

STUDY

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# Climate Change and Public Perception in Brazil 2022



Instituto  
de Tecnologia  
& Sociedade  
do Rio



YALE PROGRAM ON  
Climate Change  
Communication



# Technical Specifications

## Goal

Gathering, for the third consecutive year, data on the Brazilian population's perception towards issues surrounding the environment and the climate.

## Fieldwork period

From November 25<sup>th</sup>, 2022, to January 26<sup>th</sup>, 2023.

## Sample size

2,600 interviews.

## Method and data collection

Quantitative research/ Phone interviews - *C.A.T.I. system*.

## Weighting

Weighting factors were calculated by Ipec for the correction of demographic quotas, based on data provided by PNAD-IBGE.

## Universe

Brazilian population aged 18 and older.

## Margin of error

2 percentual points for the sample's total, considering a 95% trust level.

# Technical Specifications

**Sample's design and selection:** A sample of 2,600 interviews, representing the Brazilian population aged 18 or older. Landline and cellphone numbers were randomly selected for the interviews.

**Number of interviewers:** 126 interviewers.

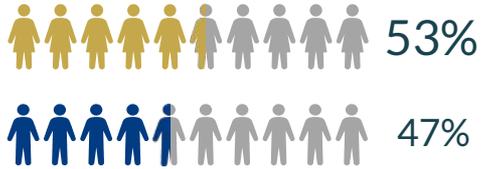
**Data-collecting instrument:** A questionnaire structured by Ipec and submitted for client approval, lasting, on average, 22 minutes.

**Quality control:** 100% of the questionnaires were submitted to an electronic consistency test to verify the integrity of the answers. At least 20% of interviewers' material was reviewed and verified.

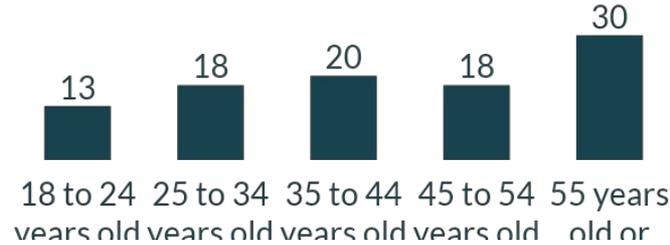
- Fieldwork and processing was conducted with the support of this interior structure and through partners.
- Ipec's activities are regulated under the Brazilian Market Research Association's (ABEP) and the European Society for Opinion and Marketing Research's (ESOMAR) ethical standards.
- In addition, our procedures are in accordance with the International Quality Standards in Market, Opinion, and Social Research - ISO 20252 and the International Quality Standards in Quality Management ISO 9001.

# SAMPLE PROFILE

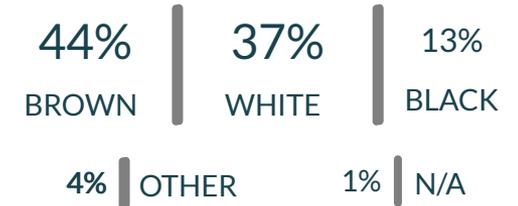
## GENDER



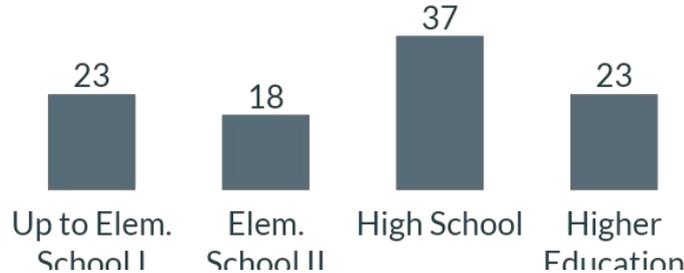
## AGE



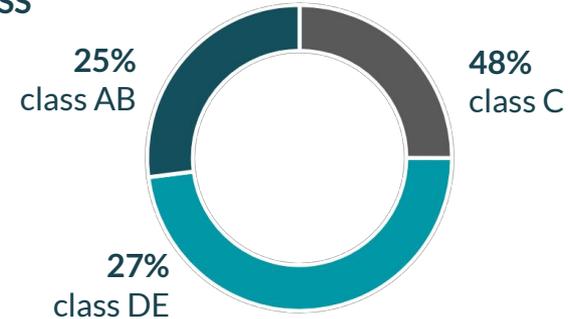
## ETHNICITY



## LEVEL OF EDUCATION



## CLASS



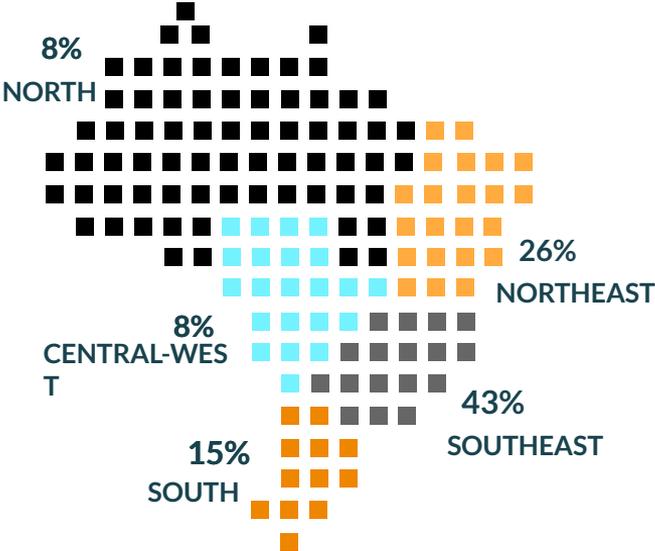
Base: Sample (2600)

(%)

F1) GENDER / CLASS / F2) What is your age? / LEVEL OF EDUCATION) Up to what school grade have you attended and completed? (SPONTANEOUS) / ETHNICITY) Now, I will ask you a question exactly as it is asked by IBGE when classifying the Brazilian population. Your skin color or ethnicity is: (READ OPTIONS - SA)

# SAMPLE PROFILE

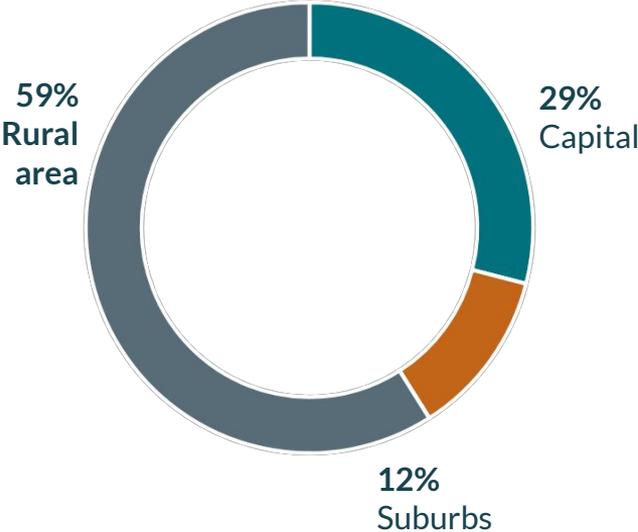
## REGION



Base: Sample (2600)

F3) In what city and state do you live?

## City Condition (%)

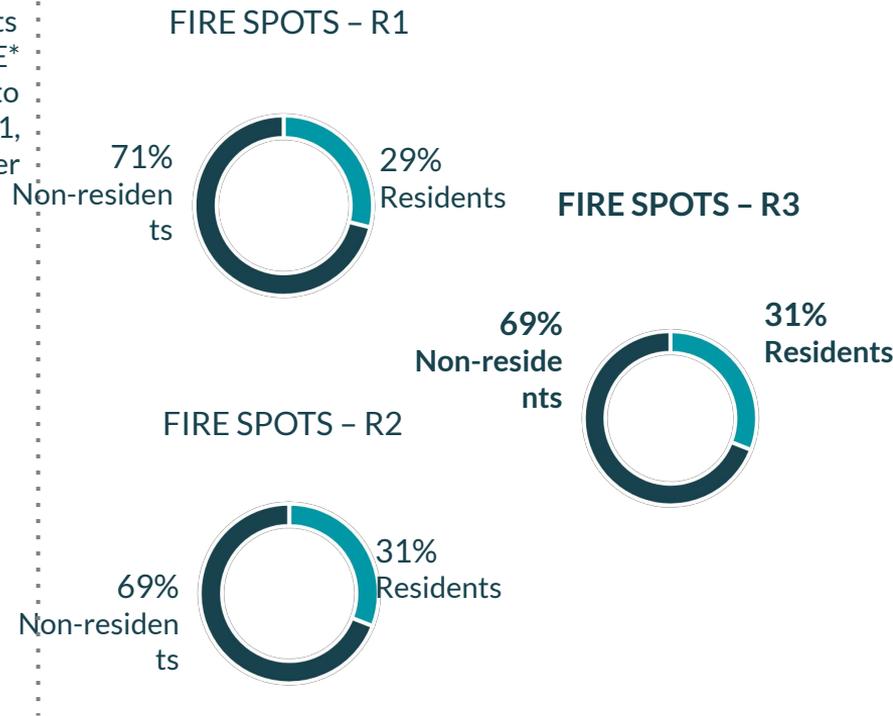


# FIRE SPOTS

(%)

To establish fire spot areas, 10 states with the highest number of fire spots throughout the period of 1 year were selected, in accordance with INPE\* data. For the first study round, the period was from 09/01/2019 to 09/01/2020, for the second round it was from 09/01/2020 to 09/01/2021, and for the third round it was from 09/01/2021 to 09/01/2022. Other states were classified as “Non-residents”.

10 states with the highest number of fire spots			
	Round 1	Round 2	Round 3
1 <sup>st</sup>	MT	MT	PA
2 <sup>nd</sup>	PA	PA	MT
3 <sup>rd</sup>	MA	MA	MA
4 <sup>th</sup>	AM	AM	AM
5 <sup>th</sup>	MS	TO	BA
6 <sup>th</sup>	TO	RO	PI
7 <sup>th</sup>	PI	PI	MG
8 <sup>th</sup>	MG	MG	TO
9 <sup>th</sup>	RO	BA	RO
10 <sup>th</sup>	GO**	MS	AC**



Base: Sample (2600)

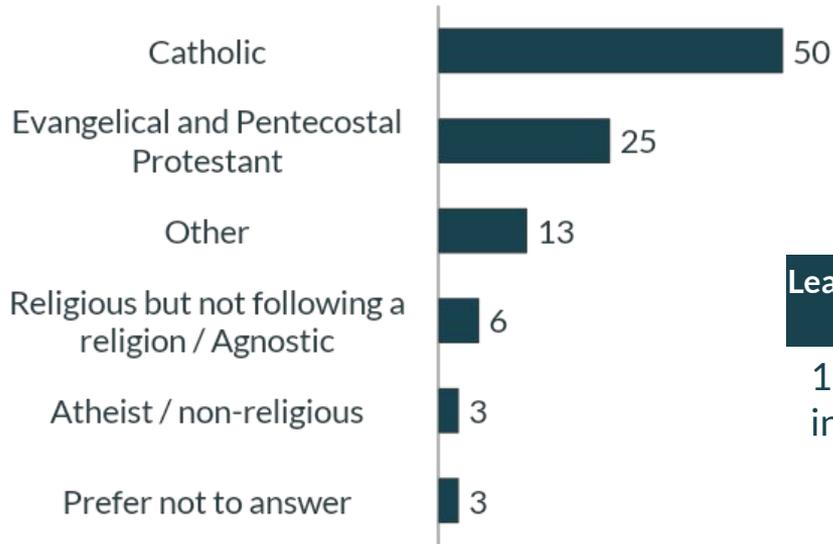
\*Source: INPE - National Institute for Space Research, 2022. Portal for Monitoring Fire Spots and Vegetation Fires. Available at <http://www.inpe.br/queimadas>. Accessed on: 01/24/2023

\*\* Those are the states that appear on the list only in one round, being either the first, second, or third.

# SAMPLE PROFILE

(%)

## RELIGION



## POLITICAL POSITION

**22%**

Leaning towards the  
LEFT

18% in 2021, 16%  
in 2020

**19%**

CENTER

23% in 2021, 25%  
in 2020

**35%**

Leaning towards  
the RIGHT

32% in 2021, 33%  
in 2020

24% DK | DA  
27% in 2021, 25%  
in 2020

Base: Sample (2600)

**RELIGION**) What is your religion or cult? (SPONTANEOUS – SA) /

**Q2.1.9**) In politics, people usually talk about the “left”, “right”, and “center”. Do you define yourself as: (READ OPTIONS – SA) /

# SAMPLE PROFILE

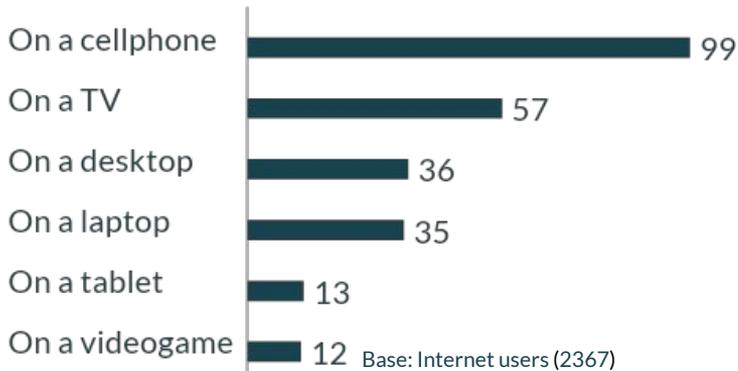


**Internet users**  
(used it within the last 3 months)



**Non-users**

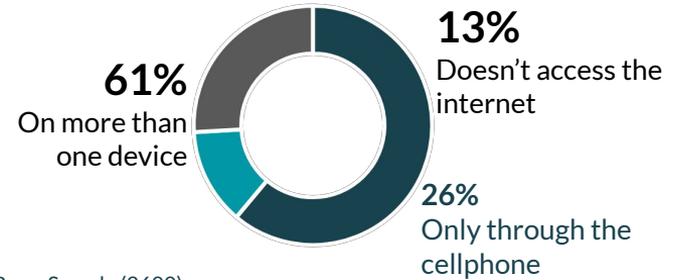
## DEVICE USED



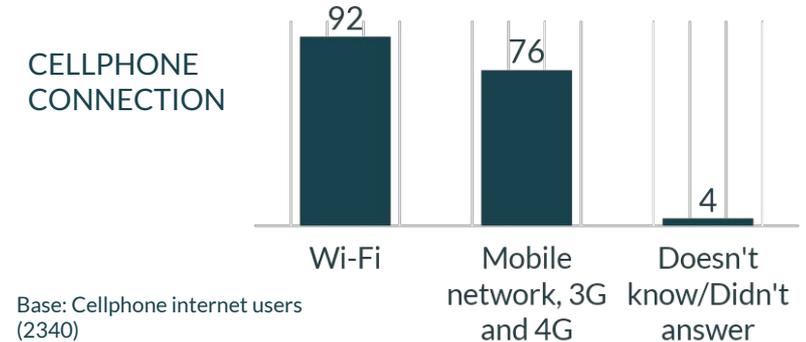
I.M.: 2.52

## INTERNET ACCESS DEVICES

(%)



