



Hurricane Harvey: Three Years Later

Figures and Tables

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Figures and Tables

Figure A1: Did your residence receive any damages during Hurricane Harvey?

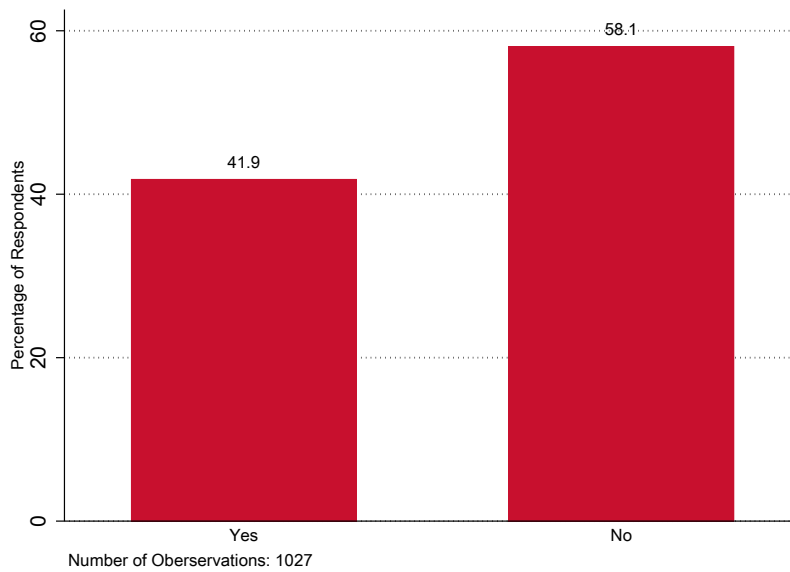


Table A1: Did your residence receive any damages during Hurricane Harvey?

Damage	No.	%
Yes	430	41.9
No	596	58.1
Total	1,026	100.0

Among the respondents who evacuated or attempted to evacuate, more than two-fifths (41.9 percent) of them reported that their residence received damages during Hurricane Harvey.

Figure A2: Did you have to move from your residence because of Hurricane Harvey?

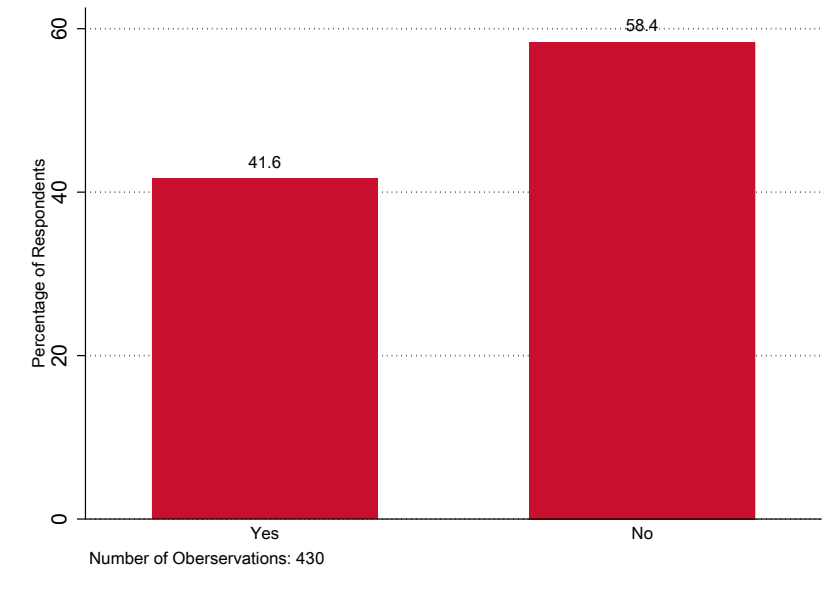


Table A2: Did you have to move from your residence because of Hurricane Harvey?

Moved from residence	No.	%
Yes	179	41.6
No	251	58.4
Total	430	100.0

Among those who answered having received damages to their residence, 41.6% responded that they had to move from their residence because of Hurricane Harvey.

Figure A3: Have you moved back into your residence, are you still living in temporary housing, or have you relocated to a new residence?

