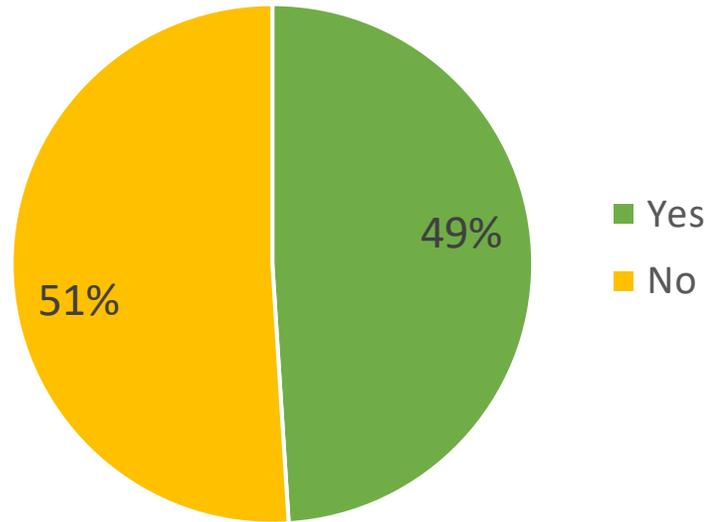
# Awareness of concept of AQI



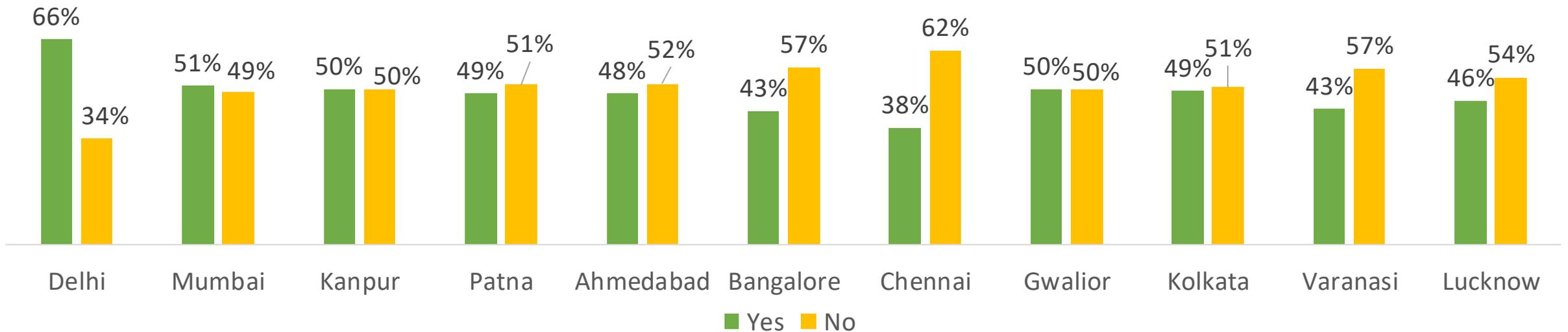
- Two third of respondents say they understand the concept of AQI
- Delhi and Mumbai show a higher level of understanding
- Everyone in Delhi claimed to know AQI
- High levels of claimed awareness about AQI across cities



# Awareness about PM 2.5

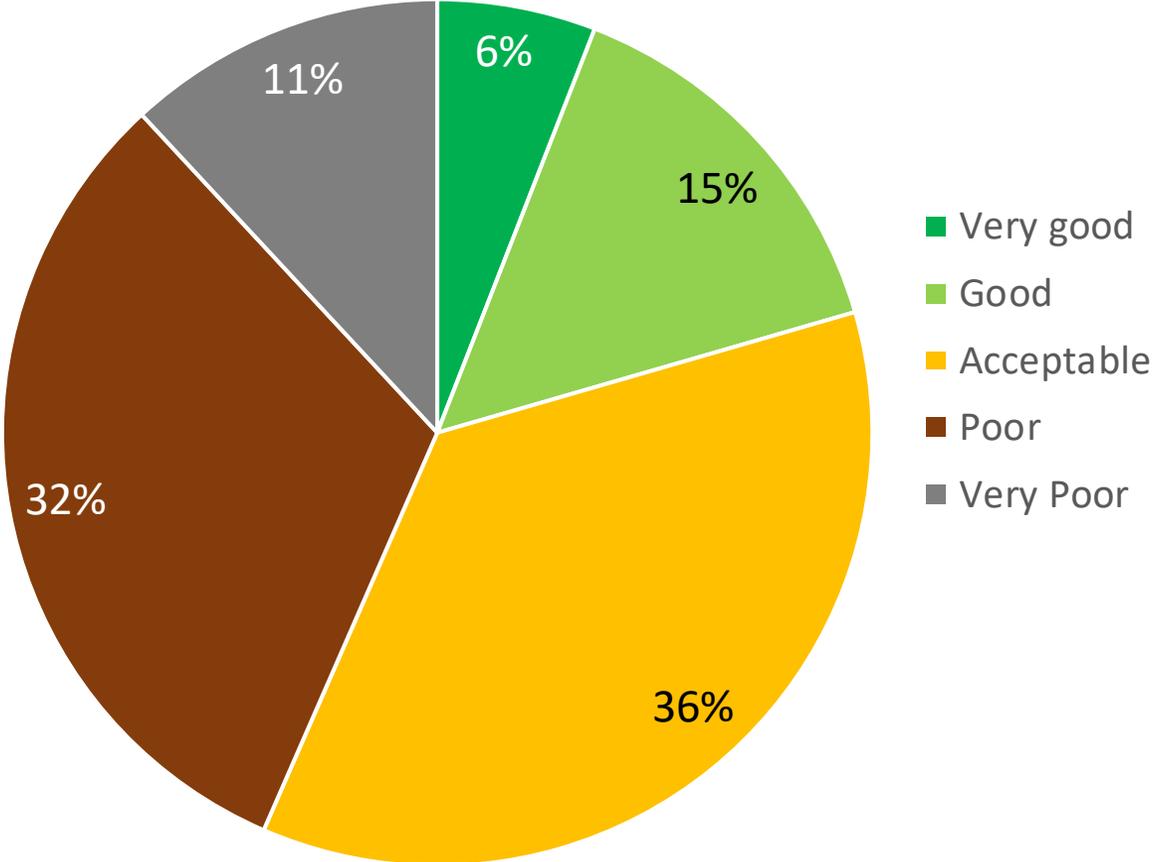


- Respondents in Delhi show markedly higher knowledge of PM2.5 than any other city surveyed
- In many cities, more than half the respondents said they do not know about PM 2.5
- Only 7% of respondents know optimum value of National Ambient Air Quality Standard (NAAQS) for PM2.5



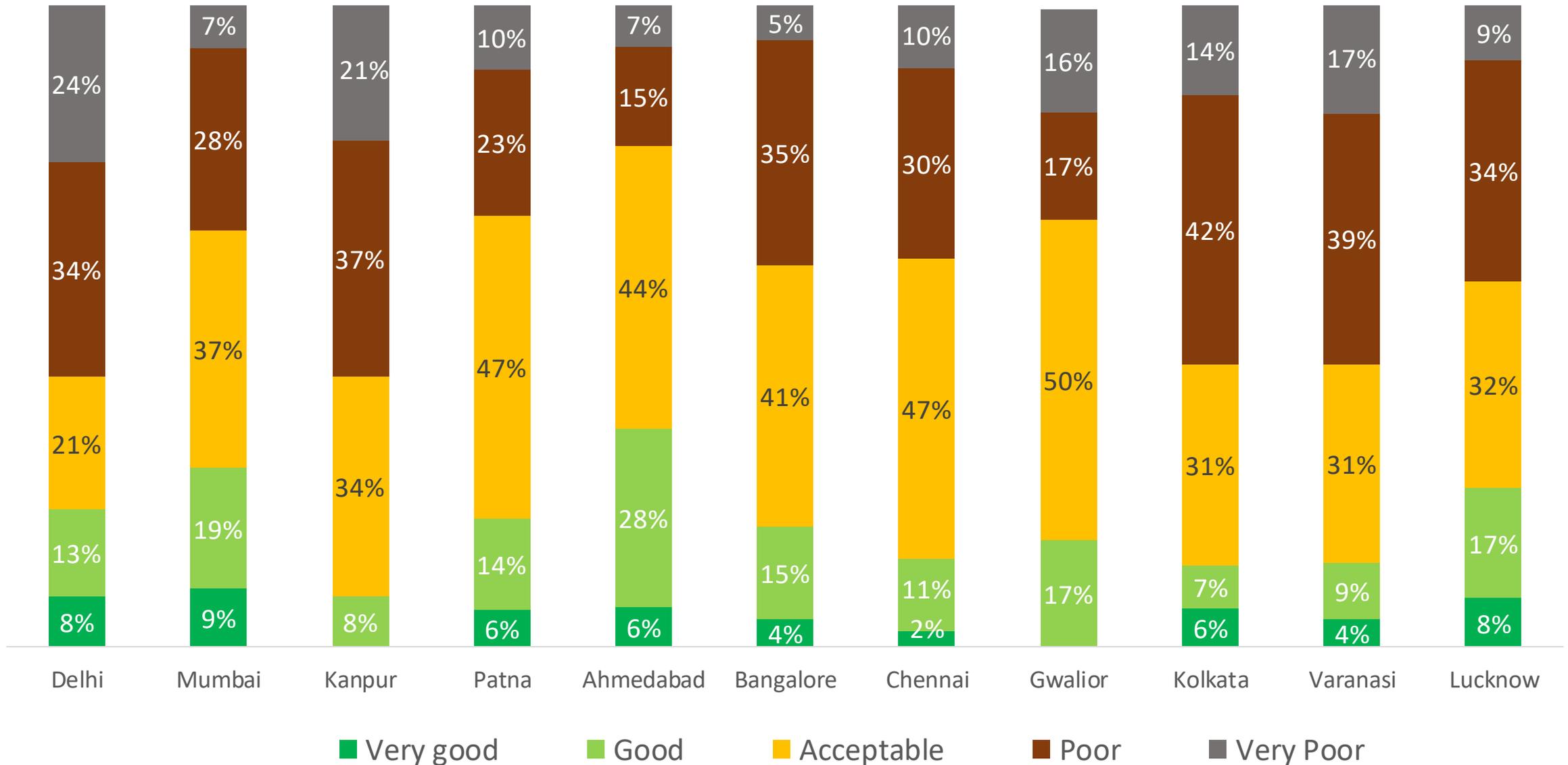
How bad is the air?