## CELLPHONE CONNECTION



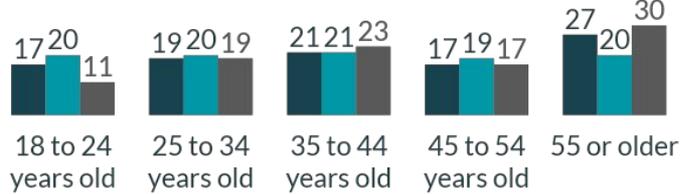
# SAMPLE PROFILE- Political Position

(%)

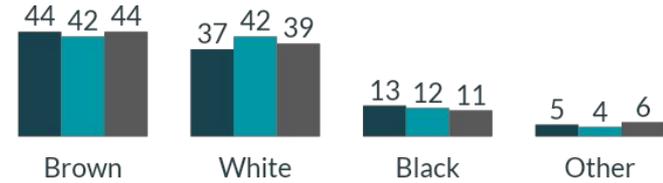
## GENDER



## AGE



## ETHNICITY



## LEVEL OF EDUCATION



## CLASS



Towards the left  
 Center  
 Towards the right

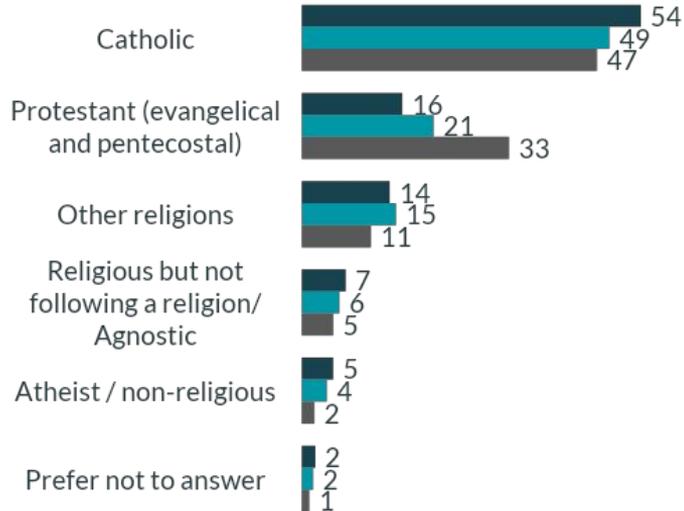
F1) GENDER / CLASS / F2) What is your age? / LEVEL OF EDUCATION) Up to what school grade have you attended and completed? (SPONTANEOUS) / ETHNICITY) Now, I will ask you a question exactly as it is asked by IBGE when classifying the Brazilian population. Your skin color or ethnicity is: (READ OPTIONS - SA)

Base: Sample (2600)

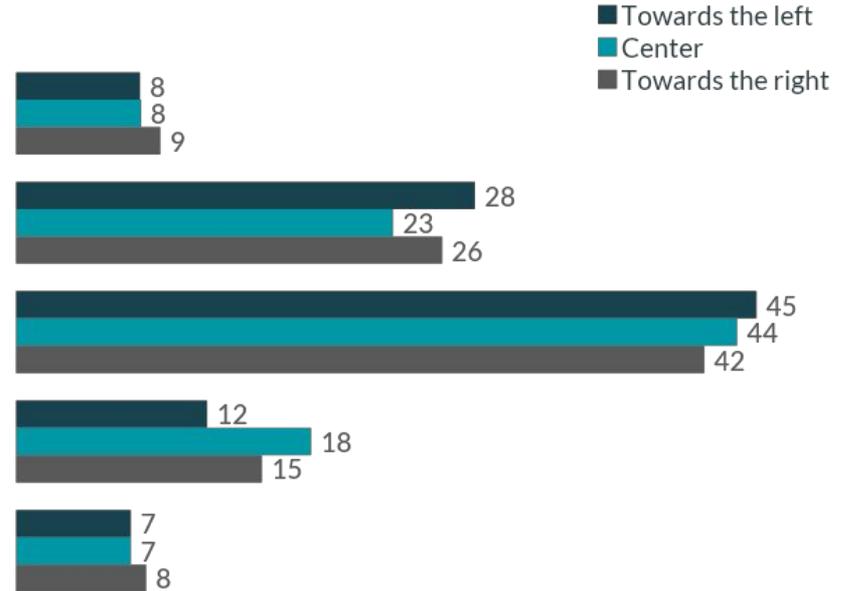
# SAMPLE PROFILE- Political Position

(%)

## RELIGION



## REGION



Base: Sample (2600)

**RELIGION)** What is your religion or cult? (SPONTANEOUS- SA) /  
**F3) In what city and state do you live?**

# SAMPLE PROFILE – Political Position

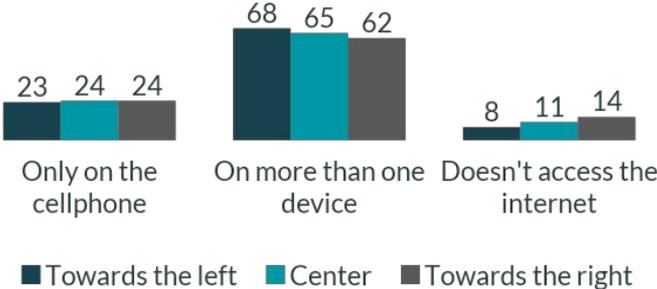
(%)

  
**Internet users**  
 (used it within  
 the last 3 months)

  
**Non-users**

<b>Towards the left</b>	92%	8%
<b>Center</b>	90%	10%
<b>Towards the right</b>	86%	14%

## INTERNET ACCESS DEVICE



Base: Sample (2600)

INTERNET) Have you used the Internet in the last three months? (SA) / INTERNET1) In the last 3 months, you've used the internet: (READ OPTIONS - SA PER LINE)

# RESPONDENTS' BACKGROUND ON MAIN ANALYSIS VARIABLES

## AGE

18 to 24 y.o.	243
25 to 34 y.o.	555
35 to 44 y.o.	631
45 to 54 y.o.	507
55 and older	664

## REGION

North	360
Northeast	580
Southeast	920
South	380
Central-West	360

## POLITICAL POSITION

Towards the left	Center	Towards the right
594	527	925

## LEVEL OF EDUCATION

Up to Elementary School I	334
Elementary School II	427
High School	1084
Higher Education	755

## CLASS

AB	C	DE
1025	1154	421

## INTERNET USAGE

Users	Non-users
2367	233

Sample (2600)

# Through which of these means do you receive most of your information?

I.M.: 4.43



79%

Conversations with relatives, friends, and coworkers (87% in 2021)



70%

Internet websites



67%

WhatsApp



66%

Social networks, such as Facebook, Twitter, or Instagram



56%

Broadcast TV (62% in 2021)



46%

Radio



29%

Cable TV, subscription-based

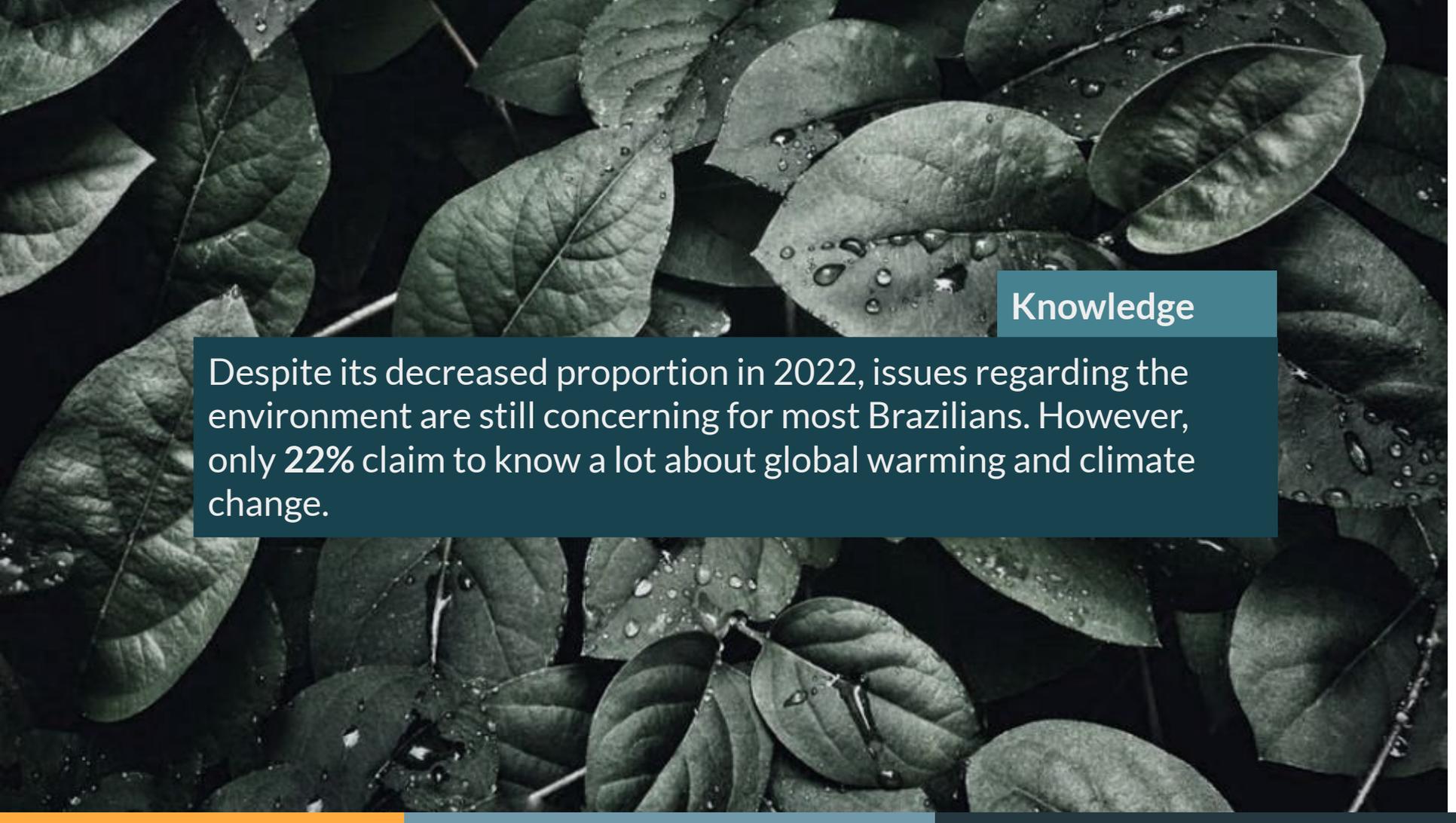


27%

Print newspapers or magazines

Base: Sample (2600)

Q.2.1.8) Usually, through which of these means do you receive most of your information? (READ OPTIONS – SA PER LINE)

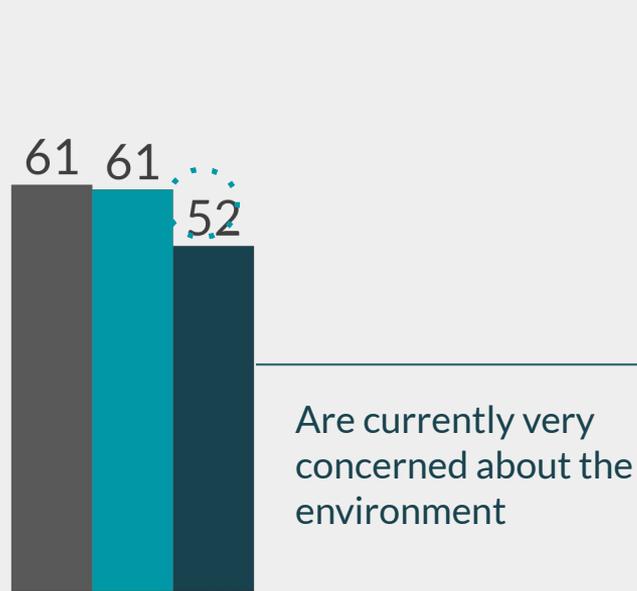
A close-up photograph of several green leaves, likely from a tropical plant, with numerous small, clear water droplets scattered across their surfaces. The leaves are set against a dark, almost black background, which makes the green color and the highlights on the water droplets stand out. The lighting is soft, creating a natural and serene atmosphere.

## Knowledge

Despite its decreased proportion in 2022, issues regarding the environment are still concerning for most Brazilians. However, only **22%** claim to know a lot about global warming and climate change.