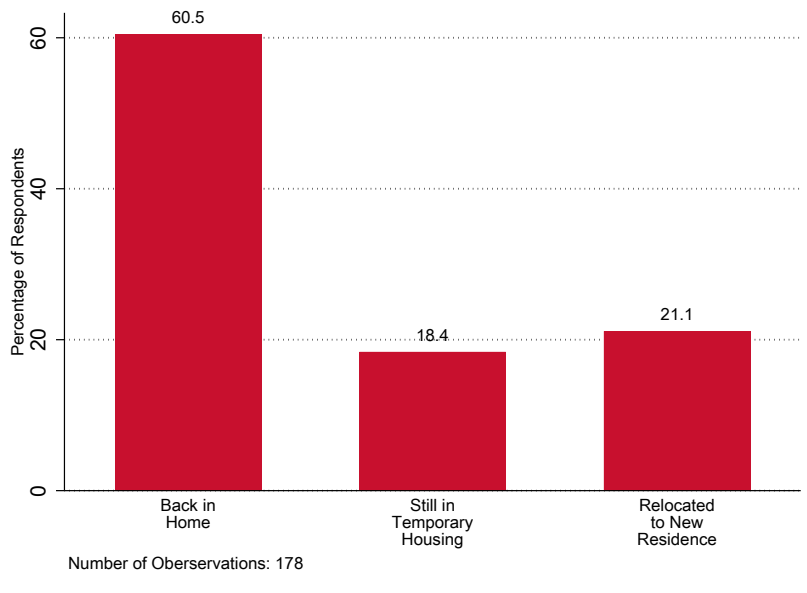


Table A3: Have you moved back into your residence, are you still living in temporary housing, or have you relocated to a new residence?

Moved back	No.	%
Back in Home	108	60.5
Still in Temporary Housing	33	18.4
Relocated to New Residence	38	21.1
Total	178	100.0

Among those respondents who had to move from their residence because of Hurricane Harvey, three-fifths (60.5%) of them are back in their residences, while 18.4% were still in temporary housing at the time the survey was fielded.

Figure A4: Did you need to rebuild or modify your property or part of your property as a result of Hurricane Harvey?

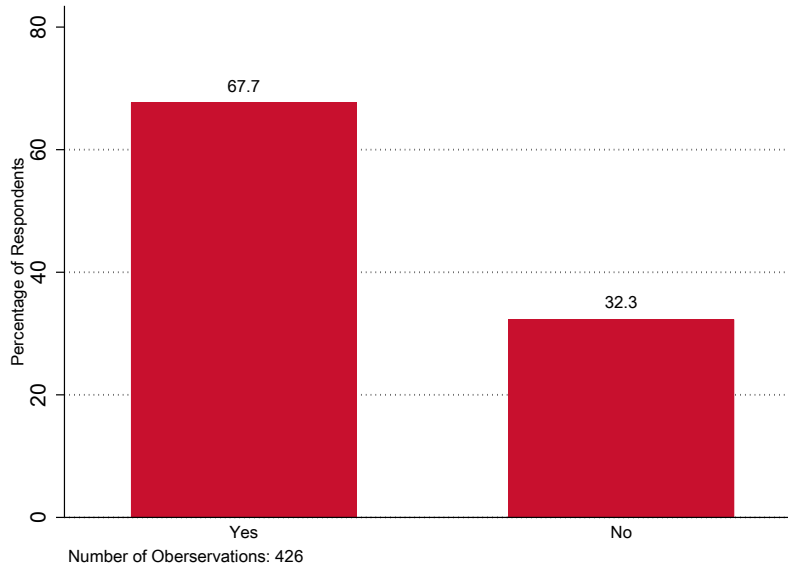


Table A4: Did you need to rebuild or modify your property or part of your property as a result of Hurricane Harvey?

Rebuild property	No.	%
Yes	288	67.7
No	138	32.3
Total	426	100.0

Figure A4 shows that more than two-thirds of the respondents needed to rebuild or modify their properties or parts of their properties due to Hurricane Harvey. Slightly less than one-third of them (32.3%) did not need to make any modifications.

Figure A5: What type of modifications did you make on your property after Hurricane Harvey?