# How do you rate air quality in your city?

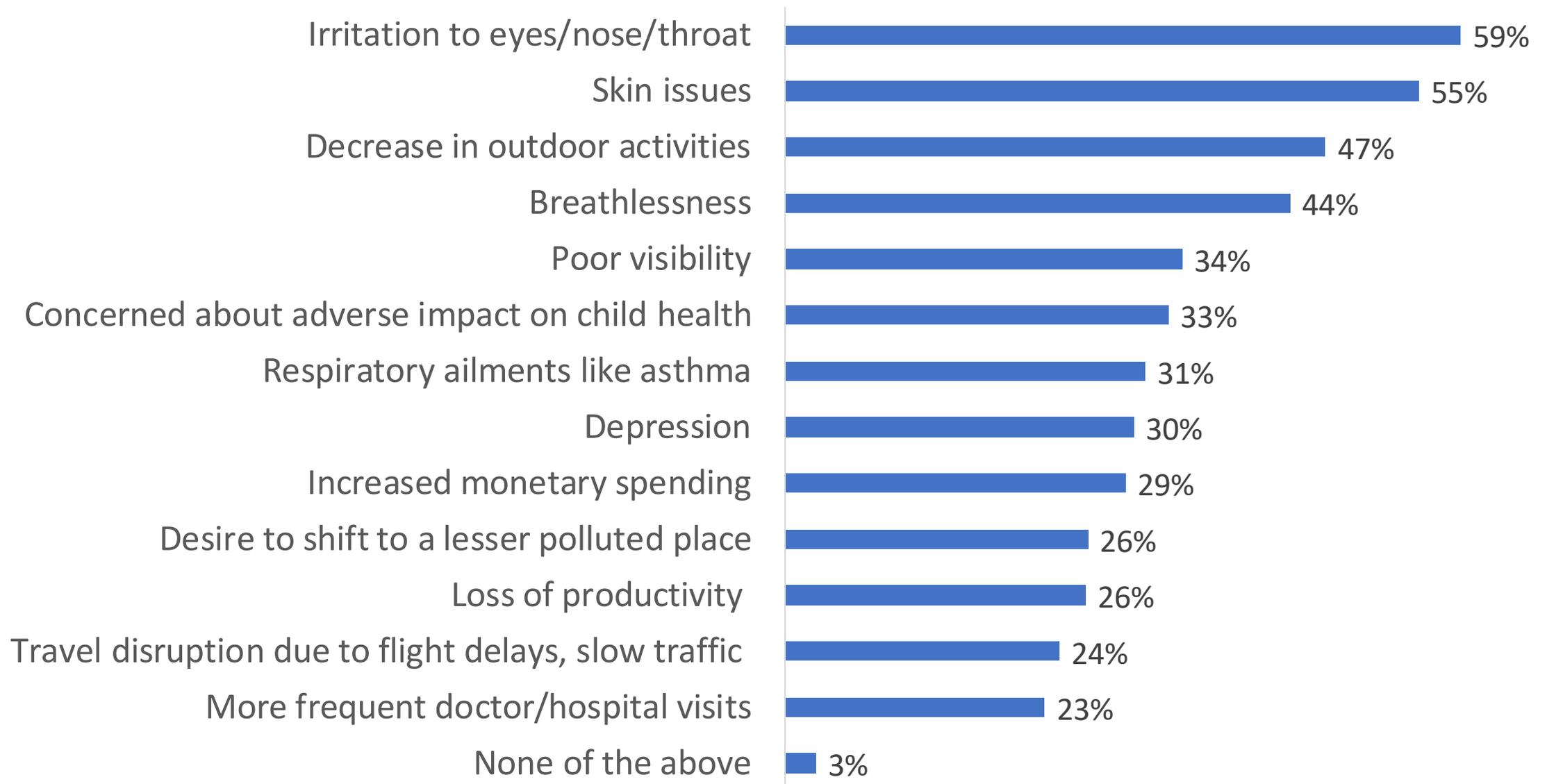


- A majority (57%) of respondents rate air quality in their city as acceptable or better
- Responses do not vary by gender, age group and income levels