# Knowledge and concern

regarding global warming and climate change



- 2020
- 2021
- 2022



Base: Sample 2020, 2021, and 2022 (2,600)

Q1.1.1) How concerned about the environment do you consider yourself to be currently? Would you say you... (READ OPTIONS - SA)

Q1.1.0) How much do you know about global warming or climate change? (READ OPTIONS - SA)

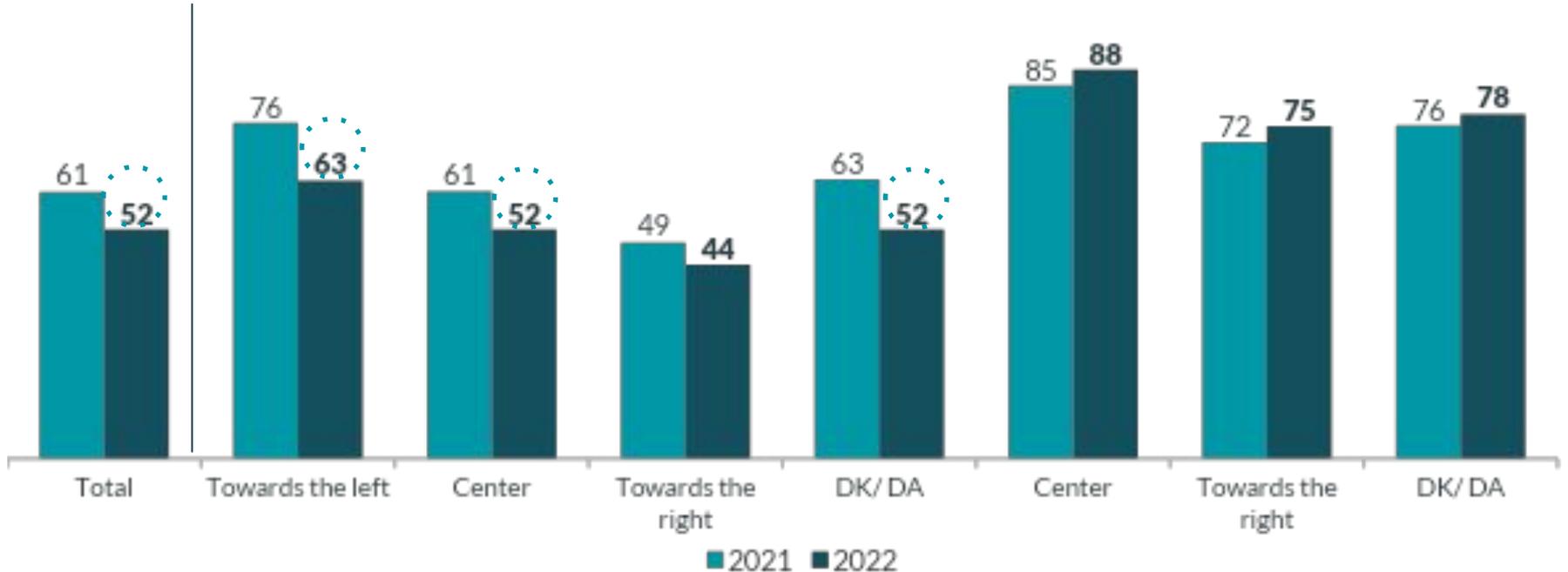


## Environment and politics

Even with its reduced proportion compared to 2021, those leaning towards the left politically continue to be the ones who state a greater level of concern towards the environment.

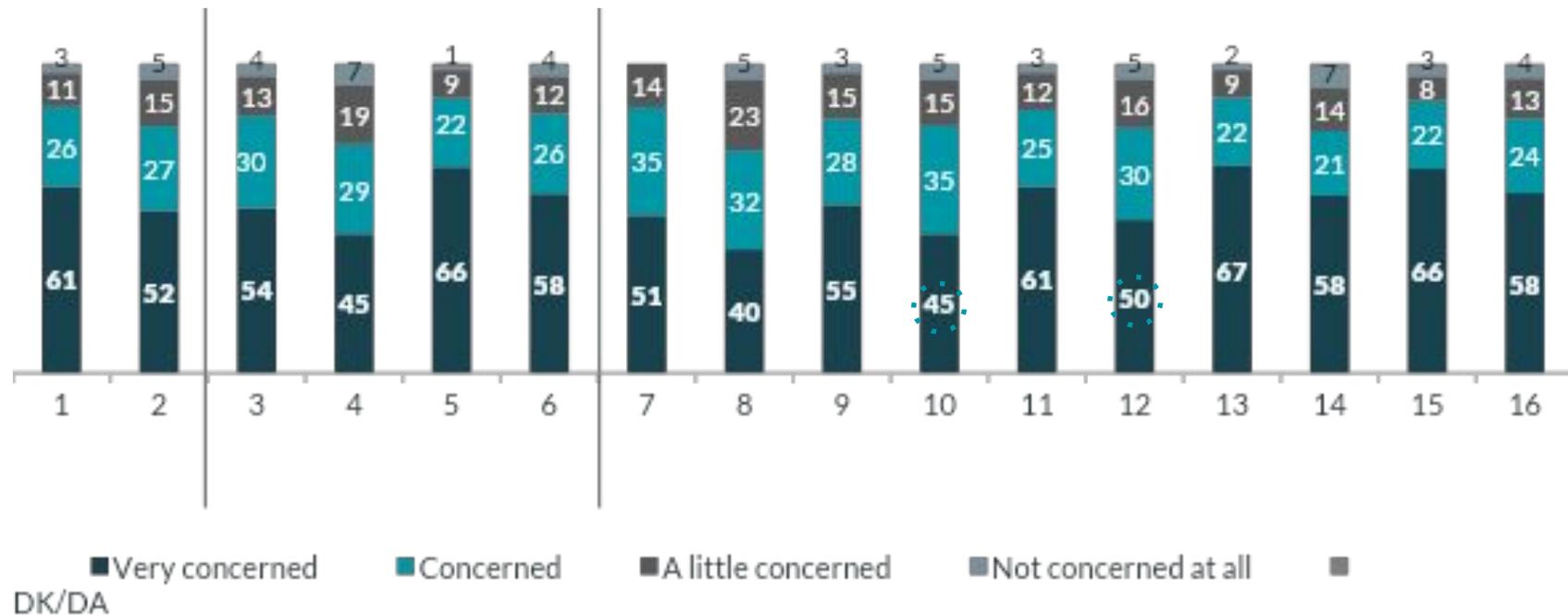
# Level of concern

towards the environment (very concerned)



Q1.1.1) In terms of the environment, how concerned would you consider yourself to be right now? Would you say you are... (READ OPTIONS - SA) Base: Sample (2,600)

# Level of concern towards the environment



Q1.1.1) In terms of the environment, how concerned would you consider yourself to be right now? Would you say you are...

Base: Sample (2,600)

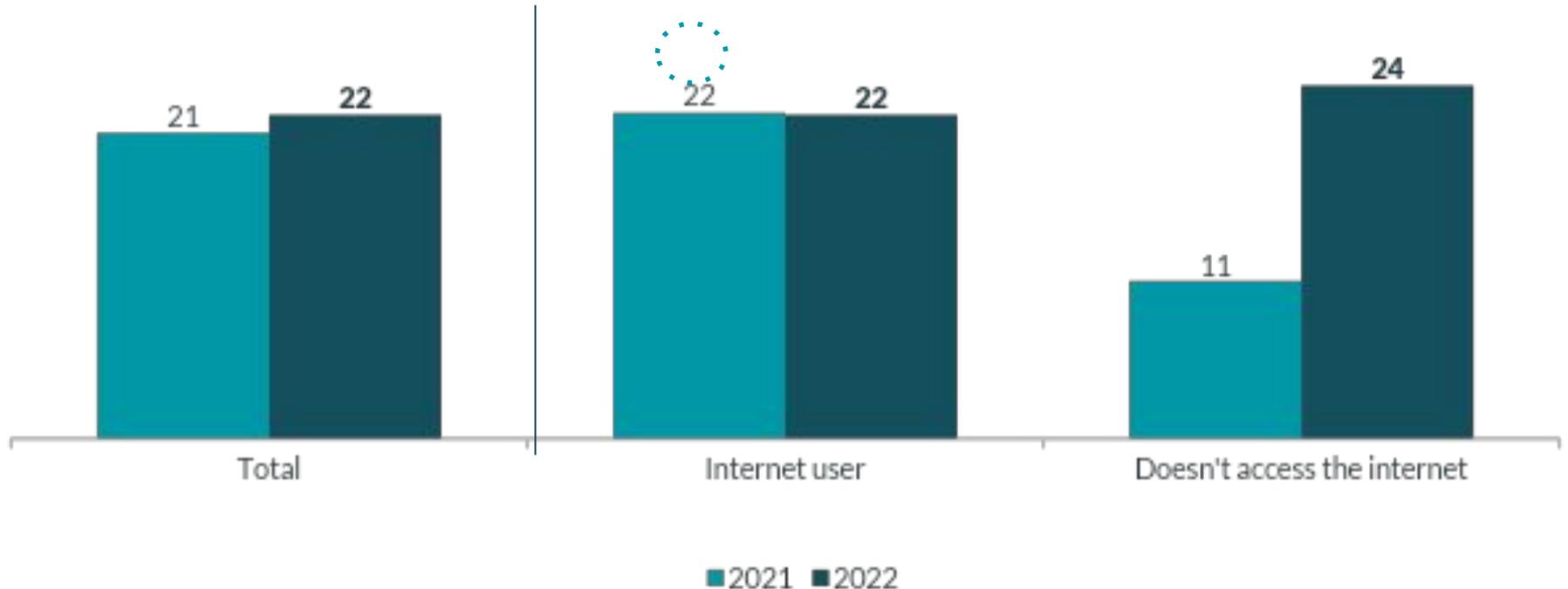
A close-up, slightly blurred photograph of a person's hands holding and reading a newspaper. The newspaper is open, showing text and a small image. The background is out of focus, suggesting an indoor setting like a library or office. The overall tone is professional and focused on information.

## Knowledge

There is a higher proportion of those who state knowing a lot regarding global warming and climate change among those who do not access the Internet.

# Level of knowledge

Stated knowing a lot about global warming and climate change

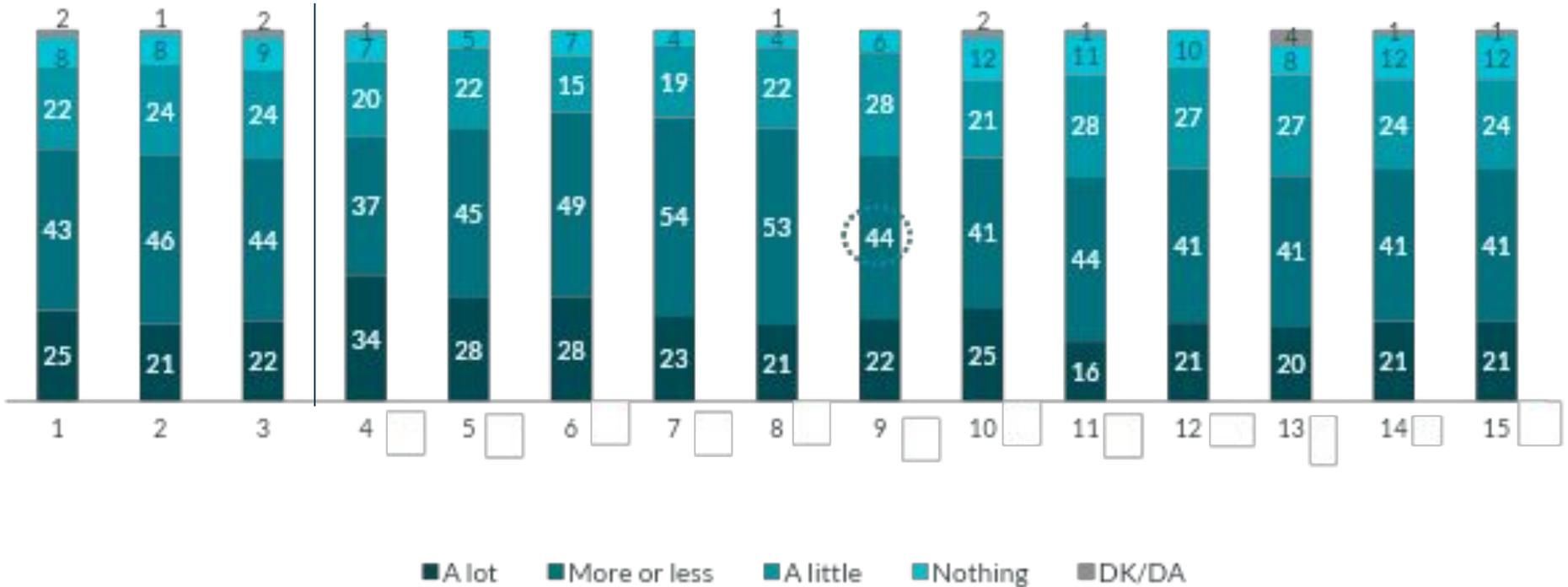


Q1.1.0) How much do you know about global warming or climate change? (READ OPTIONS – SA)

Base: Sample (2,600)

# Level of knowledge

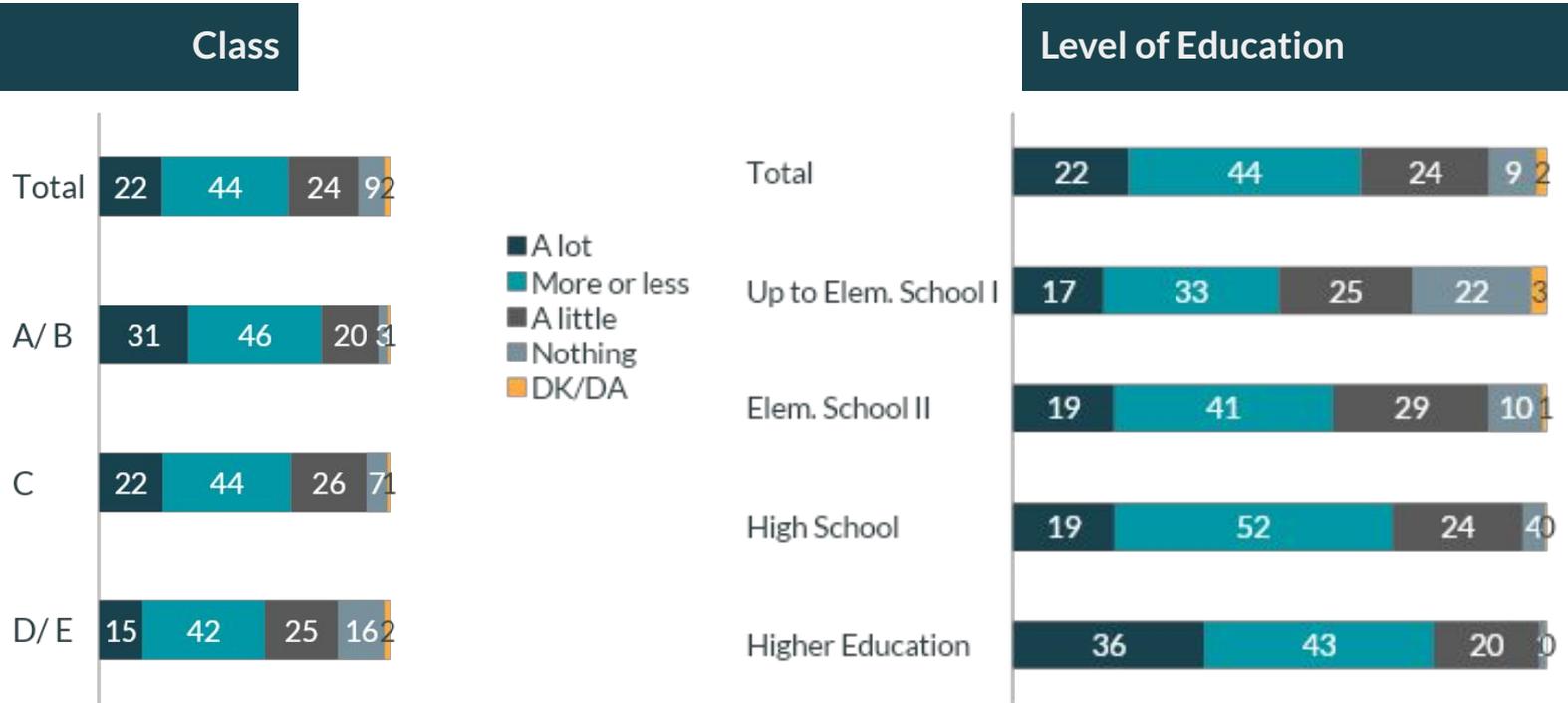
regarding global warming and climate change