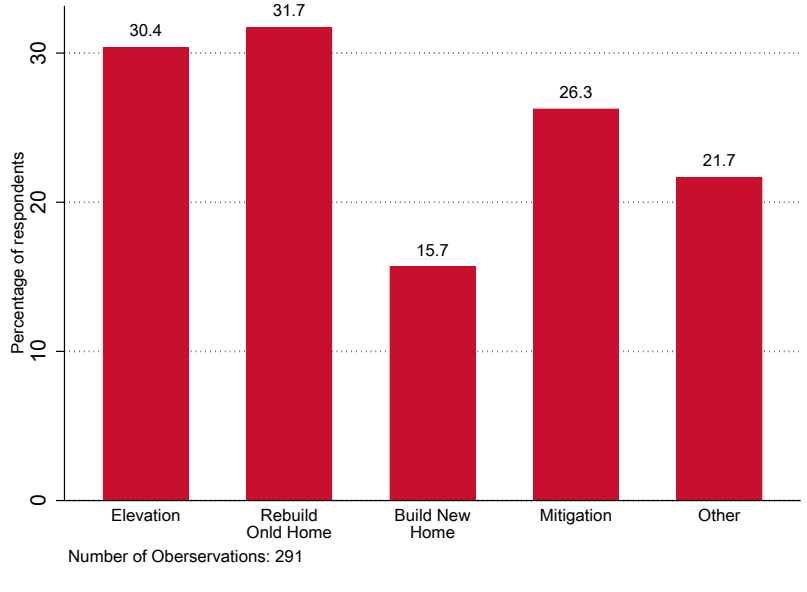


Table A5: What type of modifications did you make on your property after Hurricane Harvey?

Modifications	Percentage
Elevation	30.4
Rebuild Home	31.7
Build New Home	15.7
Mitigation	26.3
Other	21.7

To further investigate the findings in Figure A4, we asked those who indicated that their homes required modifications what kind of modifications were made. Figure A5 shows that thirty percent of respondents elevated their properties. More than one-fourth (26%) did some modifications to mitigate future floods. Furthermore, forty-six percent of the respondents either rebuilt their homes (31%) or built new homes (15%).

Figure A6: What is the approximate amount of money you spent on the modifications to your property?

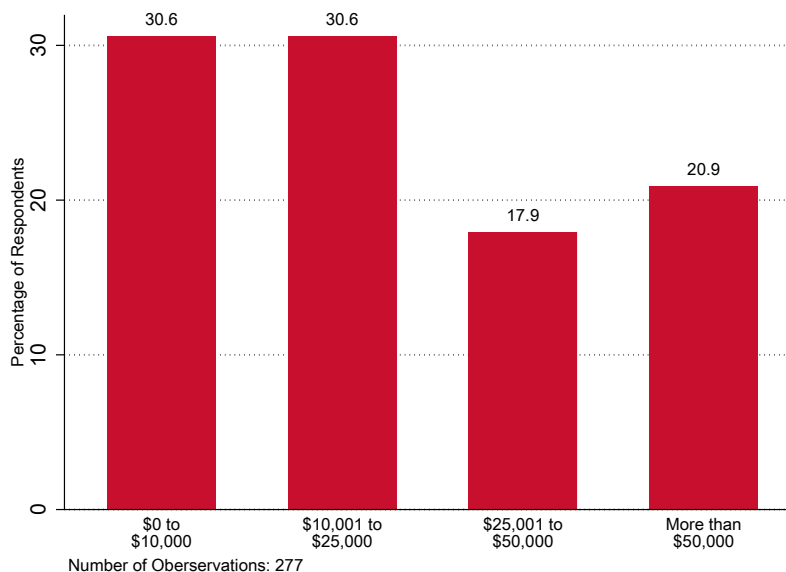


Table A6: What is the approximate amount of money you spent on the modifications to your property?

Amount	No.	%
\$0 to \$10,000	85	30.6
\$10,001 to \$25,000	85	30.6
\$25,001 to \$50,000	50	17.9
More than \$50,000	58	20.9
Total	277	100.0

Among the respondents who rebuilt or modified their properties, thirty percent spent up to \$10,000, and another thirty percent spent between \$10,000 and \$25,000. More than one-third (38%) of respondents spent more than \$25,000 on the modifications to their properties (see Figure A6).

Figure A7: Did you or any member of your household experience a job loss due to Hurricane Harvey?