## Air quality rated lowest by respondents in Delhi, Varanasi, Kolkata and Kanpur

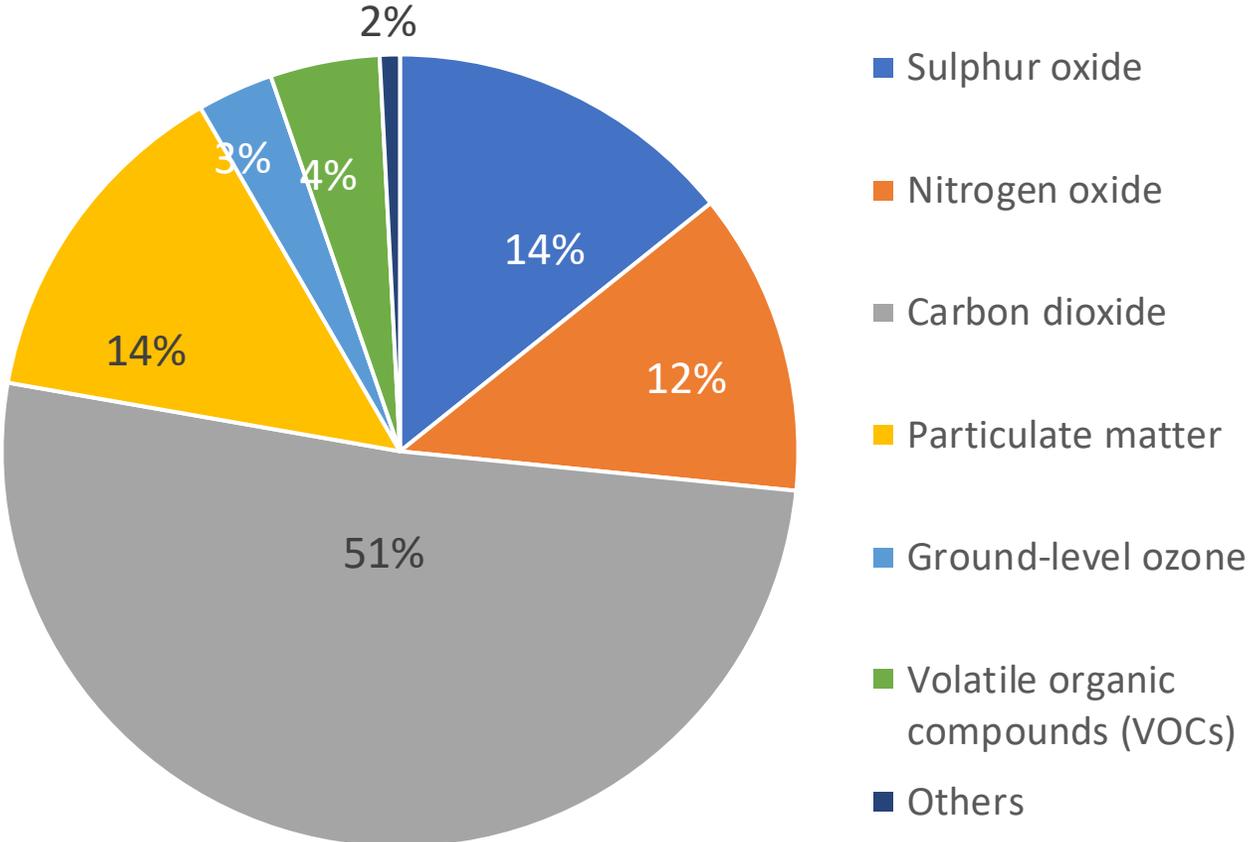


## The impact of pollution is being felt



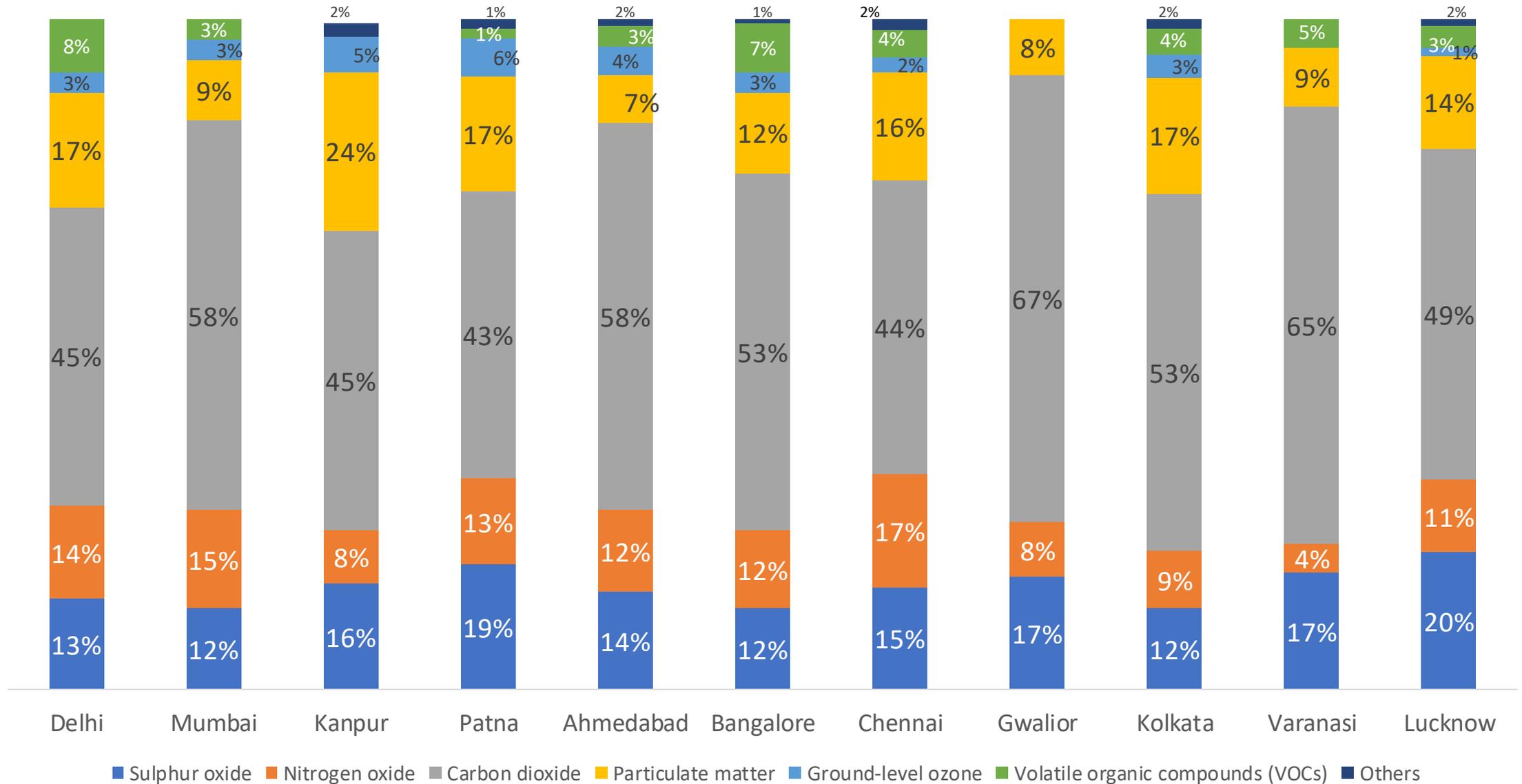
Reasons for bad air quality

# Pollutant of most concern to you

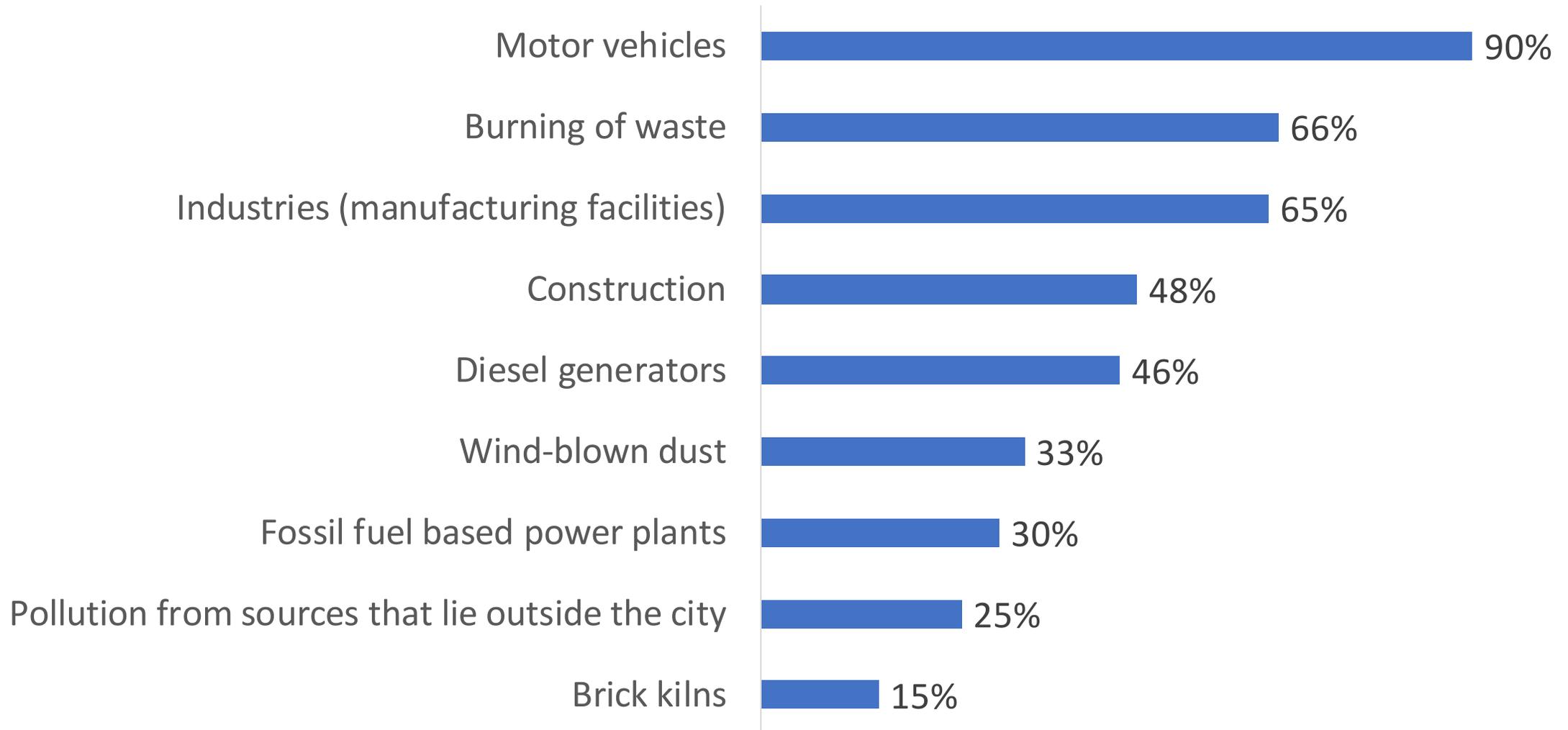


- Across all cities, Carbon Dioxide is the pollutant of most concern.
- Particulate matter (PM) comes a distant second, despite 49% of respondents saying they are aware of it
- Even respondents who said they are aware about air pollution and who understand AQI indicated carbon dioxide as the top pollutant

# Even Delhi seems to lack an understanding of the danger particulate matter poses to health given current concentration and exposure levels



## The biggest sources of air pollution

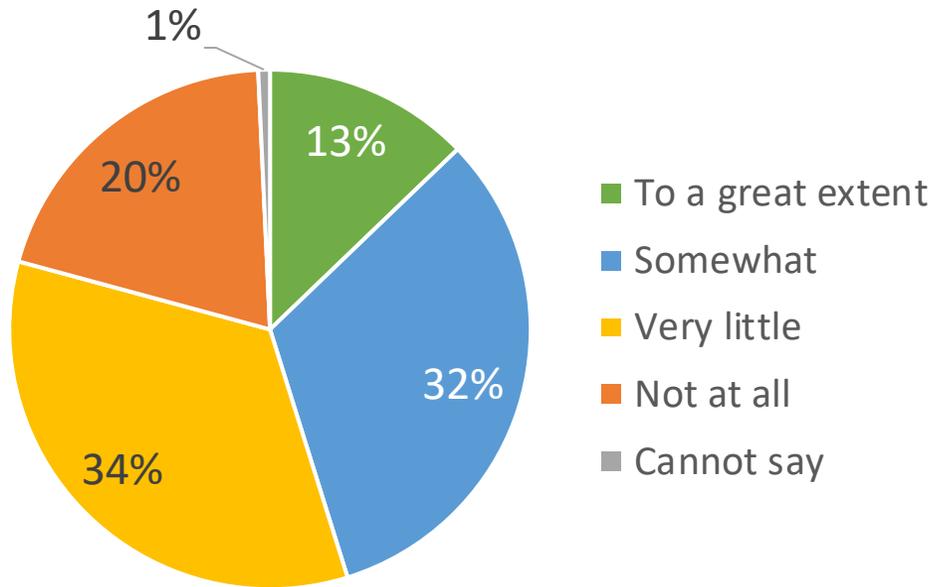


## Respondents across cities cited vehicular emissions as the main cause of air pollution

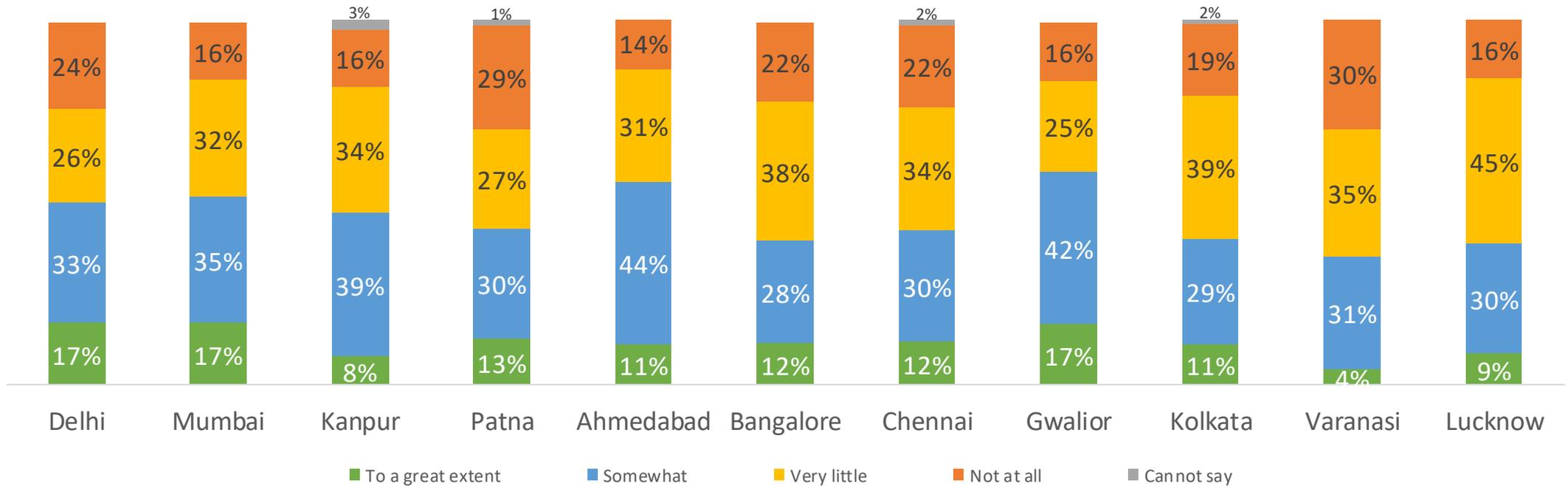
	Construction	Industries (manufacturing facilities)	Motor vehicles	Fossil fuel based power plants	Burning of waste	Wind-blown dust	Diesel generators	Brick kilns	Pollution from sources that lie outside the city
Delhi	52%	68%	91%	35%	69%	33%	53%	18%	34%
Mumbai	59%	66%	87%	37%	73%	39%	47%	13%	27%
Kanpur	26%	82%	87%	32%	58%	37%	61%	13%	18%
Patna	46%	51%	89%	20%	63%	30%	43%	10%	23%
Ahmedabad	32%	66%	91%	33%	62%	23%	33%	19%	25%
Bangalore	47%	68%	92%	27%	61%	31%	40%	16%	24%
Chennai	43%	67%	93%	26%	71%	30%	39%	9%	26%
Gwalior	42%	75%	92%	25%	58%	58%	42%	17%	17%
Kolkata	60%	67%	92%	33%	63%	41%	53%	17%	22%
Varanasi	43%	39%	91%	35%	65%	39%	35%	17%	26%
Lucknow	38%	44%	89%	22%	63%	31%	49%	16%	24%

Is enough being done?