Q1.1.0) How much do you know about global warming or climate change? (READ OPTIONS - SA)

Base: Sample (2,600)

# Level of knowledge regarding global warming and climate change



Q1.1.0) How much do you know about global warming or climate change? (READ OPTIONS - SA)

Base: Sample (2,600)

# What is considered more important?

74%

**PROTECTING THE ENVIRONMENT,**  
even if that means low economic  
growth and fewer jobs  
(77% in 2020 and 2021)

Base: Sample (2600)

Q1.2.3) What do you consider more important: (READ  
OPTIONS - SA)

17%

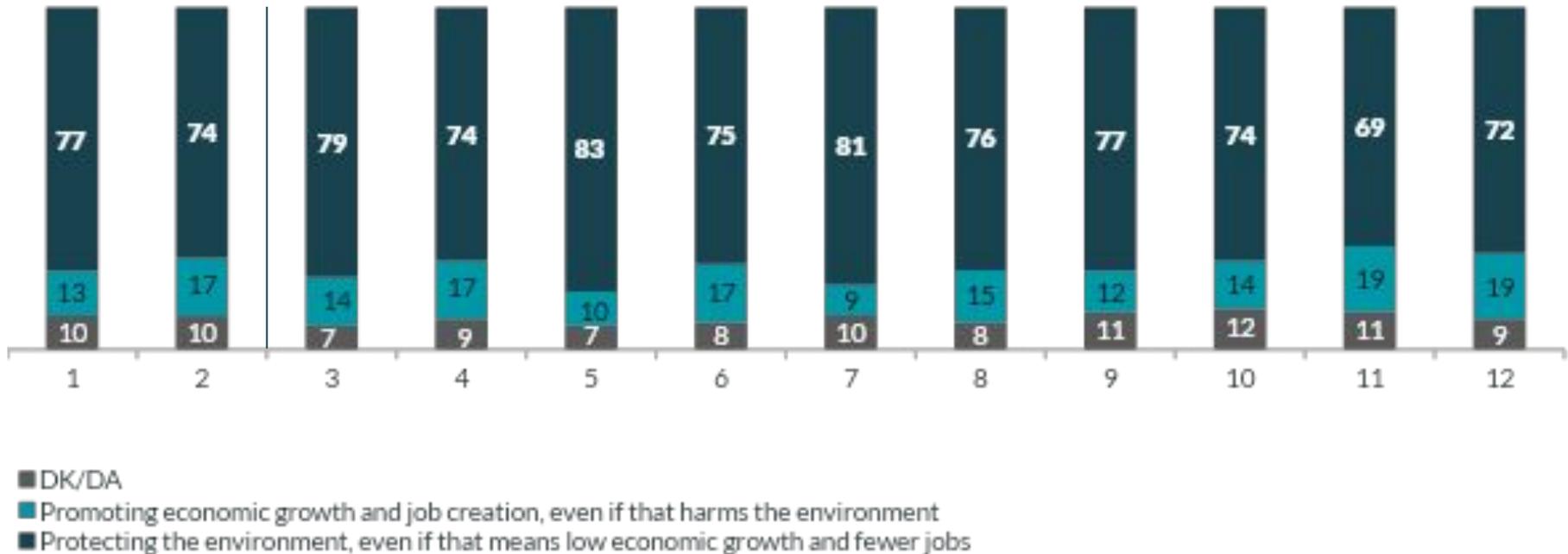
**PROMOTING  
ECONOMIC  
GROWTH**

and job creation, even  
if that harms the  
environment  
(14% in 2020, 13% in 2021)

10%

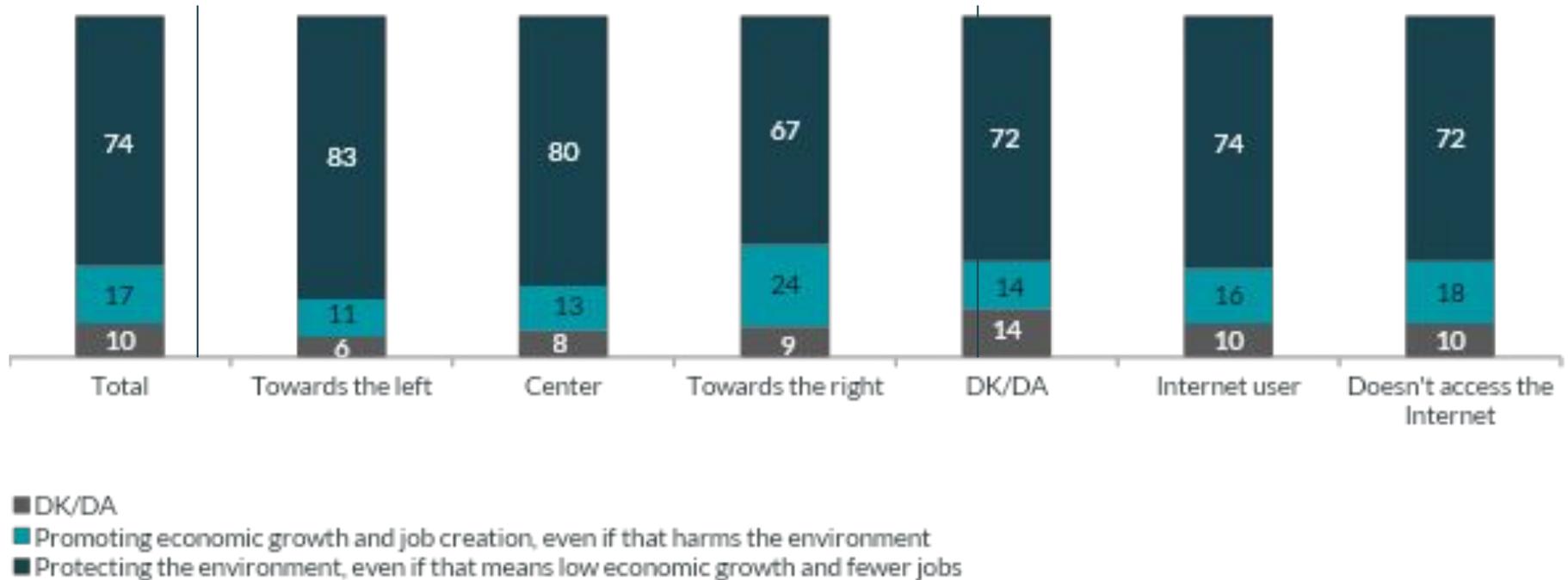
**DK/DA**  
(8% in 2020, 10% in 2021)

# What is considered more important?



Q1.2.3) What do you consider more important: (READ OPTIONS - SA) Base: Sample (2600)

# What is considered more important?



Q1.2.3) What do you consider more important: (READ OPTIONS – SA) Base: Sample (2600)

# Perception regarding the causes behind global warming

**94%**

of Brazilians believe that global warming is happening

(92% in 2020, 96% in 2021)



(77% in 2020 and 2021)

**12%**

As a result of **natural environmental changes** (12% in 2020, 11% in 2021)

**12%**

Both (sp.). (9% in 2020, 11% in 2021)

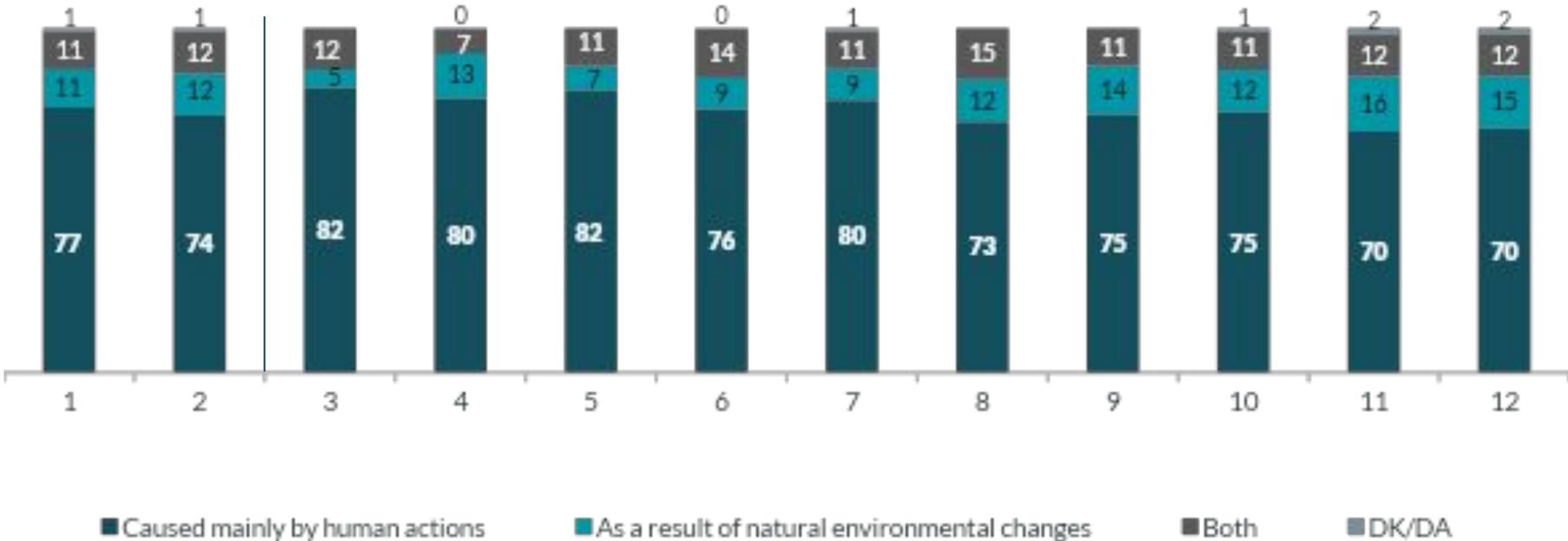
**1%** DK/DA

**Q1.1.2)** Recently, a lot has been said about global warming, meaning, the rise in the average global temperature over the last 150 years, which contributes to causing changes to the planet's climate. In your opinion, is global warming happening? (SA)

**Q1.2.1)** Do you believe it to be caused mainly by human actions or as a result of natural environmental changes? (SA)

Base: Sample (2,600)

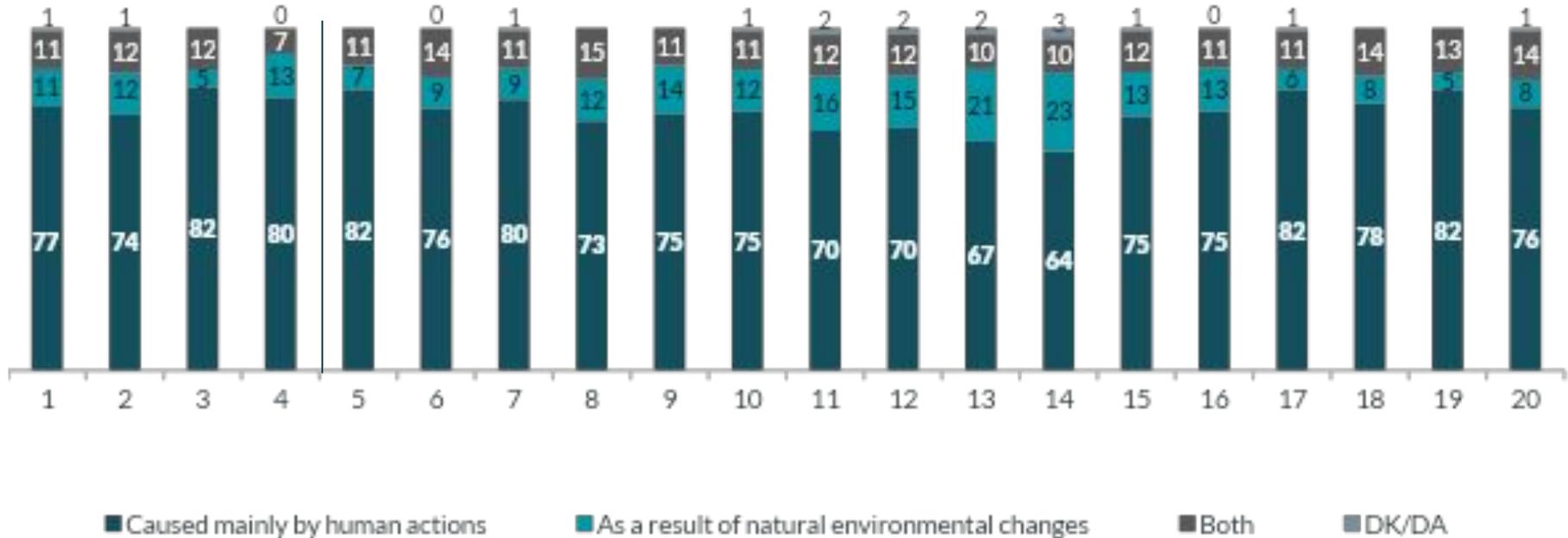
# Perception regarding the causes behind global warming



Base: Sample (2,600)

Q1.2.1) Do you believe it to be caused mainly by human actions or as a result of natural environmental changes? (SA)

# Perception regarding the causes behind global warming



Base: Sample (2,600)