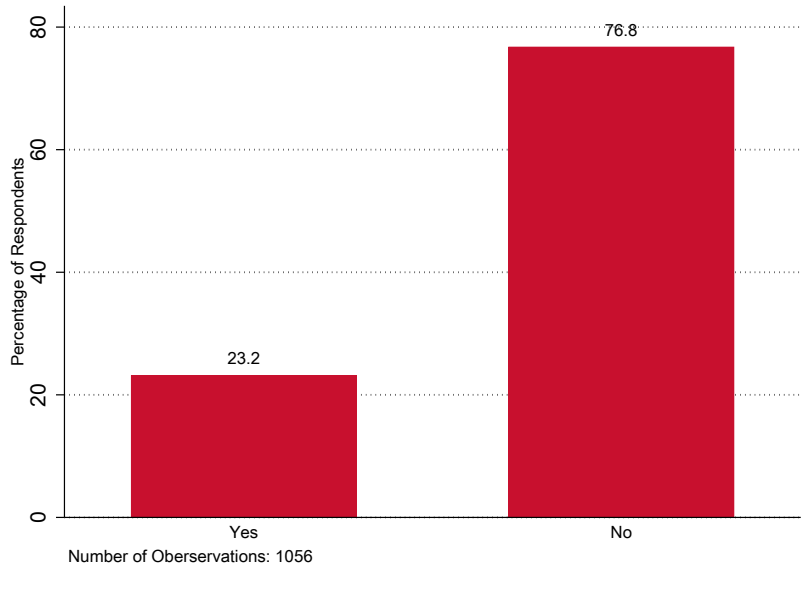


Table A7: Did you or any member of your household experience a job loss due to Hurricane Harvey?

Job loss	No.	%
Yes	243	23.2
No	804	76.8
Total	1,047	100.0

Nearly one-quarter (23.2%) of the respondents mentioned that they or their family members experienced a job loss due to Hurricane Harvey (see Figure A7).

Figure A8: How long were you or a member of your household unemployed as a result of Hurricane Harvey?

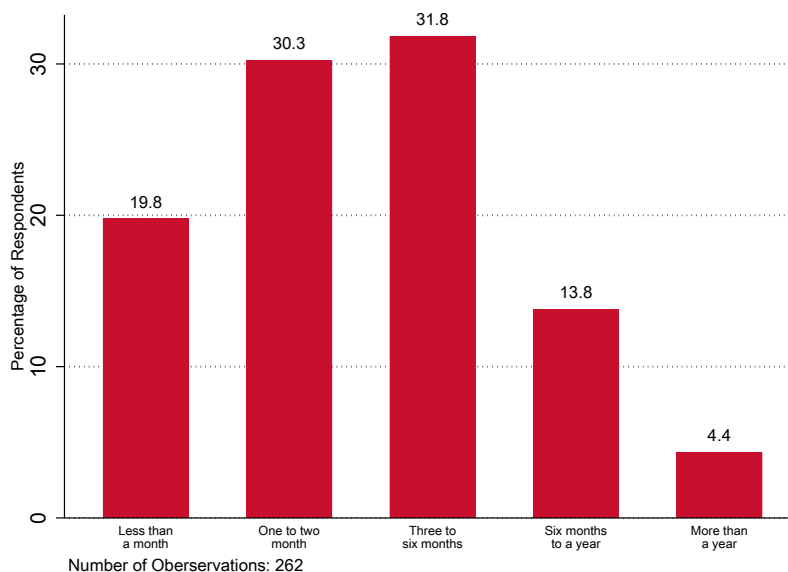


Table A8: How long were you or a member of your household unemployed as a result of Hurricane Harvey

Period Unemployed	No.	%
Less than a month	52	19.8
One to two month	79	30.3
Three to six months	83	31.8
Six months to a year	36	13.8
More than a year	11	4.4
Total	261	100.0

Among the respondents who lost their jobs as a result of Hurricane Harvey, half of them (50%) were unemployed for two months or less. Another half remained unemployed for at least three months (see Figure A8).

Figure A9: Did you have flood insurance, homeowners or rental insurance to cover the costs of repair caused by Hurricane Harvey?