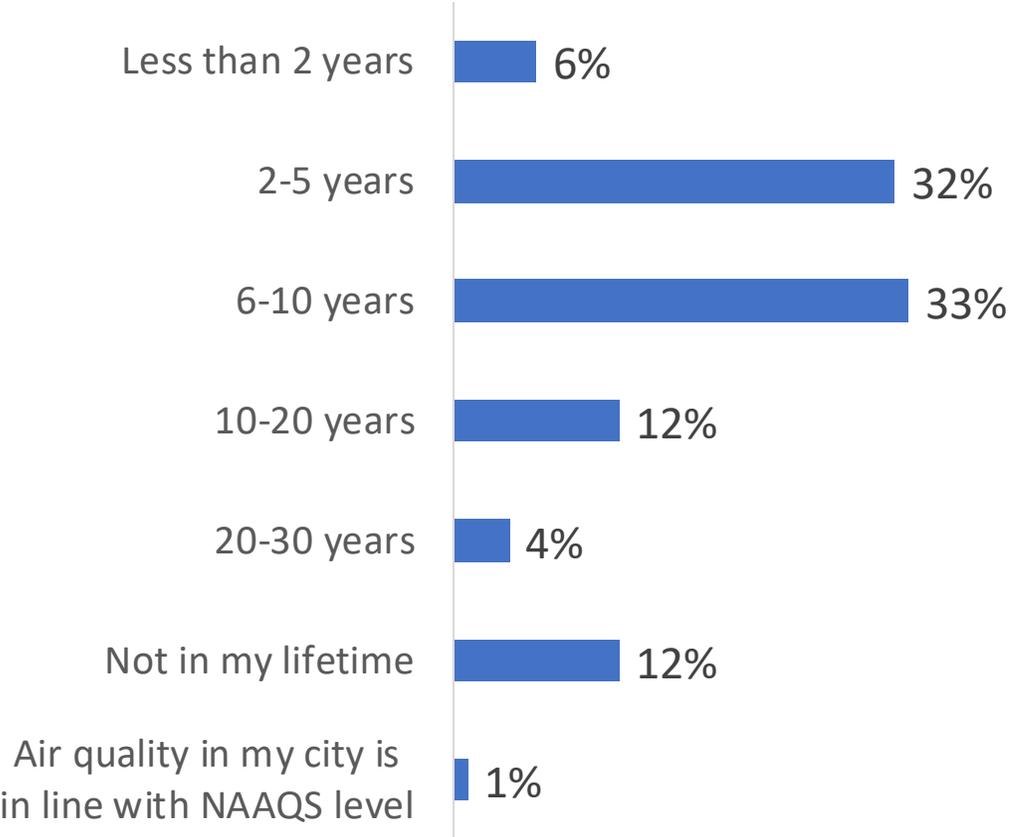
# Satisfaction with Government action on air quality



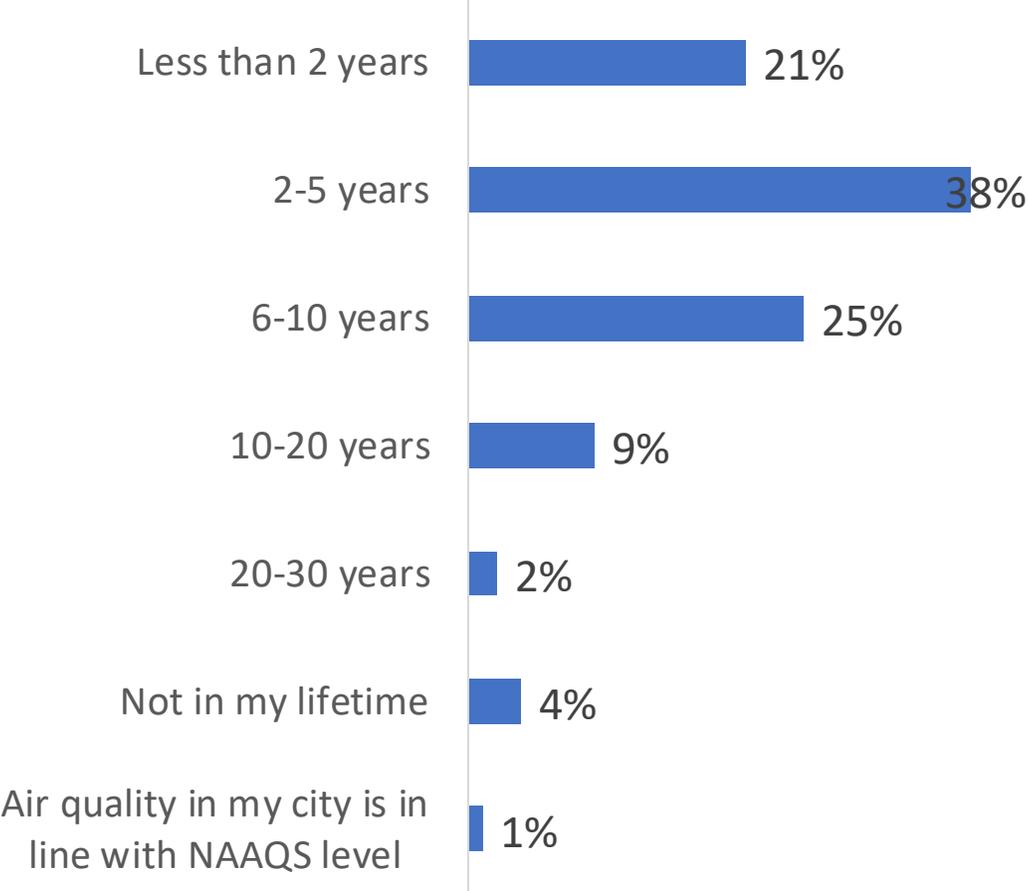
- Majority of respondents are not satisfied with the action taken by the government for controlling air pollution
- Respondents from Varanasi are the least satisfied with government actions followed by Lucknow



# Optimism about how long it would take to resolve air quality issues shows lack of understanding of scale of the problem