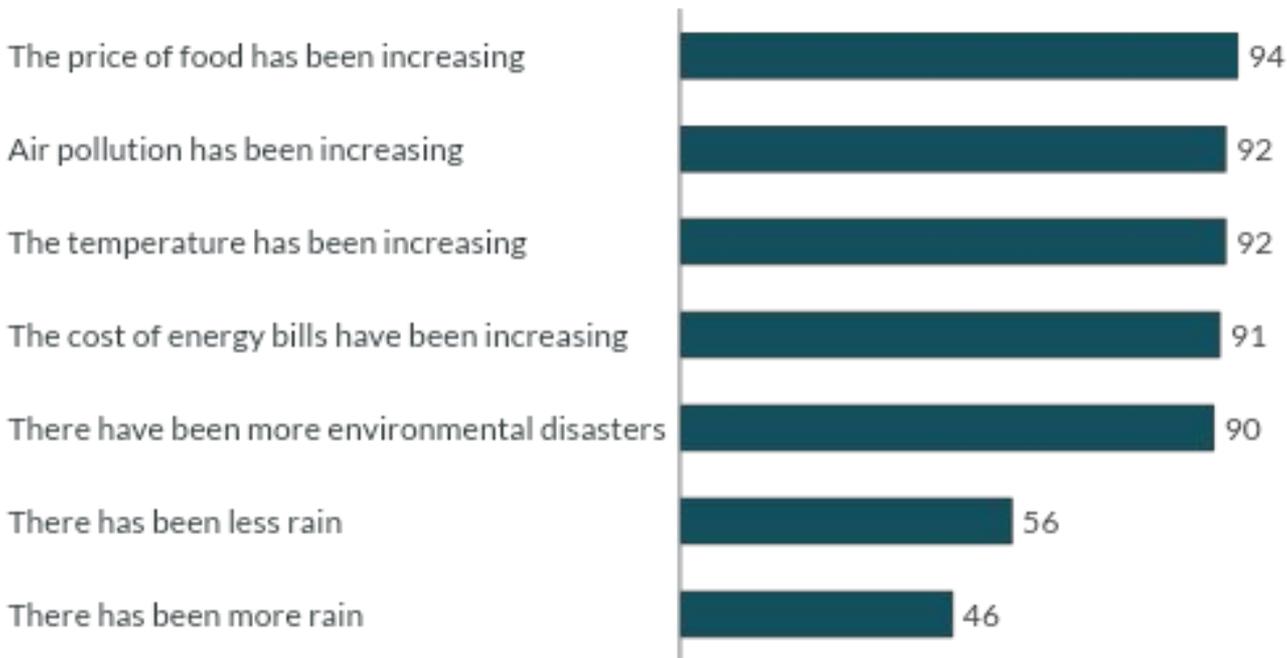
Q1.2.1) Do you believe it to be caused mainly by human actions or as a result of natural environmental changes? (SA)

A close-up, slightly blurred photograph of a person's hands holding and reading a newspaper. The newspaper is open, showing columns of text and a small image. The background is out of focus, suggesting an indoor setting like a library or office.

## Knowledge

Around 9 out of 10 Brazilian citizens (94%) aged over 18 have noticed an increase in the cost of food over the last few years, but just over half (56%) believe it to be a consequence of global warming.

# Perception towards what has been happening over the last few years



I.M.: 562

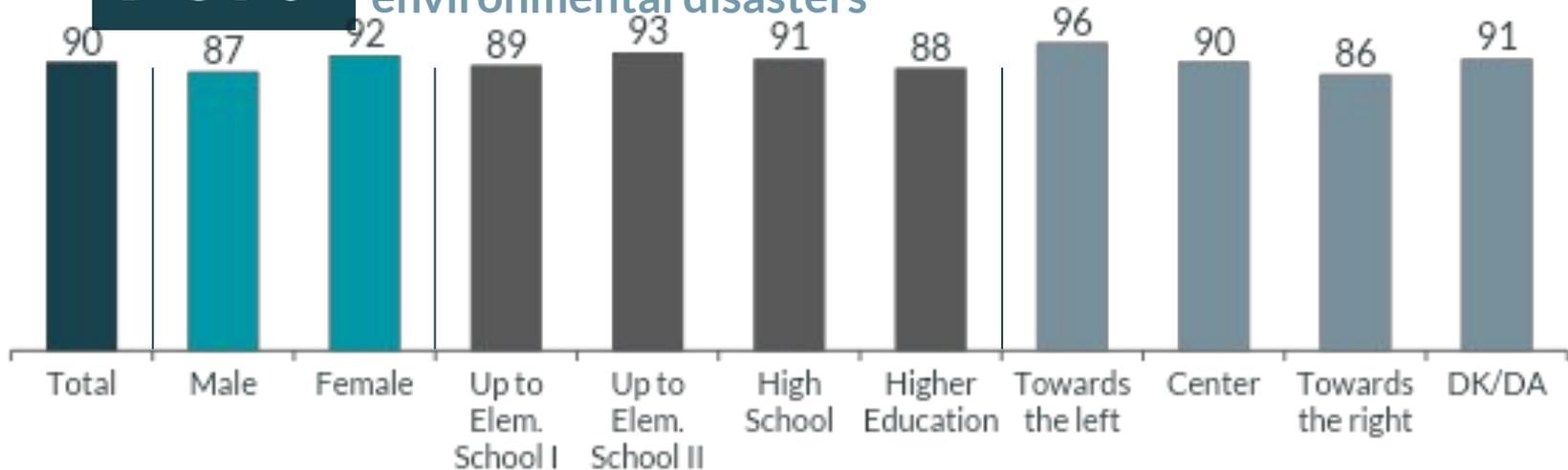
Base: Sample (2,600)

Q1.1.8) Over the last few years, do you believe that:

# Perception towards the increased number of environmental disasters over the last few years

90%

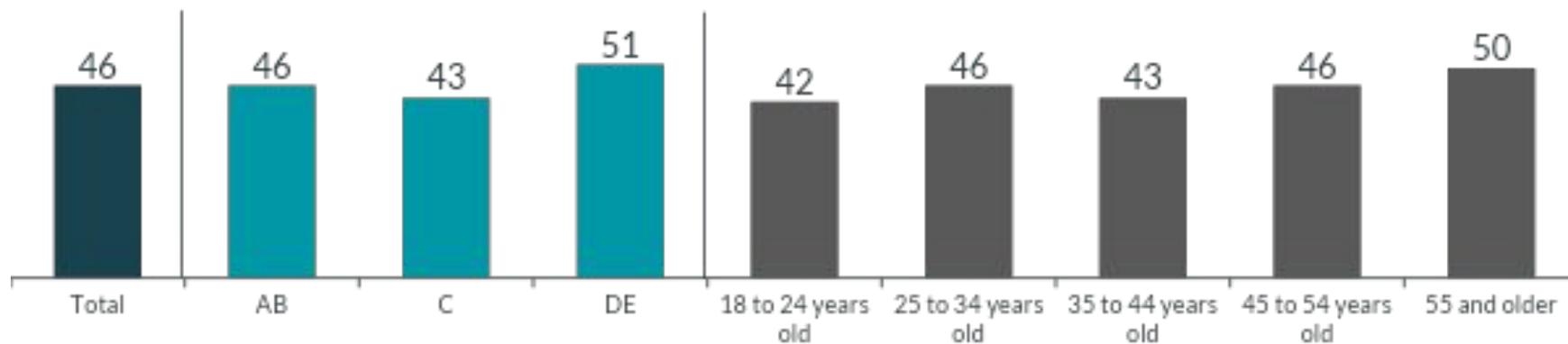
Believe that there have been more environmental disasters



# Perception towards increased rainfall over the last few years

**46%**

believe that there has been more rain



# The impact of global warming

86%

Believe that the environmental disasters that have been happening over the last few years are caused by global warming

11%

No

3%

DK/DA

Base: Respondent (2,332)

Q1.1.9C) Do you believe that more environmental disasters have been happening as a result of global warming?

# Global warming is causing...

Higher  
temperatures

93%

Base: Respondents (2365)

Less rain

88%

Base: Respondents (1432)

More environmental  
disasters

86%

Base: Respondents (2332)

More rain

80%

Base: Respondents (1158)

Increased air  
pollution

74%

Base: Respondents (2383)

Higher cost of  
energy bills

66%

Base: Respondents (2352)

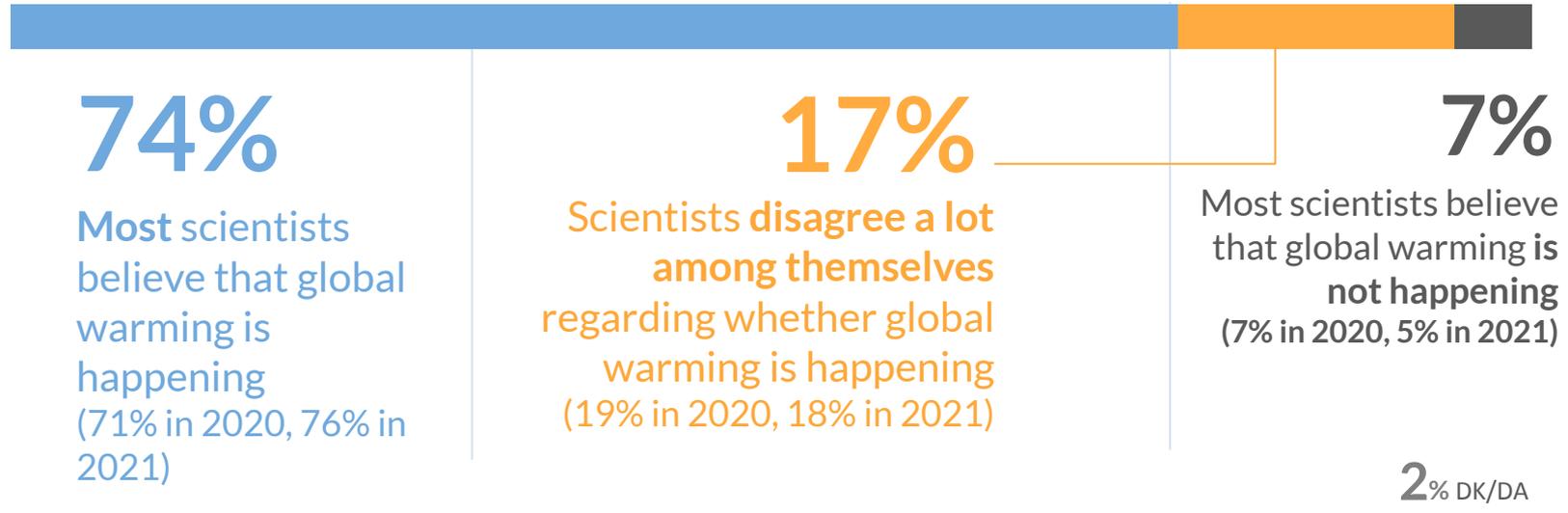
Higher cost of food

56%

Base: Respondents (2442)

Q1.1.9) Do you believe that this has been happening as a result of global warming?

# Perception towards scientists' opinions regarding this issue



Q1.2.2) Which of the next three statements read by me is closest to your opinion on what scientists believe regarding global warming (SA):

Base: Sample (2,600)

# Perception towards scientists' opinions regarding this issue

## Age



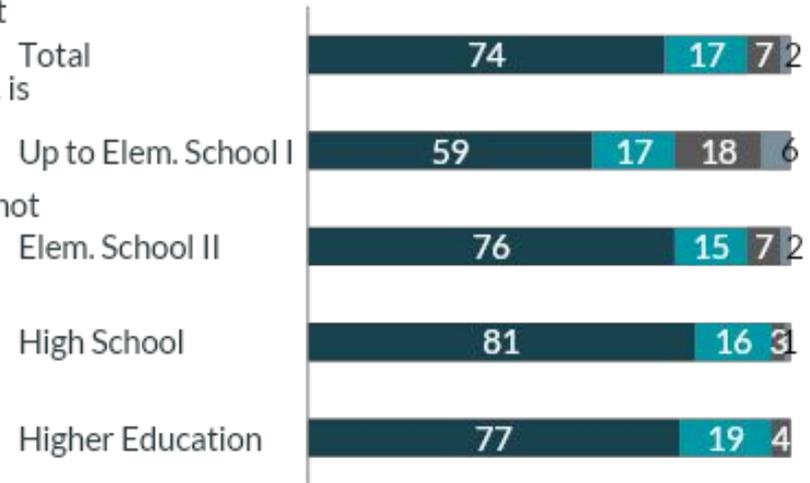
Most scientists believe that global warming is happening

Scientists disagree a lot among themselves regarding whether g.w. is happening

Most scientists believe that global warming is not happening

DK/DA

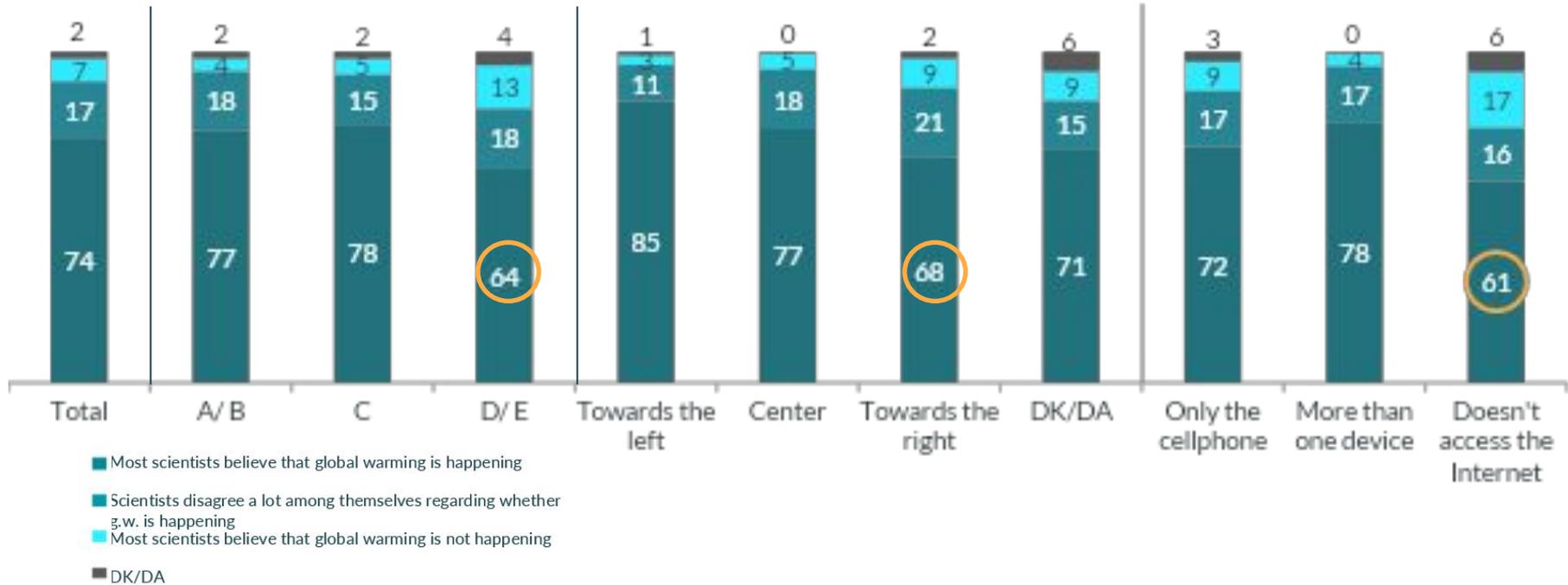
## Level of education



Q1.2.2) Which of the next three statements read by me is closest to your opinion on what scientists believe regarding global warming (SA):  
\*G.W.: global warming

Base: Sample (2,600)

# Perception towards scientists' opinions regarding this issue



Q1.2.2) Which of the next three statements read by me is closest to your opinion on what scientists believe regarding global warming (SA):  
 \*G.W.: global warming

Base: Sample (2,600)

# Can global warming greatly harm future generations?

87%

Believe that global warming can greatly harm future generations (88% in 2020, 90% in 2021)

7%

**Somewhat**  
(5% in 2020 and 2021)

3%

**A little**  
(4% in 2020, 3% in 2021)

2%

**Not at all**  
(2% in 2020, 1% in 2021)

1%

**DK/DA**  
(1% in 2020 and 2021)

Base: Sample 2020, 2021, and 2022 (2,600)

Q1.1.6) And to what extent do you believe global warming can harm future generations)?