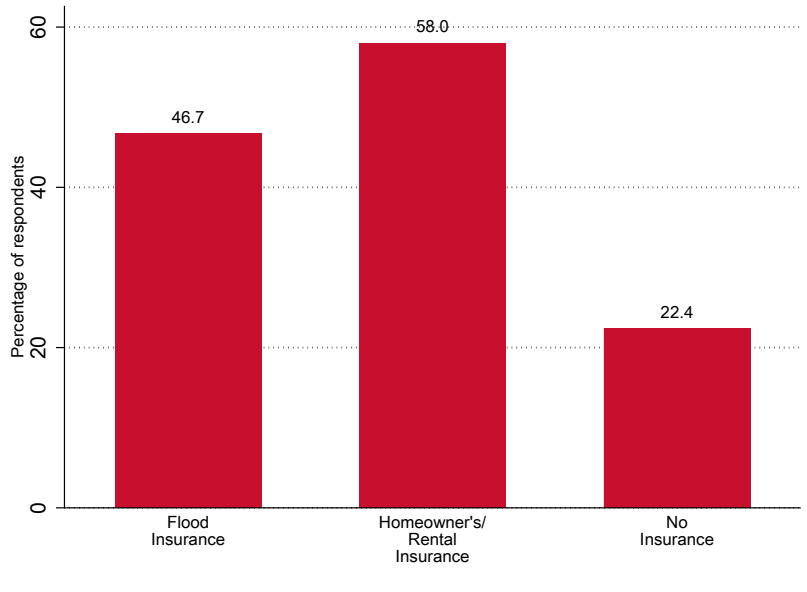


Table A9: Did you have flood insurance, homeowners, or rental insurance to cover the costs of repair caused by Hurricane Harvey?

Insurance pre-Harvey	%
Flood Insurance	46.7
Homeowner's/Rental Insurance	58.0
No Insurance	22.4

Nearly three-fifths (58%) of the respondents had either homeowner’s or rental insurance, and forty-six percent of them had flood insurance, which could cover the costs of repair caused by Hurricane Harvey. Slightly over one-fifth of the respondents did not have any insurance (see Figure A9).

Figure A10: Do you now have flood insurance, homeowners or rental insurance to cover the costs of repair caused by natural disasters?

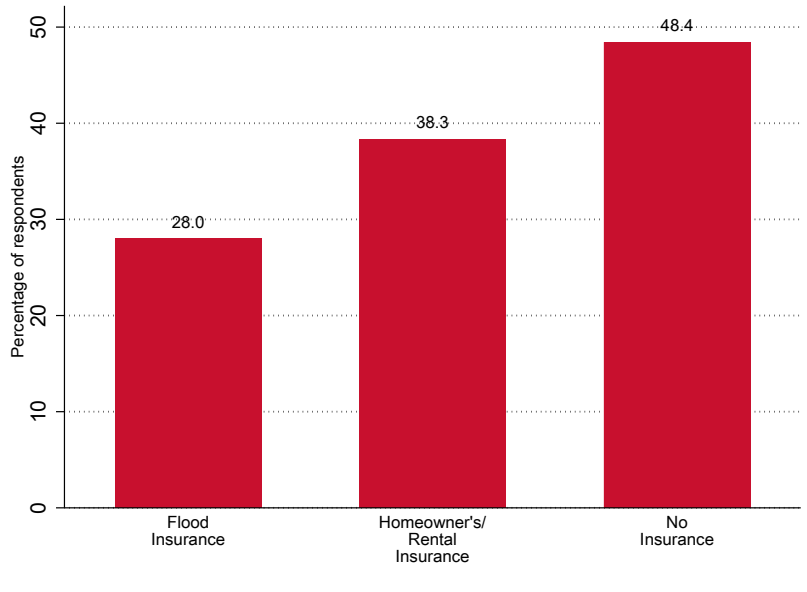


Table A10: Do you now have flood insurance, homeowners or rental insurance to cover the costs of repair caused by natural disasters?

Insurance	%
Flood Insurance	28.0
Homeowner's/Rental Insurance	38.3
No Insurance	48.42

The respondents are further asked if they currently have flood insurance, homeowners, or renters insurance to cover the costs of repair caused by natural disasters. Almost half of them (48.4%) do not have any insurance. Nearly two-fifths have homeowners or renters insurance, and twenty-eight percent have flood insurance (see Figure A10).

Figure A11: Did your insurance payment cover all, a large portion, or a small portion of your losses from Hurricane Harvey?