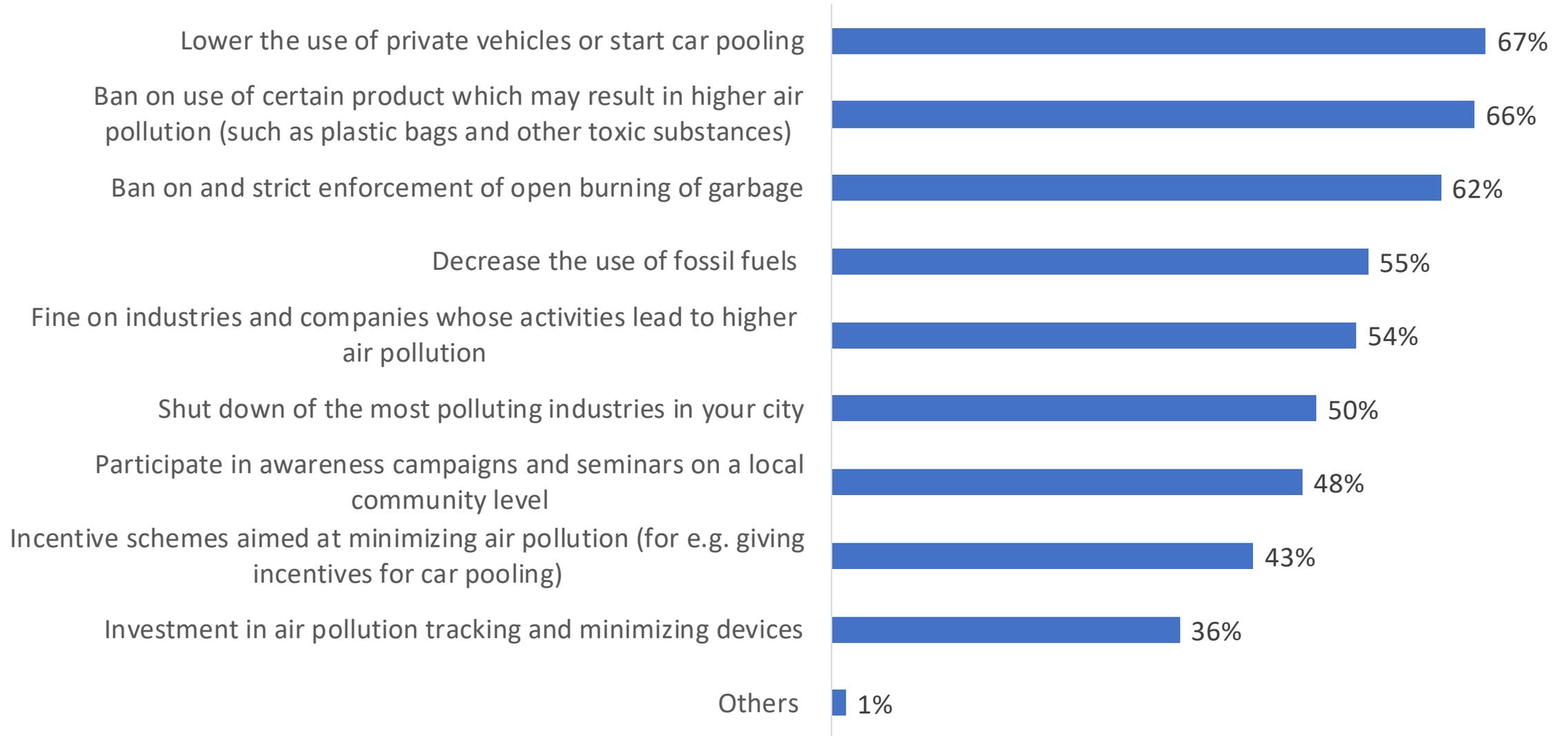


***Under the current actions of the Government***



***If the Government enhances actions***

# Willingness to support firm action to address air quality issues

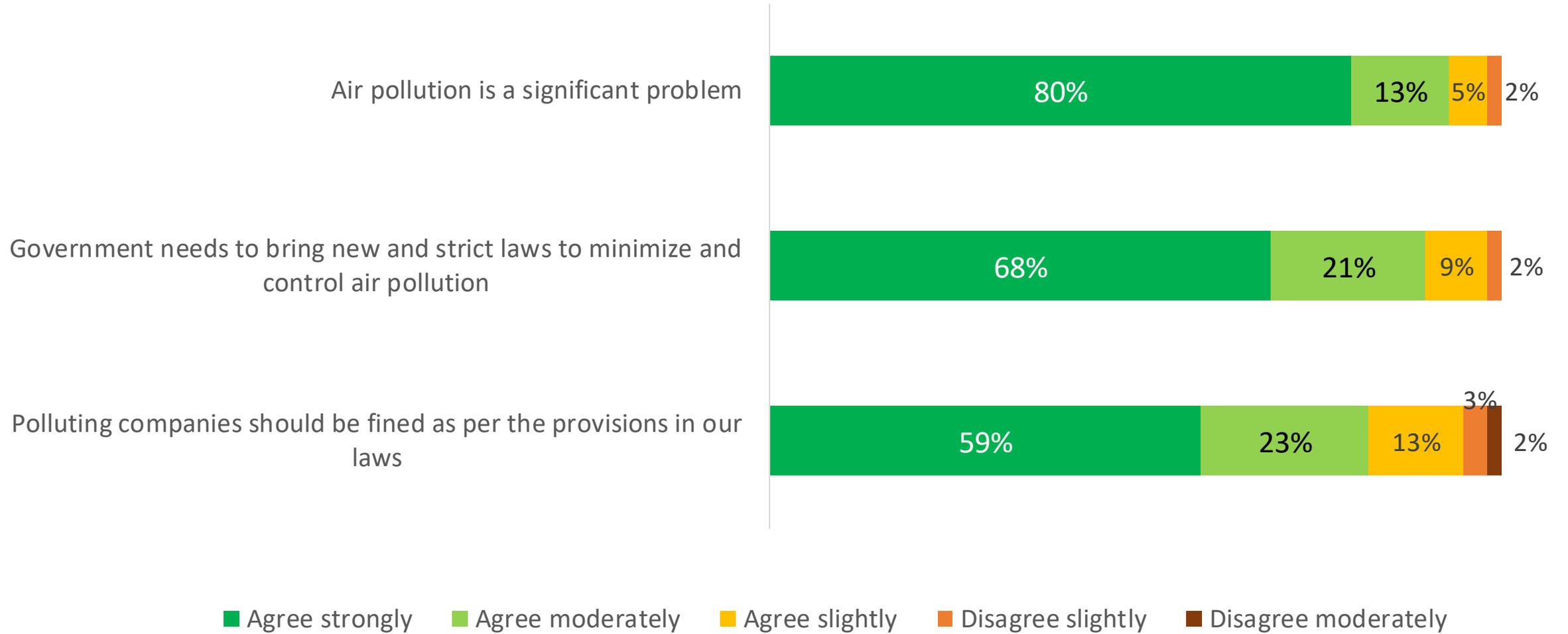


\*Everybody said they were willing to support at least one action

## Willingness to support firm action to address air quality issues

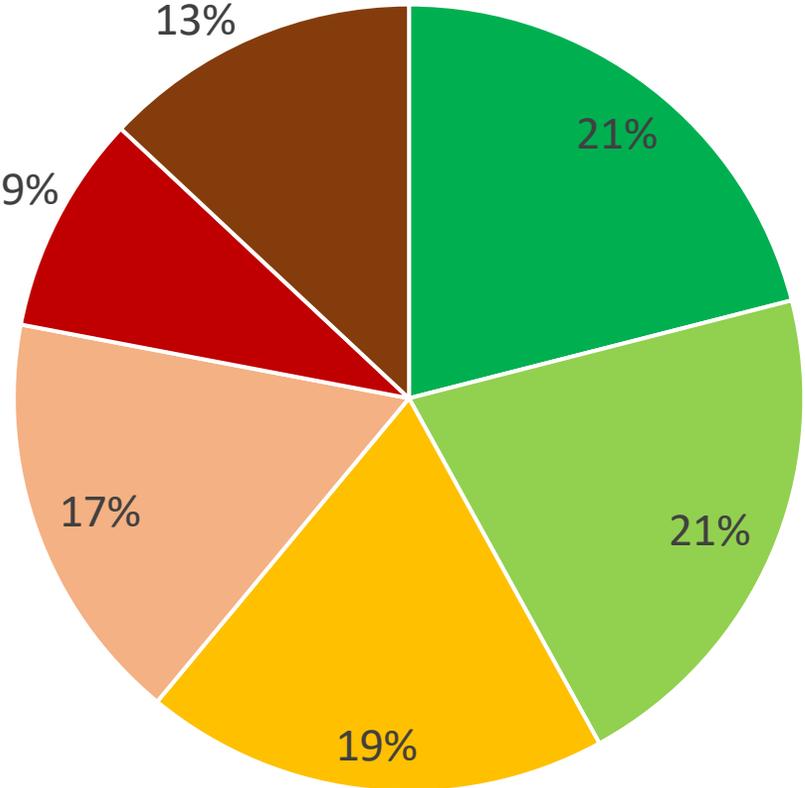
	Delhi	Mumbai	Kanpur	Patna	Ahmedabad	Bangalore	Chennai	Gwalior	Kolkata	Varanasi	Lucknow
Lower the use of private vehicles or start car pooling	67%	61%	58%	67%	66%	68%	69%	67%	72%	70%	66%
Decrease the use of fossil fuels	54%	55%	53%	56%	56%	53%	54%	42%	63%	57%	48%
Participate in community awareness campaigns & seminars	51%	45%	47%	47%	54%	52%	38%	50%	47%	57%	48%
Incentive schemes aimed at minimizing air pollution	52%	44%	34%	43%	39%	41%	41%	8%	50%	57%	31%
Ban on use of products/substances that cause air pollution	70%	62%	63%	66%	62%	66%	59%	33%	71%	74%	73%
Ban on and strict enforcement of open burning of garbage	62%	58%	61%	63%	61%	63%	62%	42%	66%	61%	67%
Fine on polluting industries and companies	53%	59%	55%	46%	48%	54%	43%	33%	65%	57%	53%
Shut down of the most polluting industries in your city	47%	52%	53%	44%	53%	53%	42%	33%	52%	52%	51%
Investment in air pollution tracking and minimizing devices	32%	33%	32%	36%	38%	41%	30%	8%	43%	57%	29%
Others	1%	1%	3%	3%	1%	2%	0%	0%	2%	0%	2%

## Strict laws and making polluters pay finds favour



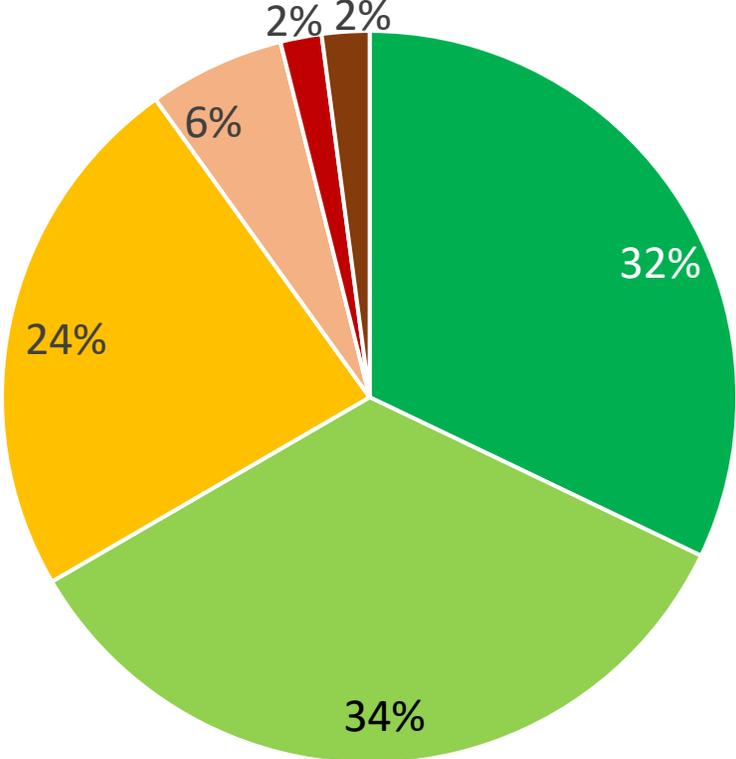
# However, action against air pollution is seen to have an adverse impact on development

Focusing on air pollution will negatively influence growth and employment opportunities



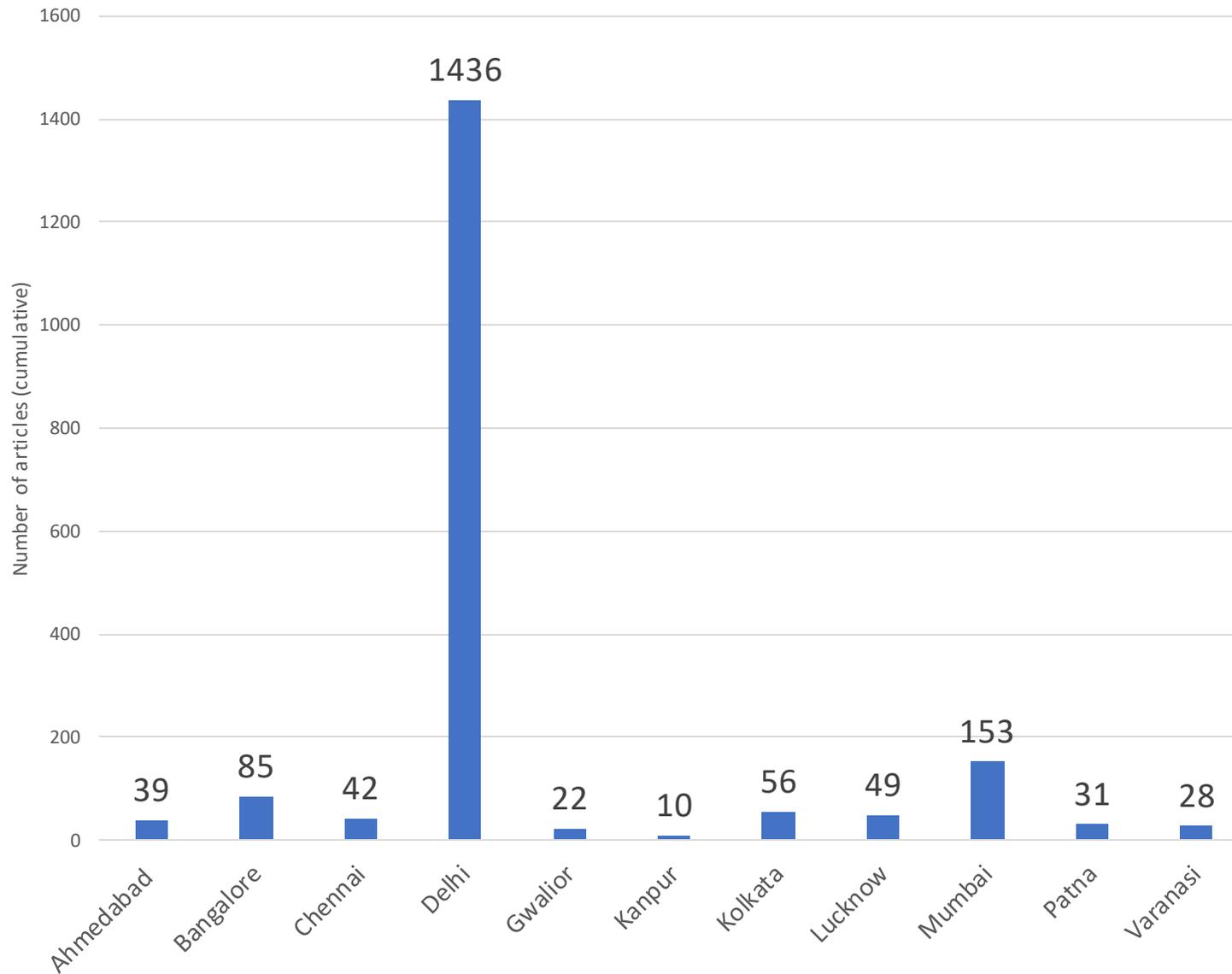
- Agree Strongly
- Agree Moderately
- Agree Slightly
- Disagree Slightly
- Disagree Moderately
- Disagree Strongly

Economic development and protecting the environment are conflicting actions



- Agree strongly
- Agree moderately
- Agree slightly
- Disagree slightly
- Disagree moderately
- Disagree strongly