70%

**Believe that  
global warming  
can greatly harm  
them and their  
families**

(72% in 2020, 75% in  
2021)

17%

**Somewhat**

(14% in 2020,  
13% in 2021)

9%

**A little**

(7% in 2020,  
8% in 2021)

4%

**Nothing**

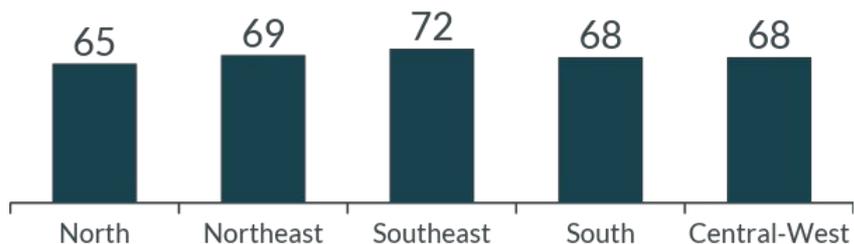
(5% in 2020,  
3% in 2021)

Q1.1.5) In your opinion, to what extent do you believe global warming can harm you and your family?

Base: Sample 2020, 2021, and 2022 (2,600)

# Brazilians who believe that global warming can greatly harm their families\*

## Region



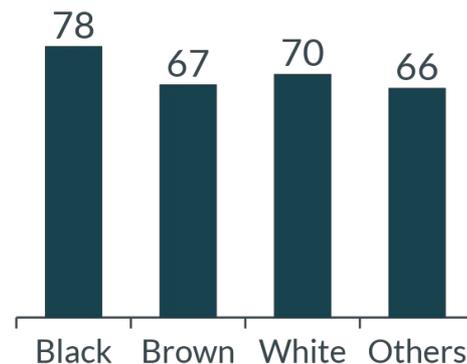
## Gender



## Politics



## Ethnicity



Base: Sample (2,600)

Q1.1.5) In your opinion, to what extent do you believe global warming can harm you and your family?

\*Percentage of those who answered that global warming can GREATLY harm future generations.

# Who is able to contribute the most to solve the issue of climate change?

36%

Governments  
(35% in 2020, 37% in 2021)

32%

Companies and Industries  
(32% in 2020 and 2021)

23%

Citizens  
(24% in 2020 and 2021)

8%

Environmental NGOs\*  
(4% in 2020 and 2021)

2%

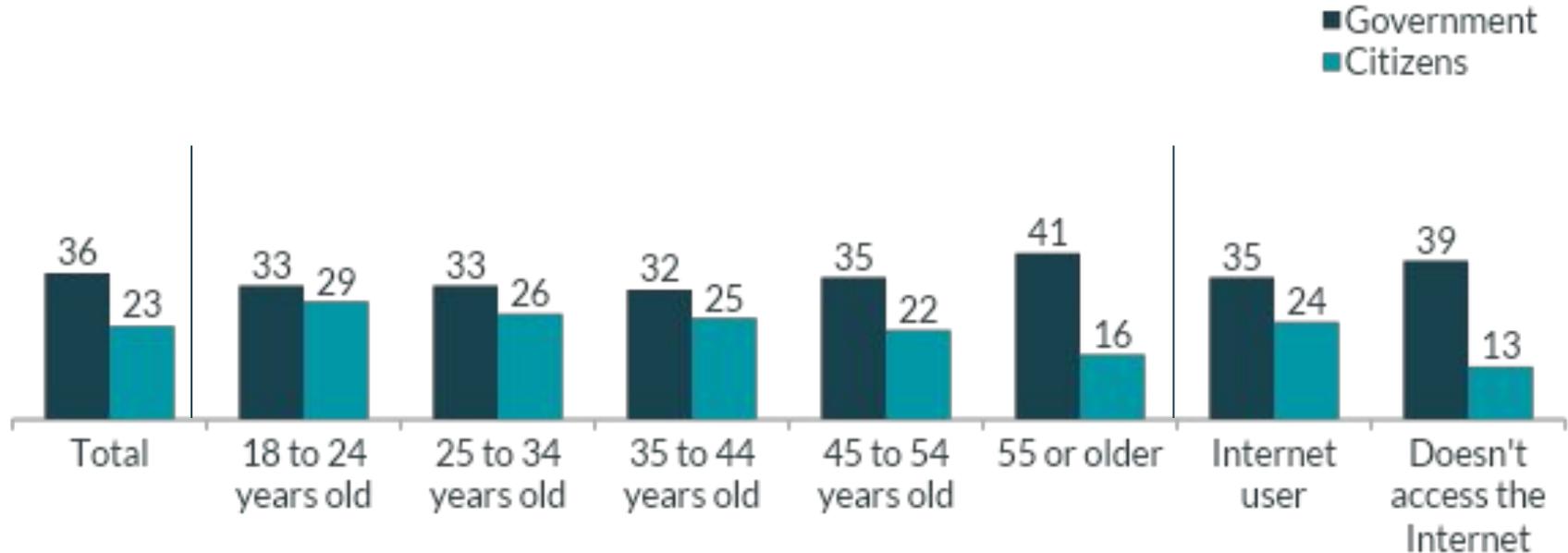
DK/DA  
(4% in 2020, 3% in 2021)

\*In previous rounds, the item's text was "NGOs", without specifically referencing environmental NGOs.

Q2.2.2) In your opinion, who do you believe is able to contribute the most to solve the issue of climate change? (READ OPTIONS) And in second place? And in third place?

Base: Sample 2020, 2021, and 2022 (2,600)

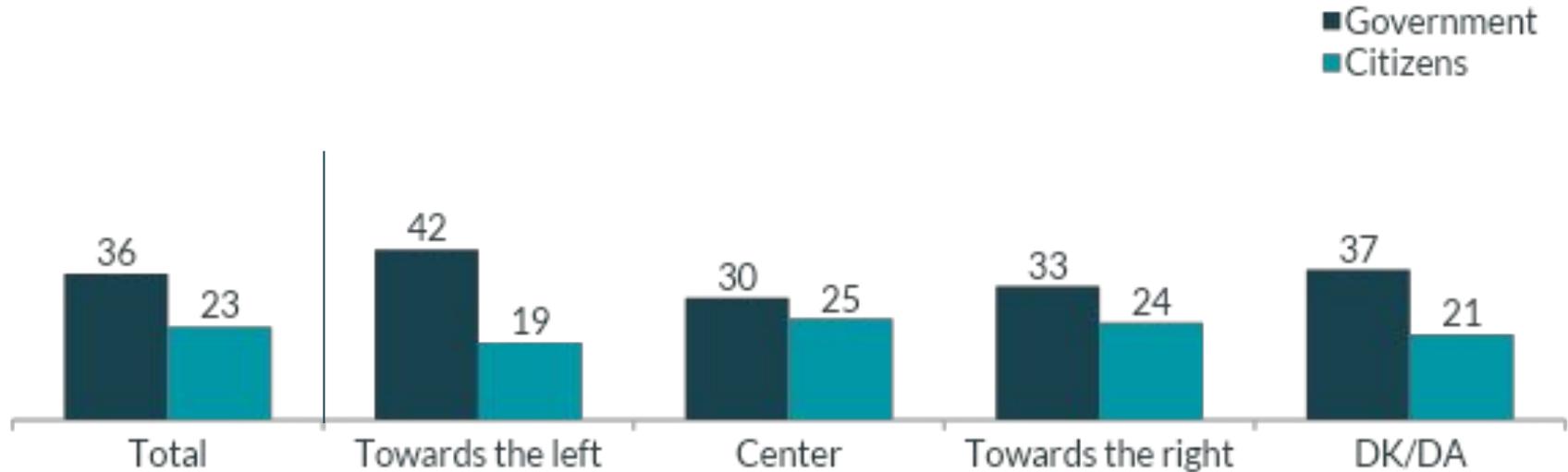
# Contribution from the government VS the citizens to solve the issue of climate change



Base: Sample (2,600)

Q2.2.2) In your opinion, who do you believe is able to contribute the most to solve the issue of climate change? (READ OPTIONS) And in second place? And in third place?

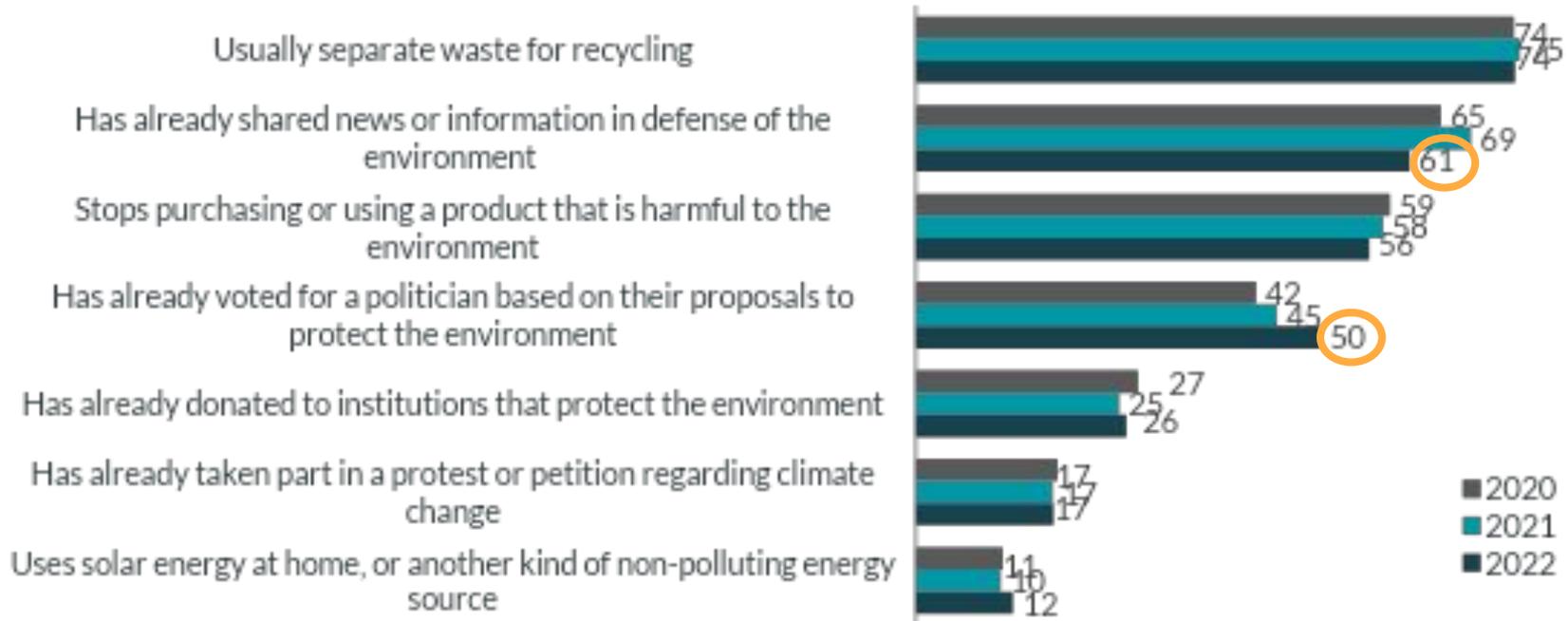
# Contribution from the government VS the citizens to solve the issue of climate change



Base: Sample (2,600)

Q2.2.2) In your opinion, who do you believe is able to contribute the most to solve the issue of climate change? (READ OPTIONS) And in second place? And in third place?