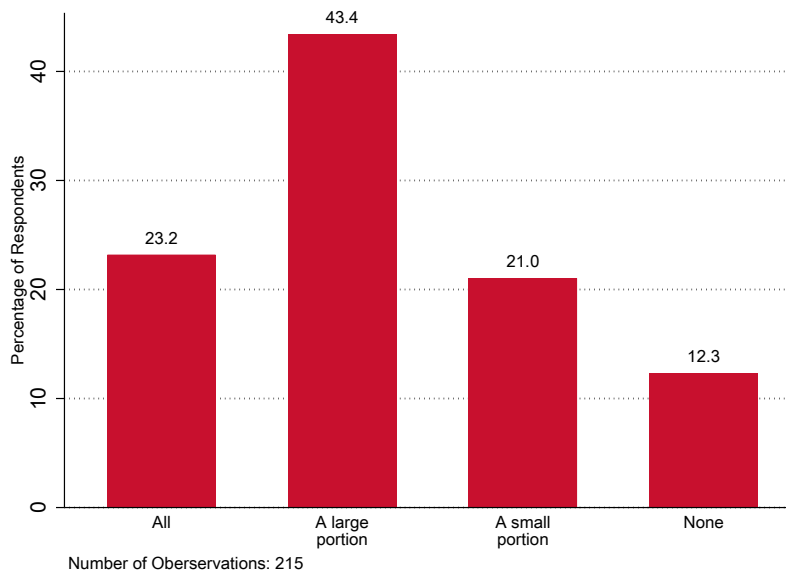


Table A11: Did your insurance payment cover all, a large portion, or a small portion of your losses from Hurricane Harvey?

Losses covered by Insurance	No.	%
All	50	23.2
A large portion	93	43.4
A small portion	45	21.0
None	27	12.3
Total	215	100.0

Approximately 23.2% of respondents had their insurance cover the entire portion of their losses from Hurricane Harvey. A large portion of respondents, 43.4%, responded that a large portion was covered by insurance. While 21% said only a small portion was covered. These responses are in contrast to the 12.3% of respondents who received no coverage from their insurance (see Figure A11).

Figure A12: To rebuild, repair, or modify your property after Hurricane Harvey, did you or a member of your household request FEMA money?

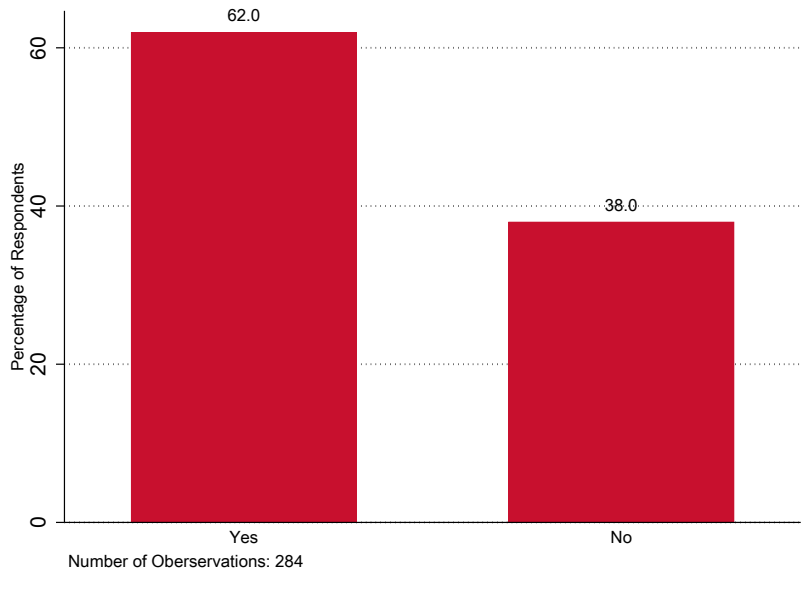


Table A12: To rebuild, repair, or modify your property after Hurricane Harvey, did you or a member of your household request FEMA money?

Requested FEMA Money	No.	%
Yes	176	62.0
No	108	38.0
Total	284	100.0

The majority of respondents, 62%, requested federal aid money through FEMA to rebuild, repair, or modify their property following Hurricane Harvey. Whereas 38% did not request money from FEMA (see Figure A12).

Figure A13: Have you received the funds that you or a member of your household requested from FEMA to cover the cost of rebuilding your property after Hurricane Harvey?