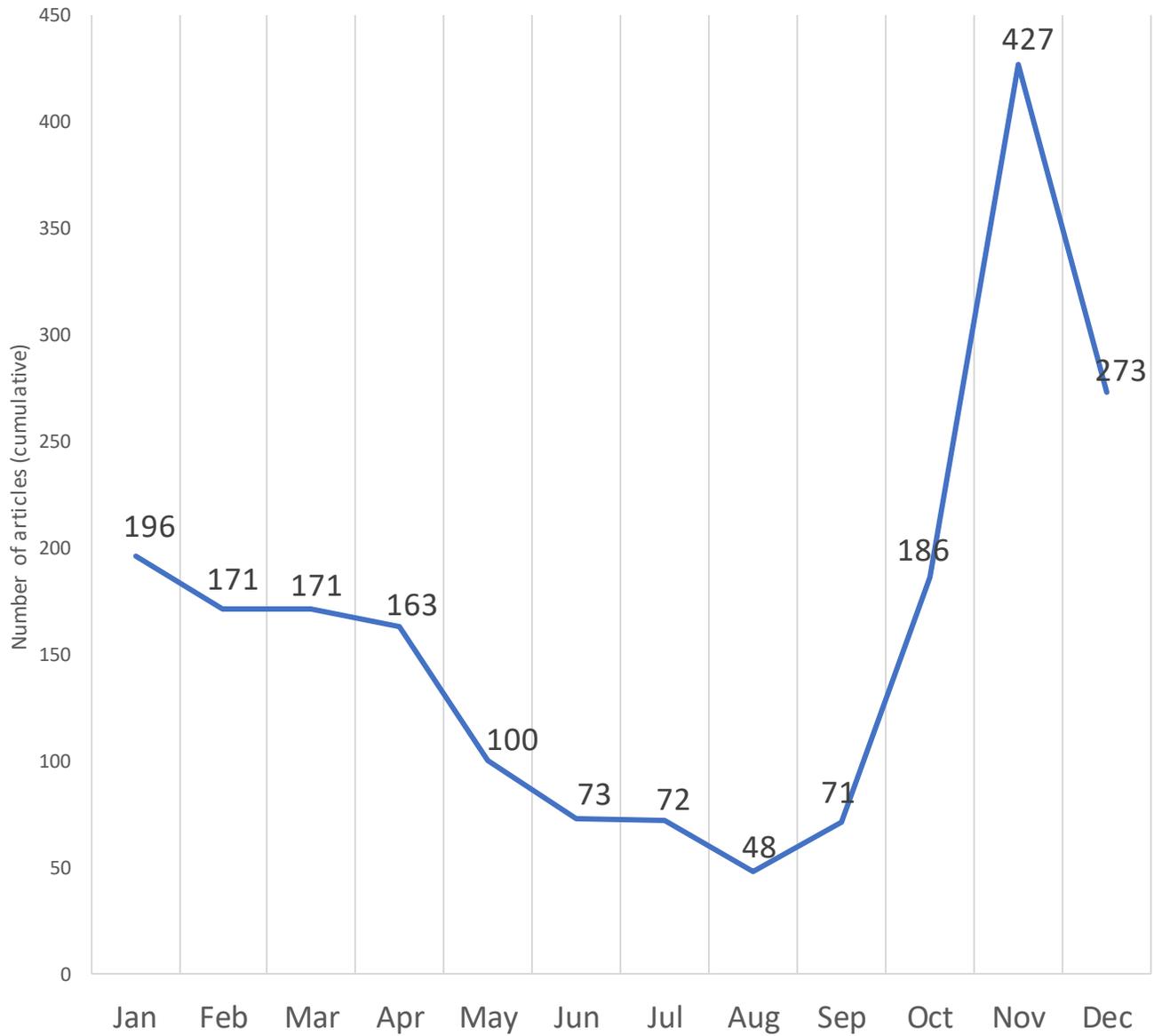
The Delhi effect



Media coverage in Delhi far outstrips other cities

The coverage for the Tier II cities is very low as even vernacular media based reportage on air pollution was severely limited

Cumulative media coverage on Air Quality (June 2015 – June 2017)



## Media attention is cyclical

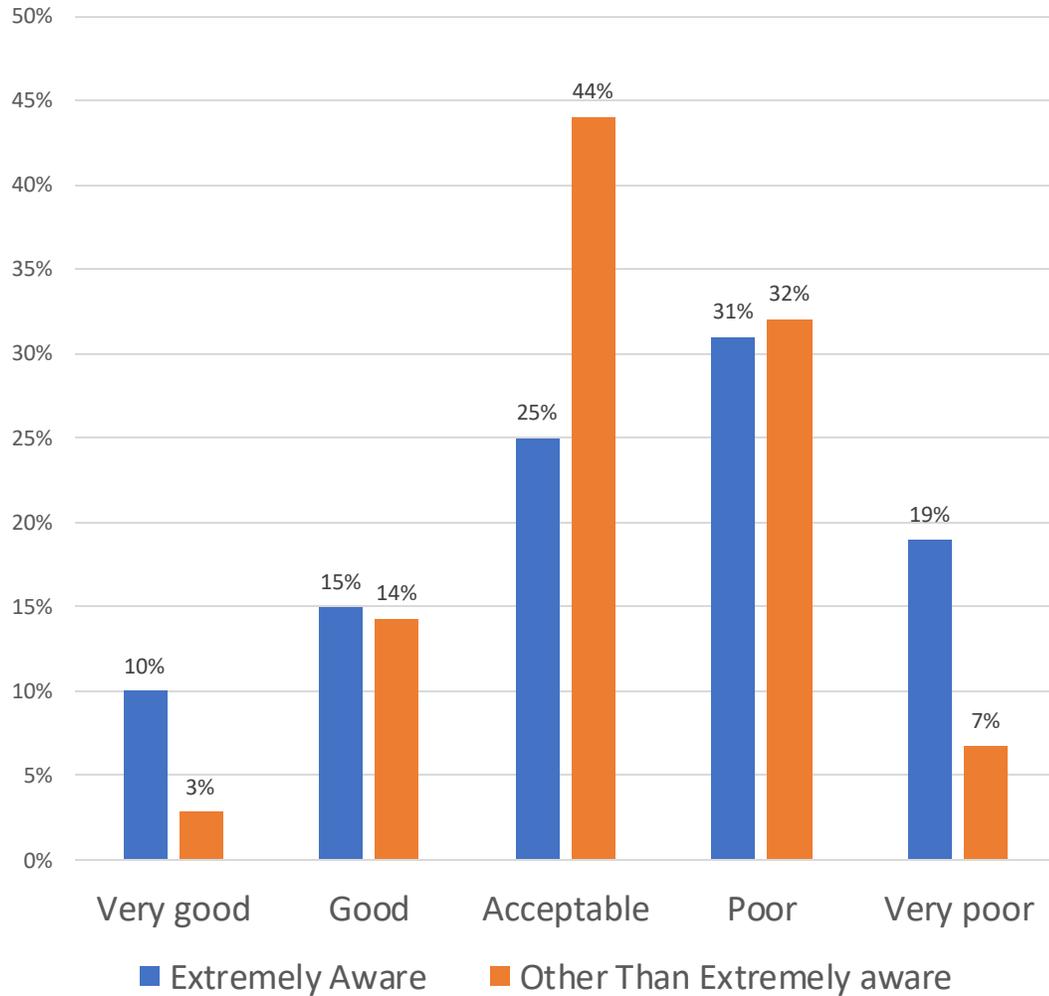
- Conversations on air pollution subside during the months of May - September
- Focus on air pollution starts from Diwali and continues till January due to prevalent haze conditions and issues emanating from crop burning
- Increased number of stories during March and April could be attributed to the government's odd-even scheme in 2016

Cumulative media coverage on Air Quality (June 2015 – June 2017)

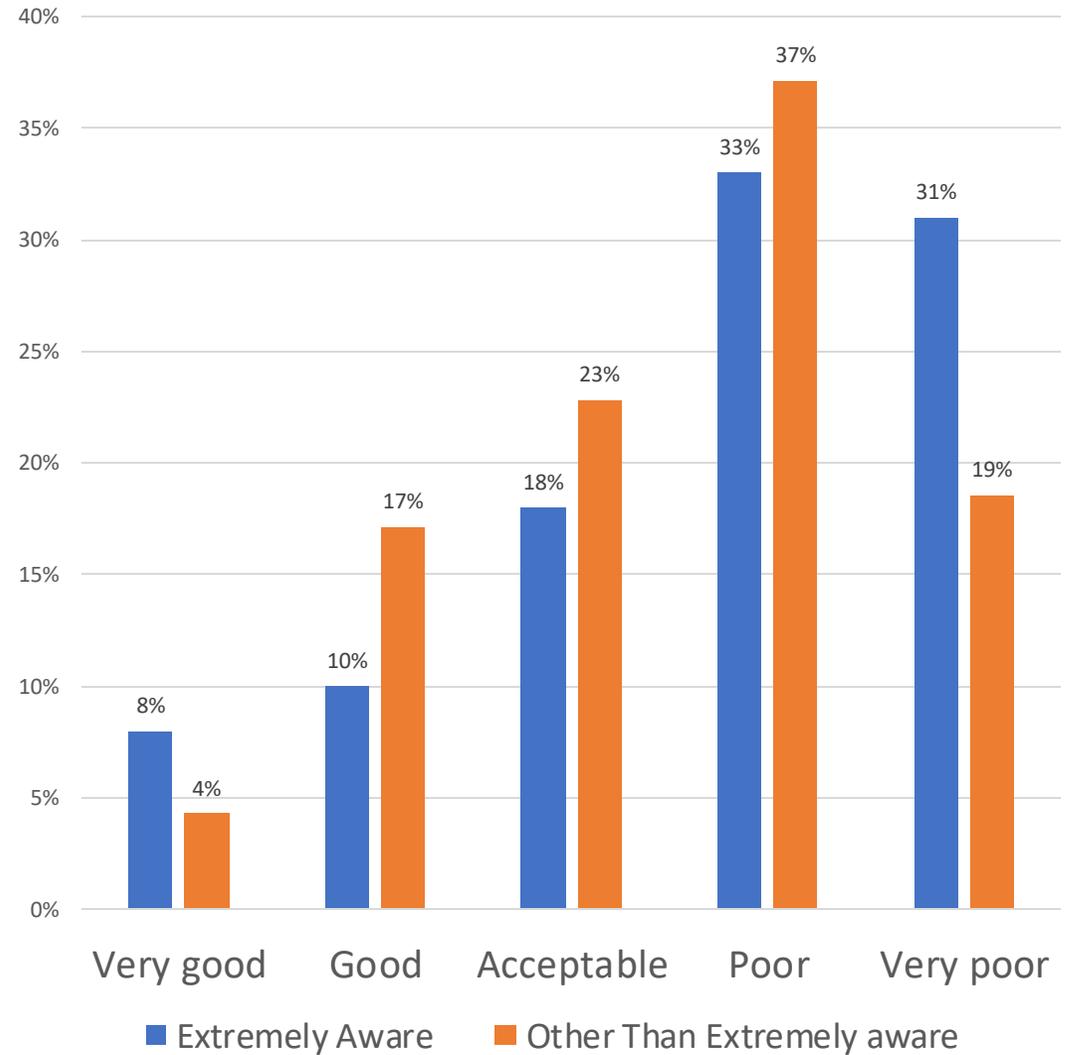
Note: Part of an overall analysis and not part of the public perception survey.