# What actions do you usually take?



Base: Sample (2,600)

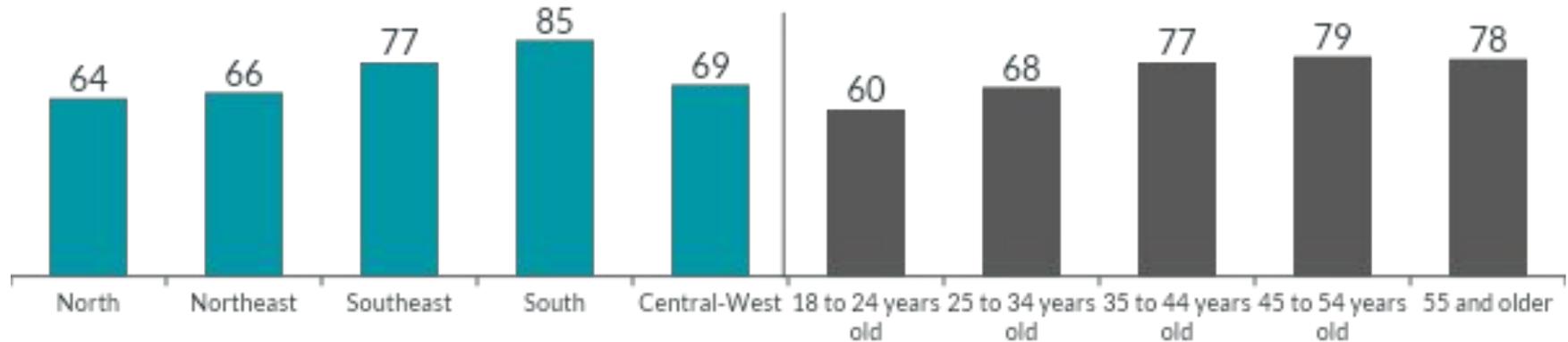
Q 1.1.7) From the options read by me, please, tell me, which of them have you already taken or usually take

# What actions do you usually take?

**74%**

**Separate waste for recycling**

(74% in 2020, 75% in 2021)



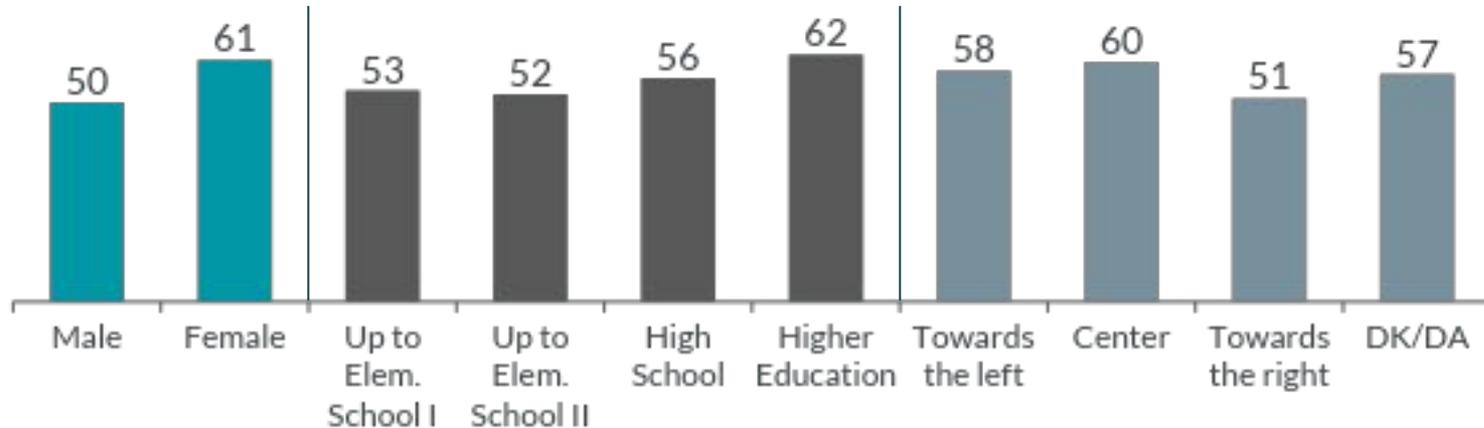
Q 1.1.7) From the options read by me, please, tell me, which of them you have already taken or usually take

Base: Sample (2,600)

# What actions do you usually take?

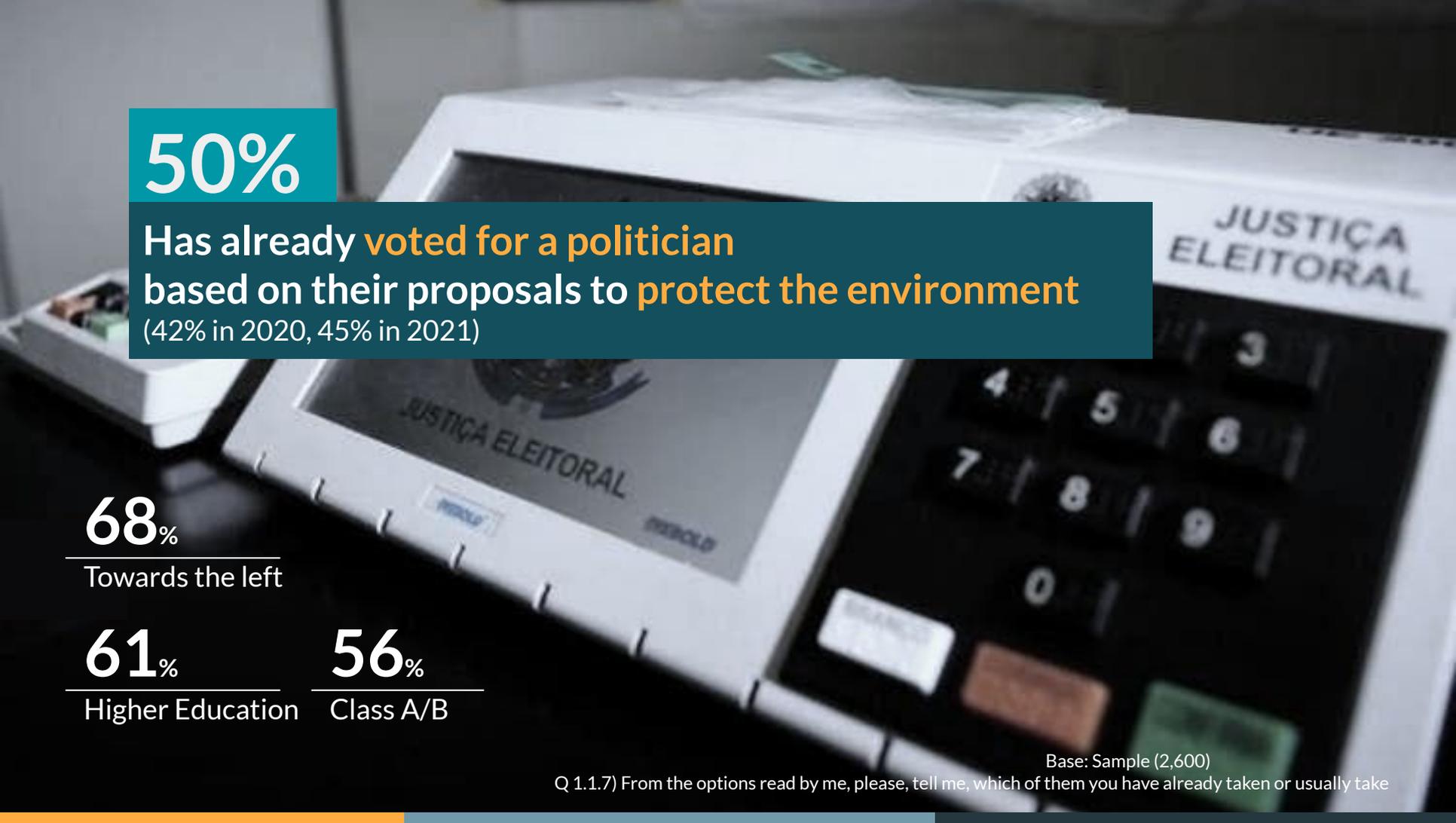
**56%**

**Stops purchasing or using a product that is harmful to the environment**  
(59% in 2020, 58% in 2021)



Q 1.1.7) From the options read by me, please, tell me, which of them you have already taken or usually take

Base: Sample (2,600)



50%

Has already **voted for a politician**  
based on their proposals to **protect the environment**  
(42% in 2020, 45% in 2021)

68%

Towards the left

61%

Higher Education

56%

Class A/B

Base: Sample (2,600)

Q 1.1.7) From the options read by me, please, tell me, which of them you have already taken or usually take



17%

Has already taken part in a protest or petition  
regarding climate change  
(17% in 2020 and 2021)

32%

Higher Education

32%

Towards the left

27%

18 to 24 years  
old

24%

Class A/B

Base: Sample (2,600)

Q 1.1.7) From the options read by me, please, tell me, which of them you have  
already taken or usually take



99%

Has already heard of the  
**Amazon fires**  
(98% in 2020 and 2021)

Base: Sample (2,600)

Q2.1.1) Have you already heard of the Amazon fires?  
(SA)

# Through which of these means do you receive most information regarding the Amazon's deforestation?

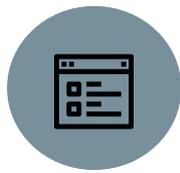
I.M.: 3.35



82%

Broadcast TV

Base: (1413)



77%

Internet websites

(1967)



74%

Social networks, such as Facebook, Twitter, or Instagram

(1820)



73%

Conversations with relatives, friends, and coworkers

(2091)



71%

Radio

(1200)



70%

Print newspapers or magazines

(685)



69%

Cable TV, subscription-based

(896)



48%

WhatsApp

(1763)

Q.2.1.8.1) Usually, you receive information regarding the Amazon's deforestation through (ITEM YES ON Q2.1.8)? (SA)

Base: Sample (2600)

# Perception about the evolution of Amazon fires over the last 10 years



Base: Sample (2,600)

Q2.1.3) In your opinion, have the Amazon fires increased, remained the same, or decreased over the last 10 years? (READ OPTIONS - SA)

Politics\*

89%

Towards the left

78%

Center

59%

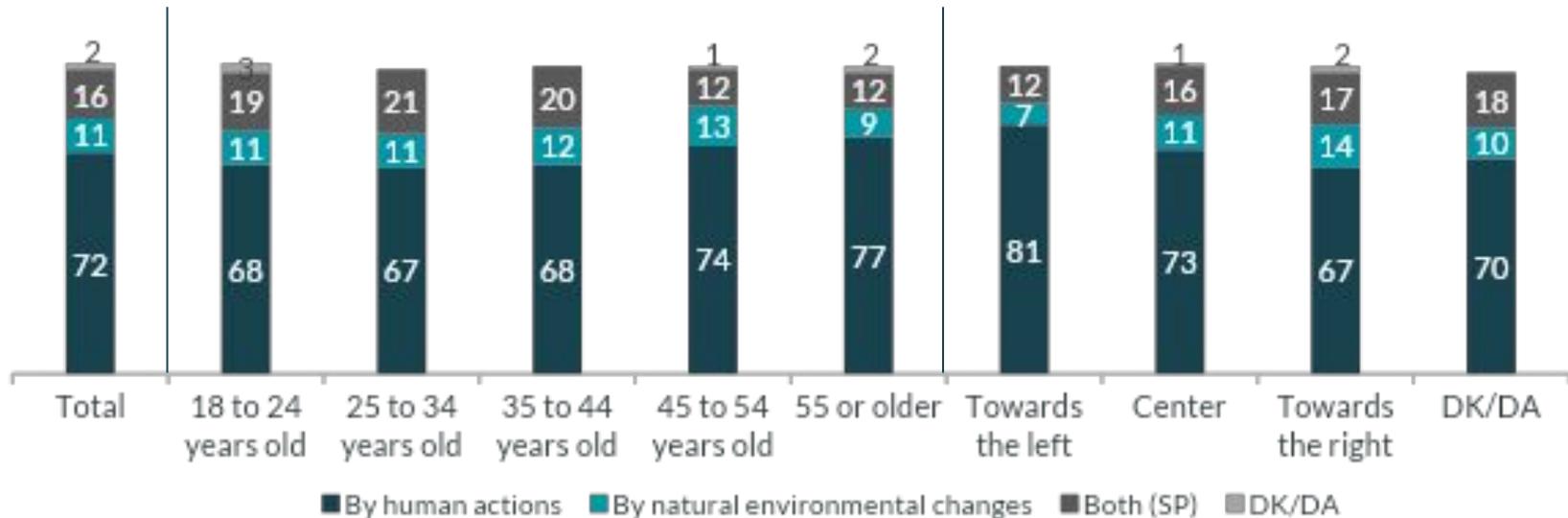
Towards the right

74%

DK/DA

\*Percentage of those who answered that the Amazon fires have increased compared to previous years.

# Perception towards the causes behind the Amazon fires



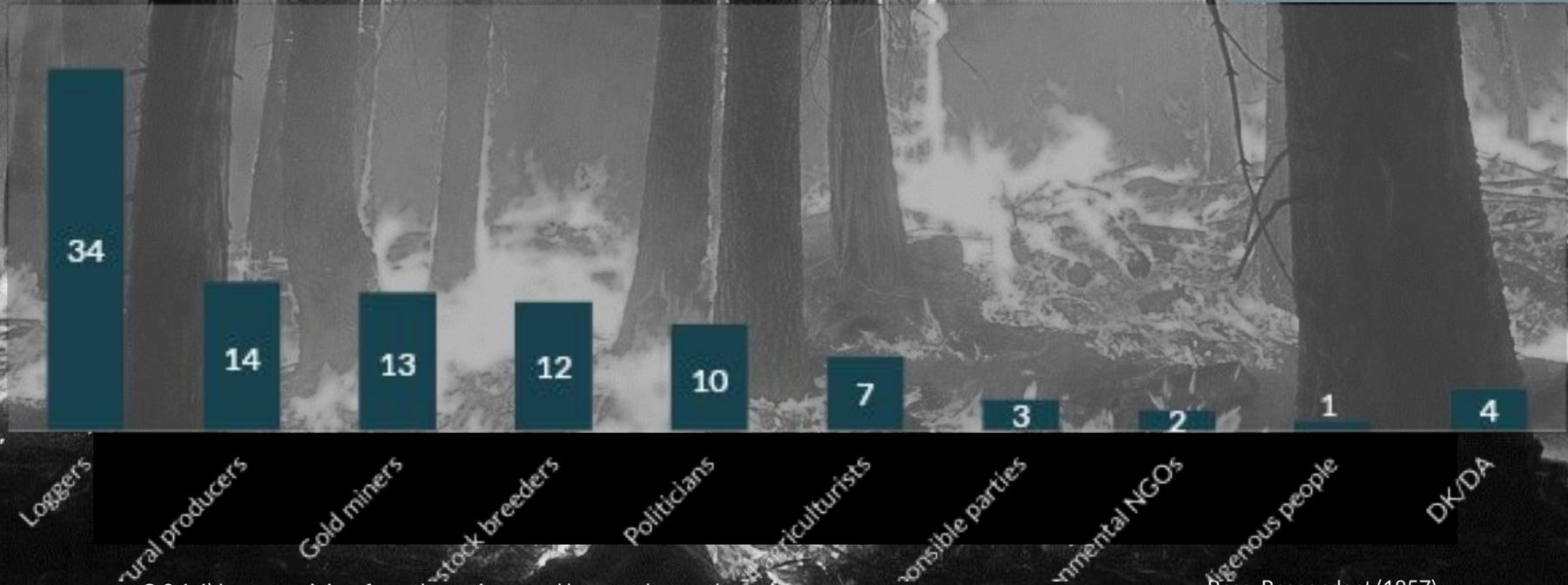
In 2020: 77% by human actions/ 9% by natural changes/ 12% by both  
 In 2021: 75% by human actions/ 10% by natural changes/ 14% by both

Base: Sample (2,600)

Q.2.1.6) Recently, there have been news in the press regarding the Amazon fires. In your opinion, the Amazon fires are caused

# Main responsible parties for the Amazon fires

1<sup>st</sup> PLACE

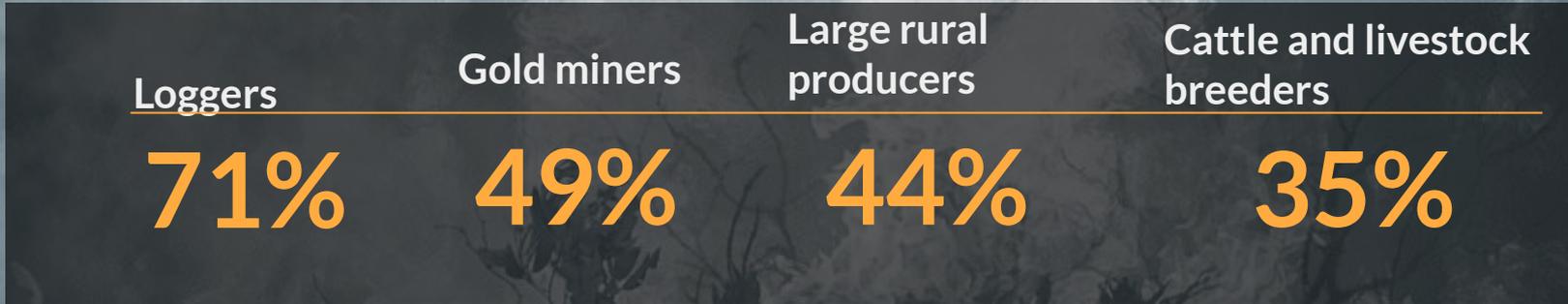


Q.2.1.4) In your opinion, from the options read by me, who are the main responsible parties for the Amazon fires in first, second, and third place?