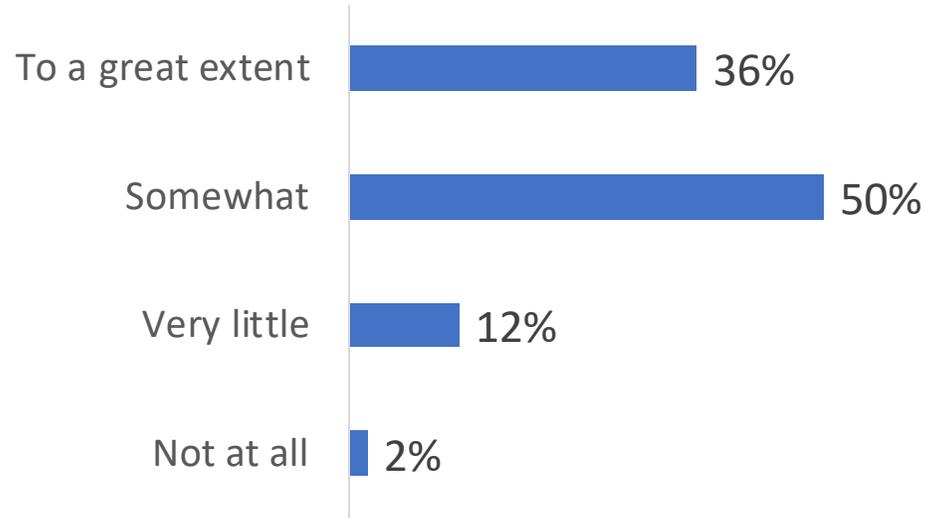
# Respondents in Delhi have a poorer opinion of the air in their city

## Rating of Air Quality in your city – Cities other than Delhi

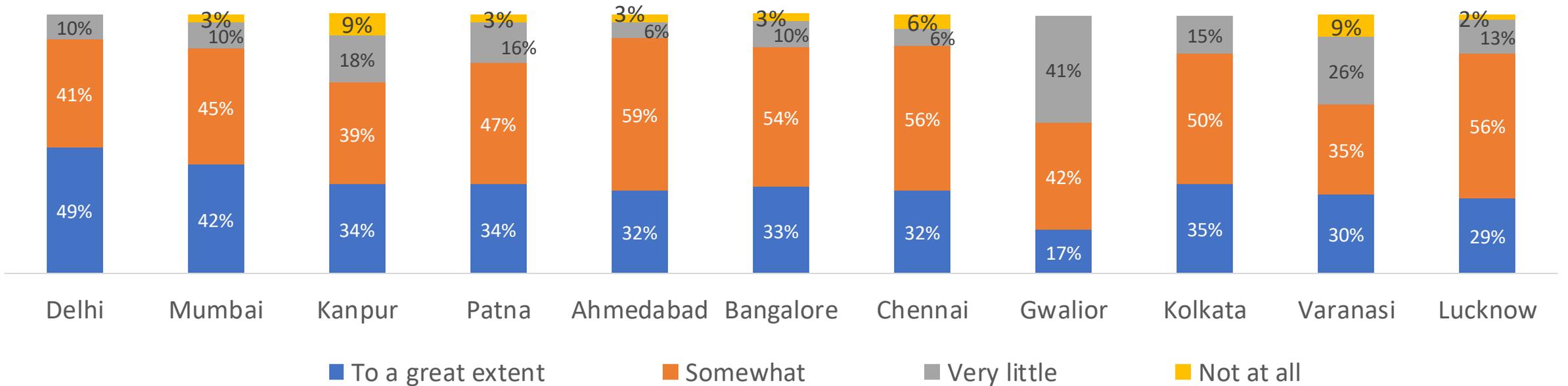


## Rating of Air Quality in your city - Delhi





People across cities show awareness of actions being taken in Delhi



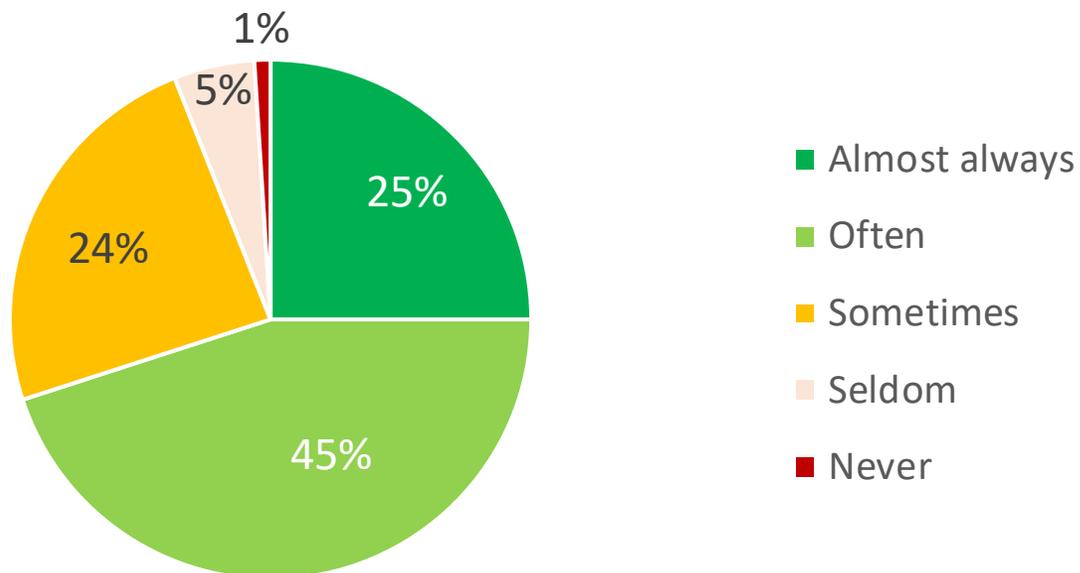
People want to know more

## Much of the information sought is about impact on health

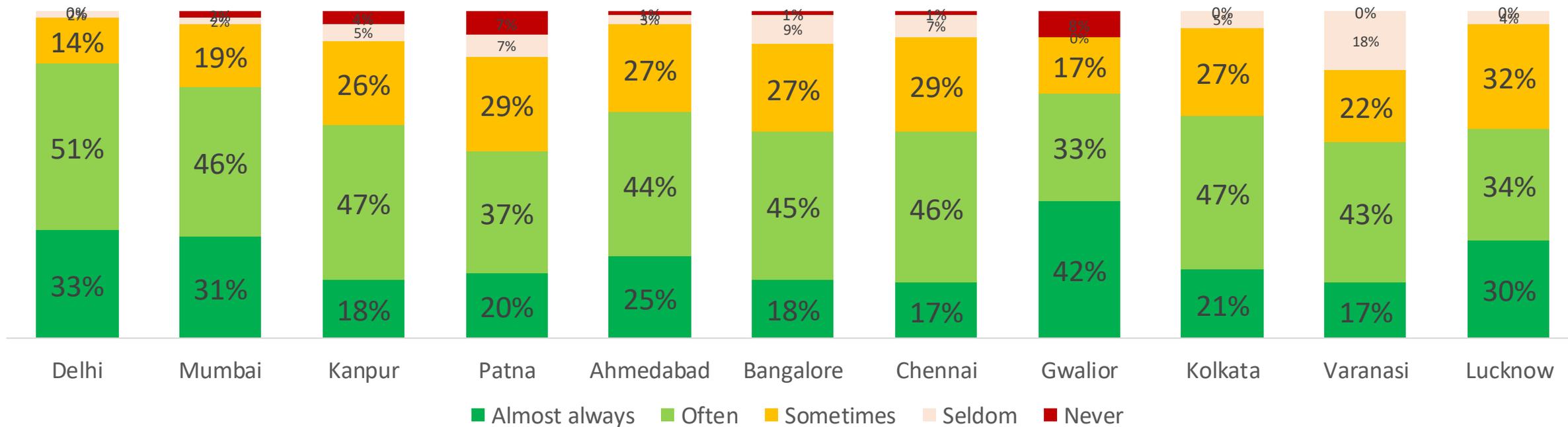
	Seek	Have Access to	Cannot Access
<b>Increase in occurrence of diseases resulting due to air pollution (Asthma, skin infection, poor visibility)</b>	<b>55%</b>	<b>29%</b>	<b>26%</b>
<b>Decrease in green areas across the city</b>	<b>53%</b>	<b>35%</b>	<b>18%</b>
Comparison of air pollution level among various cities on a national or global level	47%	39%	8%
Comparison of people who are dying because of other major diseases vs. air pollution	42%	24%	18%
Government guidelines and regulations to minimize air pollution	49%	33%	16%
Measures taken by your local authority to curb air pollution	45%	28%	17%
Key sources of air pollution in your city	50%	35%	15%
<b>Information on measures individuals can take to protect themselves from health impacts</b>	<b>53%</b>	<b>28%</b>	<b>25%</b>
Information on measures individuals can take to reduce their own contribution to air pollution	51%	35%	16%
Comparing cost of interventions for reducing air pollution and that on social/environmental activities	47%	24%	23%
Air pollution forecasts for your city and advisories/warnings in advance of extreme episodes	48%	30%	18%
<b>How other cities and countries have cleaned up air pollution</b>	<b>53%</b>	<b>31%</b>	<b>22%</b>
Information about medical expenses incurred by the public towards diseases caused by air pollution	49%	25%	24%
Adverse impact on other vital resources such as water, land due to air pollution	51%	29%	22%
<b>Adverse impact on the child health</b>	<b>52%</b>	<b>32%</b>	<b>20%</b>
Adverse impact on the economic growth and global standing of the country	50%	29%	21%