Base: Respondent (1857)

# Responsible parties for the Amazon fires

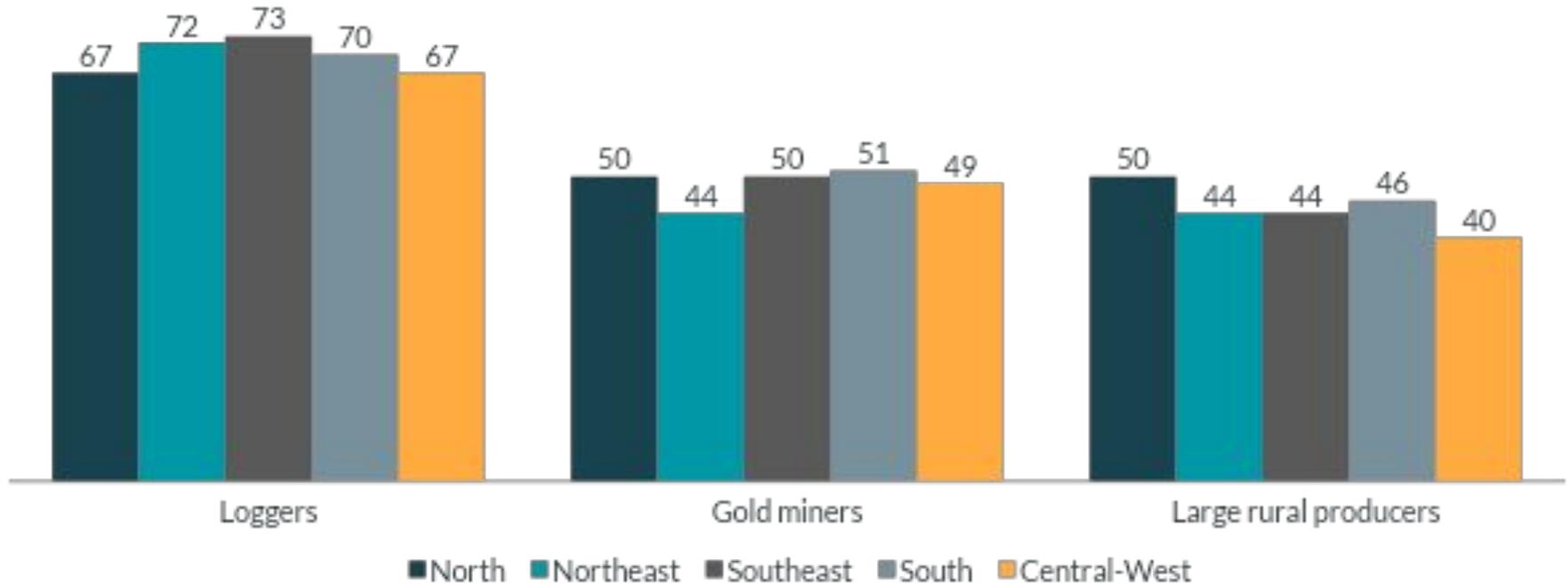
1<sup>st</sup> + 2<sup>nd</sup> + 3<sup>rd</sup> PLACE



Q.2.1.4) In your opinion, from the options read by me, who are the main responsible parties for the Amazon fires in first, second, and third place?

Base: Respondent (1857)

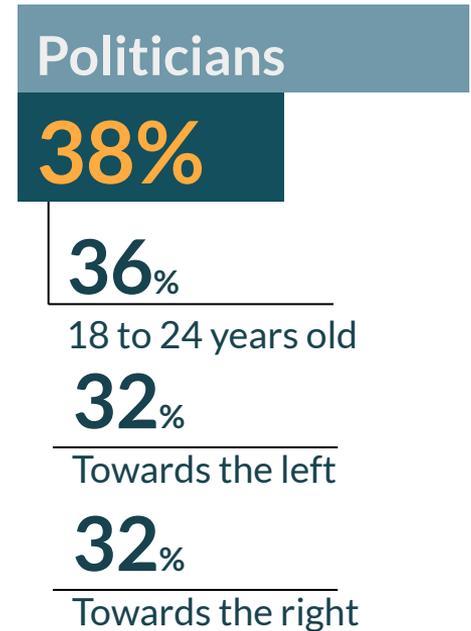
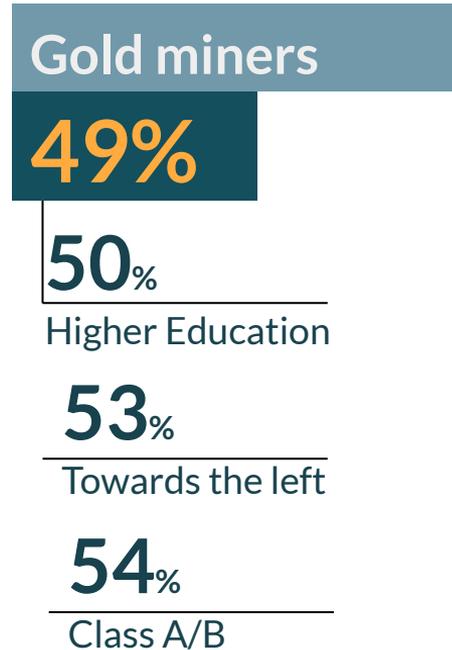
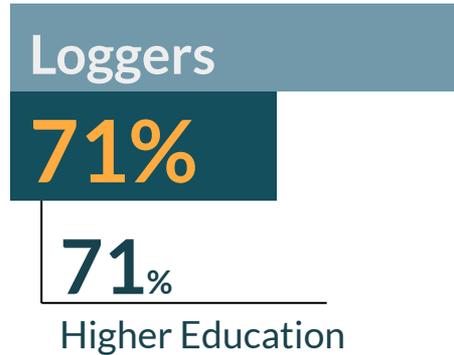
# Responsible parties for the Amazon fires



Q.2.1.4) In your opinion, from the options read by me, who are the main responsible parties for the Amazon fires in first, second, and third place?

Base: Respondent (1,857)

# Responsible parties for the Amazon fires



Base: Respondent (1857)

Q.2.1.4) In your opinion, from the options read by me, who are the main responsible parties for the Amazon fires in first, second, and third place?

**57%** completely agree

That indigenous people protect the forests

**10%**

Completely disagree

**3%**

Neither agree, nor disagree

**3%**

DK/DA

**16%**

Towards the right

**15%**

35 to 44 years old

**14%**

Men

**14%**

Classes AB

Politics\*

**69%**

Towards the left

**57%**

Center

**51%**

Towards the right

**54%**

DK/DA

\*Percentage of those who answered that they completely disagree with the statement.

\*Percentage of those who answered that they completely agree with the statement.

**53% completely agree**

With the demarcation of Indigenous lands, meaning, the government granting ownership and use of those lands only to Indigenous people

**13%**  
Completely disagree

**4%**  
Neither agree, nor disagree

**3%**  
DK/DA

Politics\*

**72%**  
Towards the left

**52%**  
Center

**44%**  
Towards the right

**48%**  
DK/DA

Base: Sample (2,600)

Q2.1.5B) Please, tell me whether you agree or disagree with each of the statements that I will read:

\*Percentage of those who answered that they completely agree with the statement.

**62%** totally or partly agree

with the establishment of the Ministry of Native People, meaning, Indigenous people, under the Government of Lula

**47%**

Completely agree

**15%**

Partly agree

**5%**

Partly disagree

**20%**

Completely disagree

**6%**

Neither agree, nor disagree

**6%**

DK/DA

Base: Sample (2,600)

Q2.1.5C) Please, tell me whether you agree or disagree with each of the statements that I will read:

# To what extent do you agree with the following statements\*?



\*Percentage of those who answered that they completely agree with the statement

Base: Sample (2,600)

Q2.1.5) Please, tell me whether you agree or disagree with each of the statements that I will read:

**54%** believe that Lula's government will be better than Bolsonaro's government regarding the issue of environmental preservation

**13%**

Believe that it will be the same

**21%**

Believe that it will be worse

**11%**

DK/DA

Base: Sample (2,600)

Q2.1.7) Regarding the issue of environmental preservation, do you believe that Lula's government will be better, worse, or the same as Bolsonaro's government? (SA)

### Highlights\*

**88%**

Towards the left

**66%**

Northeast

**62%**

Class D/E

\*Percentage of those who answered that they believe that it will be better

**81% completely agree**

The Amazon's deforestation is a threat to the planet's environment and climate

**5%**

Completely disagree

**1%**

Neither agree, nor disagree

**1%**

DK/DA

Politics\*

**88%**

Towards the left

**83%**

Center

**73%**

Towards the right

**85%**

DK/DA

\* Percentage of those who answered that they agree with the statement.

Base: Sample (2,600)

Q2.1.2) Please, tell me whether you agree or disagree with each of the statements that I will read:



**52% completely disagree**

The Amazon's deforestation is necessary for economic growth

Base: Sample (2,600)

Q2.1.2) Please, tell me whether you agree or disagree with each of the statements that I will read:

**20%**

Completely agree

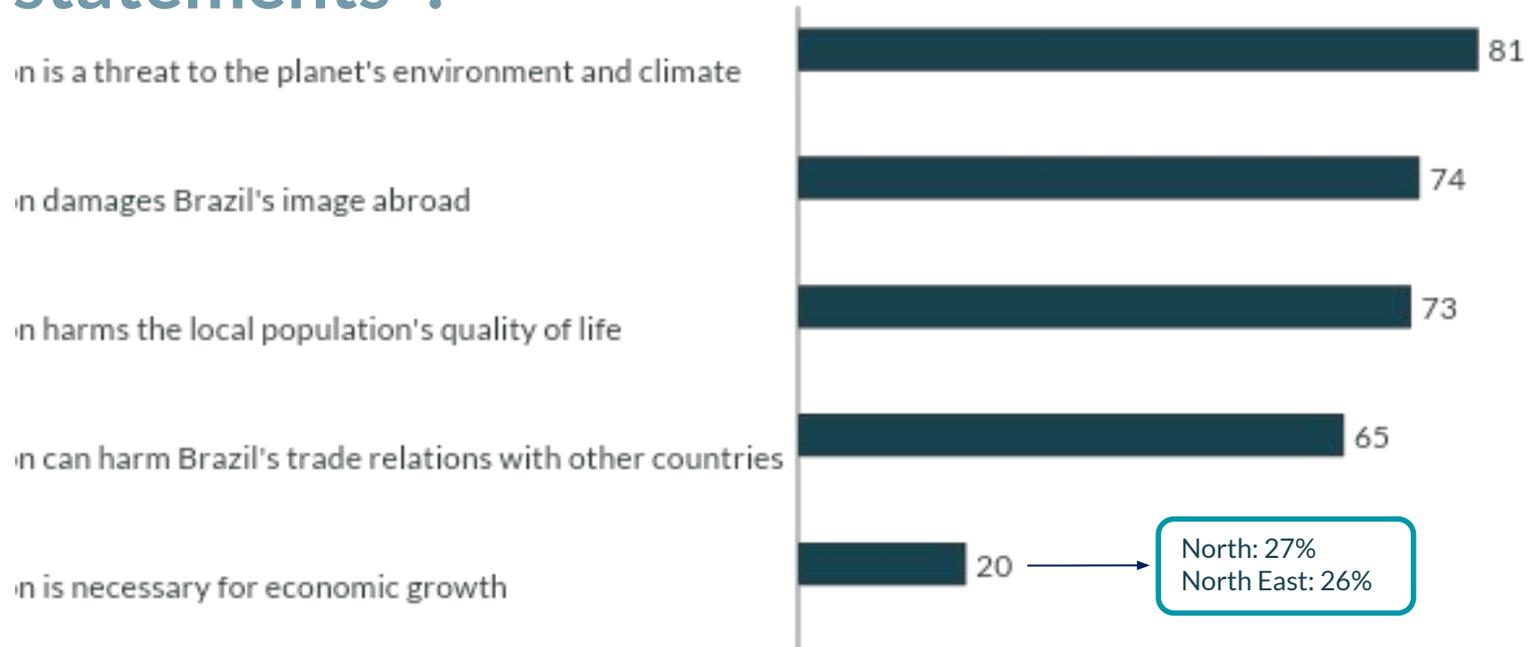
**11%**

Neither agree, nor disagree

**2%**

DK/DA

# To what extent do you agree with the following statements\*?



\*Percentage of those who answered that they completely agree with the statement.

Base: Sample (2,600)

Q2.1.2) Please, tell me whether you agree or disagree with each of the statements that I will read:

STUDY

# Climate Change and Public Perception in Brazil

## 2022

ACCESS THE PROJECT'S WEBSITE

[percepcaoclimatica.com.br](https://percepcaoclimatica.com.br)



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de Tecnologia  
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Climate Change  
Communication



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