**\*Out of 1102 respondents, 2% respondents do not seek any kind of information**

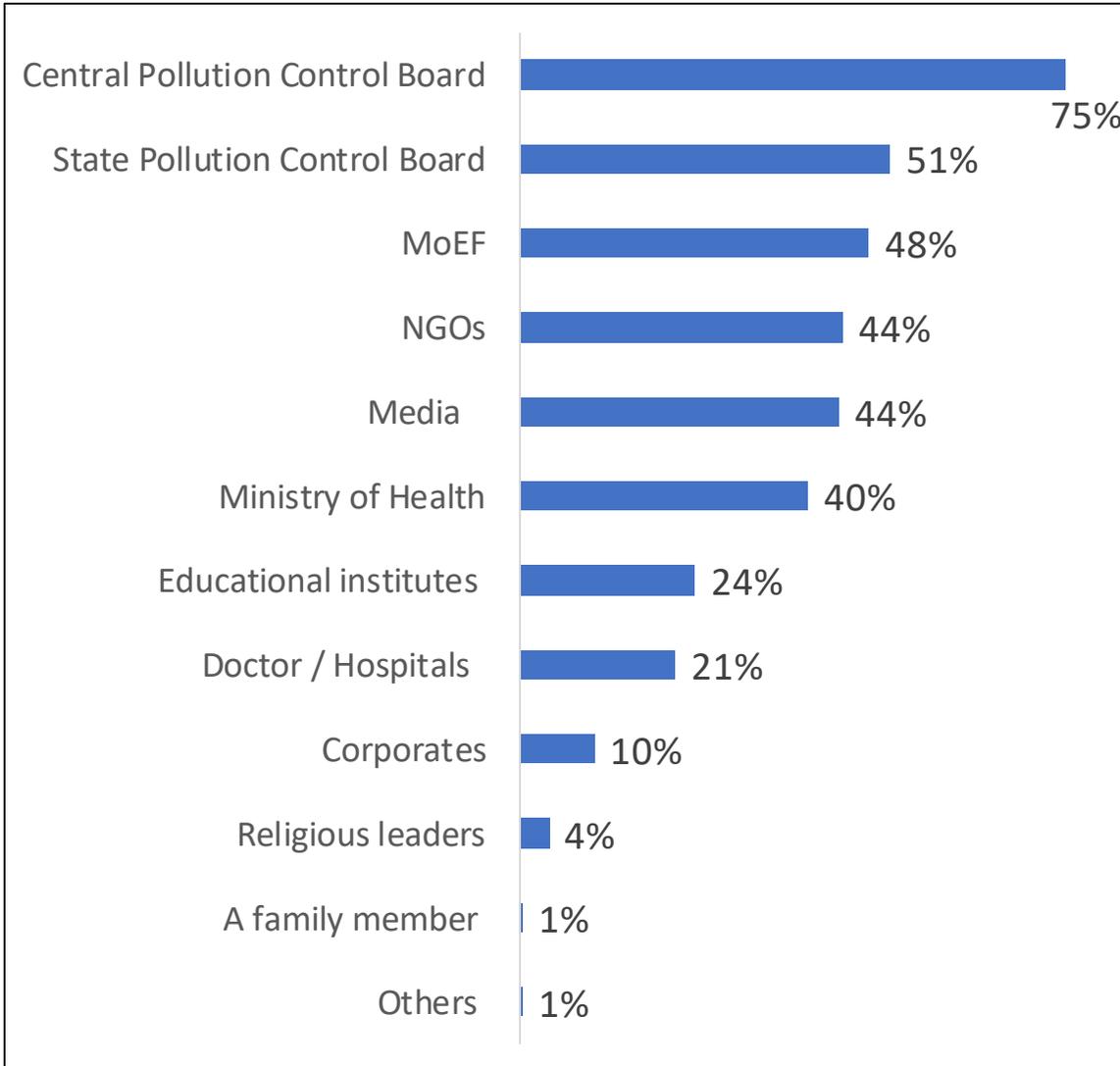
# Frequency of seeking information



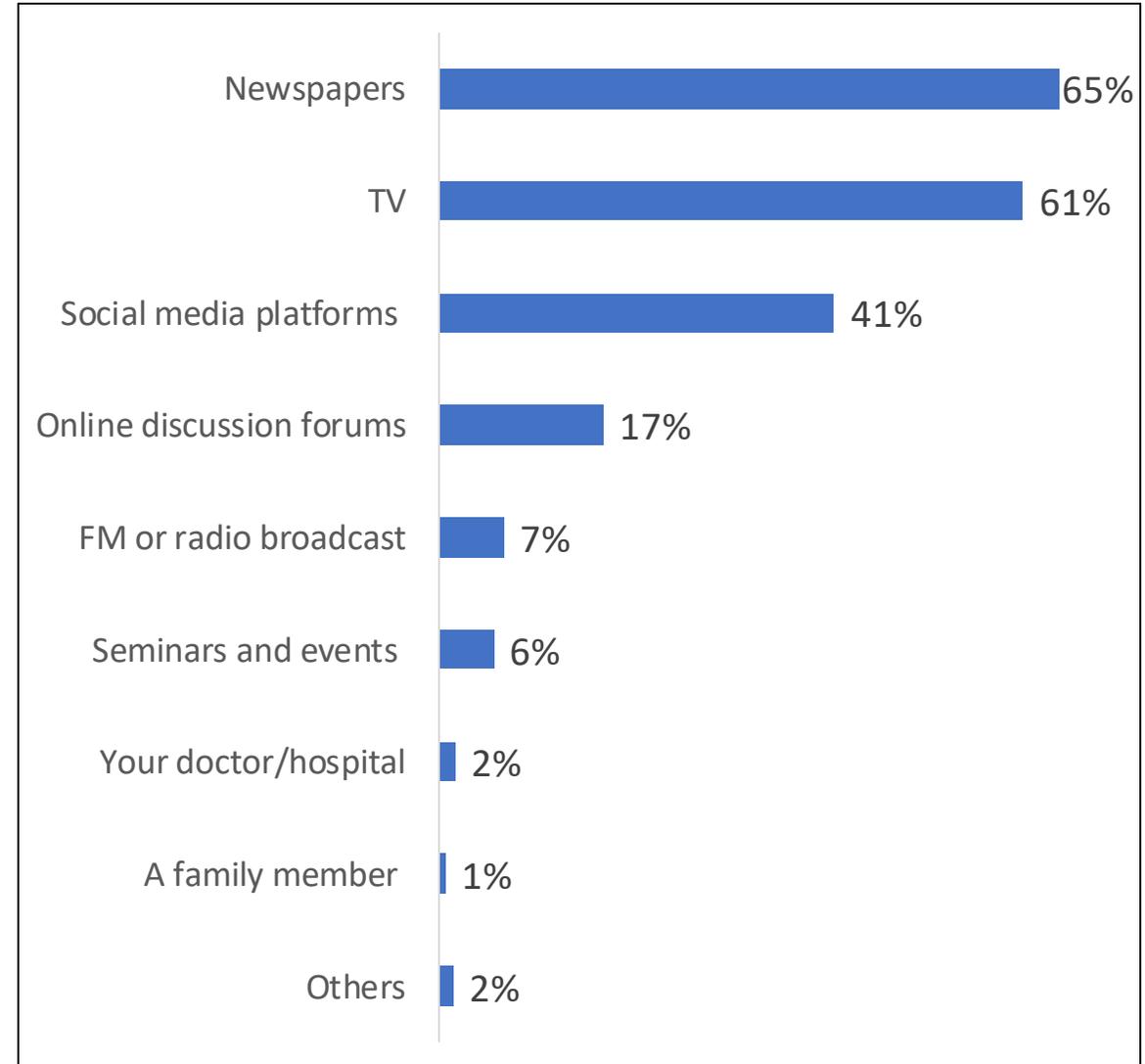
- 70% of the respondents are seeking information on air pollution frequently
- Respondents from Delhi are the most active seekers with nearly 84% seeking information frequently



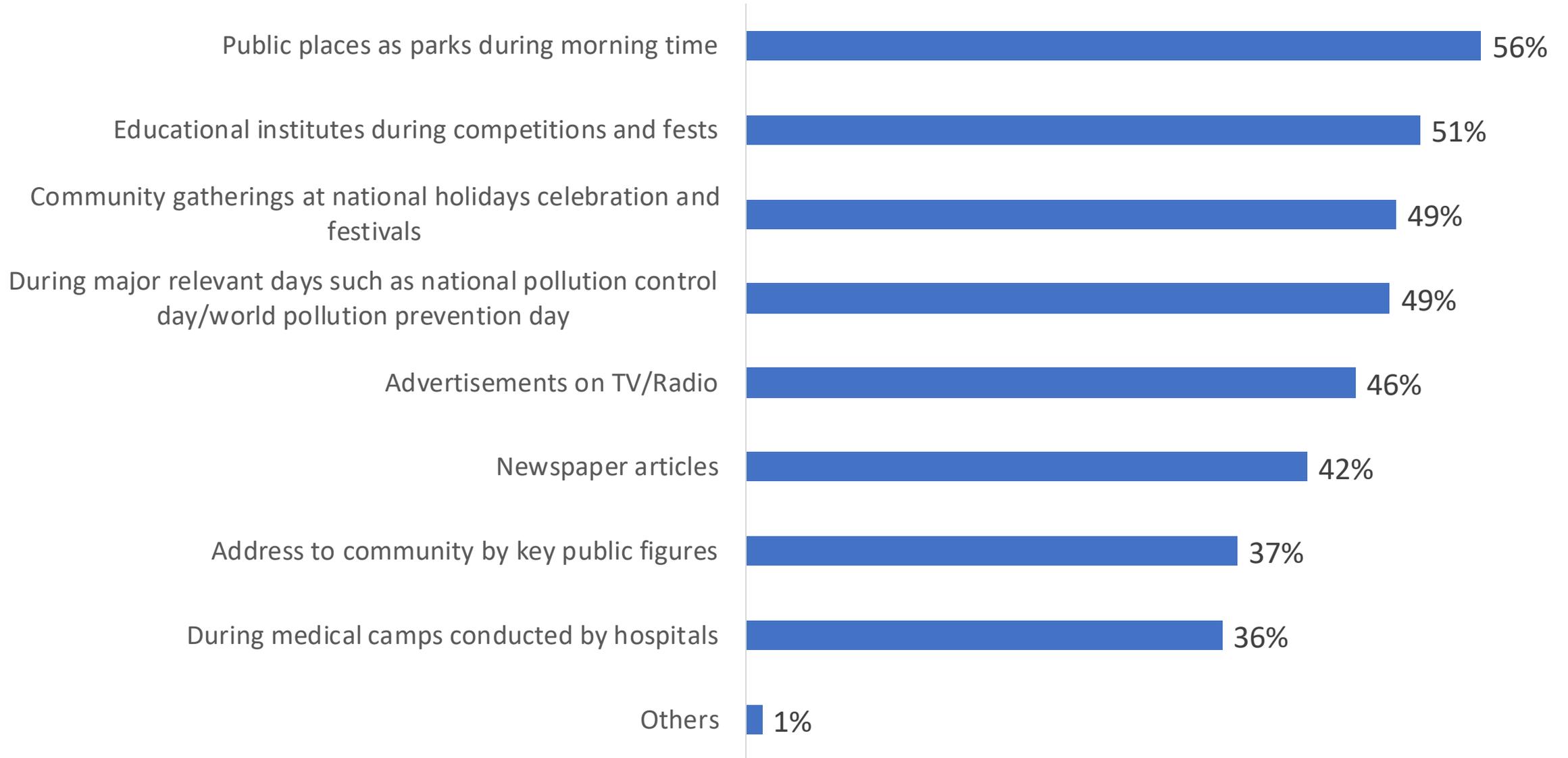
## The Government is a trusted source of information



## Newspapers and TV are preferred mediums



## When does the public want to be engaged?



# In summary

- Majority of respondents across cities claim to be reasonably aware about air pollution - actual of understanding/knowledge appears to be lower
- Lack of appreciation of the scale of the problem and effort needed to resolve it
- General unhappiness with current Government efforts - willingness to support a number of government policies and citizen driven interventions
- Actions in the capital are being noticed around the country
- People are actively seeking more information - impact on health dominates public concern