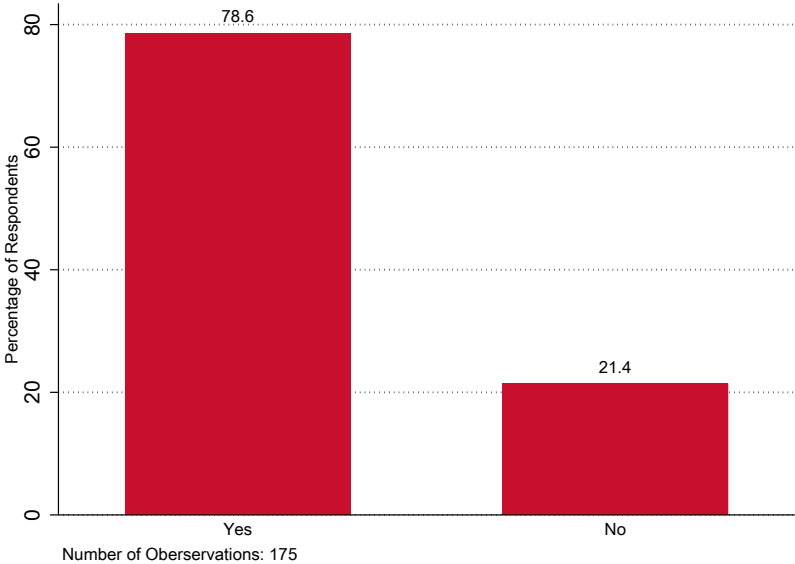


Table A13: Have you received the funds that you or a member of your household requested from FEMA to cover the cost of rebuilding your property after Hurricane Harvey?

Received FEMA Money	No.	%
Yes	137	78.6
No	38	21.4
Total	175	100.0

Of those who requested federal funds from FEMA to cover the cost of rebuilding, repairing, or modifying their property following Hurricane Harvey (62% of total respondents), more than three-quarters of respondents (78.6%), received funds. However, 21.4% of respondents were denied their requested funds (see Figure A13).

Figure A14: How long did it take to receive FEMA funds after Hurricane Harvey?

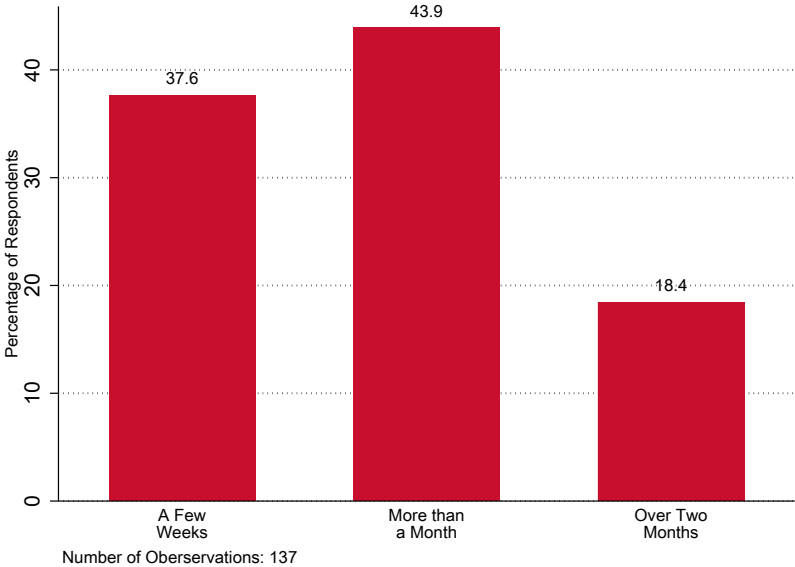


Table A14: How long did it take to receive FEMA funds after Hurricane Harvey?

Time to Receive FEMA Money	No.	%
A Few Weeks	52	37.6
More than a Month	60	43.9
Over Two Months	25	18.4
Total	137	100.0

Figure A14 shows that the vast majority of respondents received their FEMA funds a few weeks (37.6%) or more than a month (43.9%) after Hurricane Harvey. Less than one-fifth (18.4%) of respondents said it took longer than two months to receive their FEMA money.

Figure A15: Did you receive help from local (city or county), State of Texas, and/or Federal Government members in the aftermath of Hurricane Harvey?

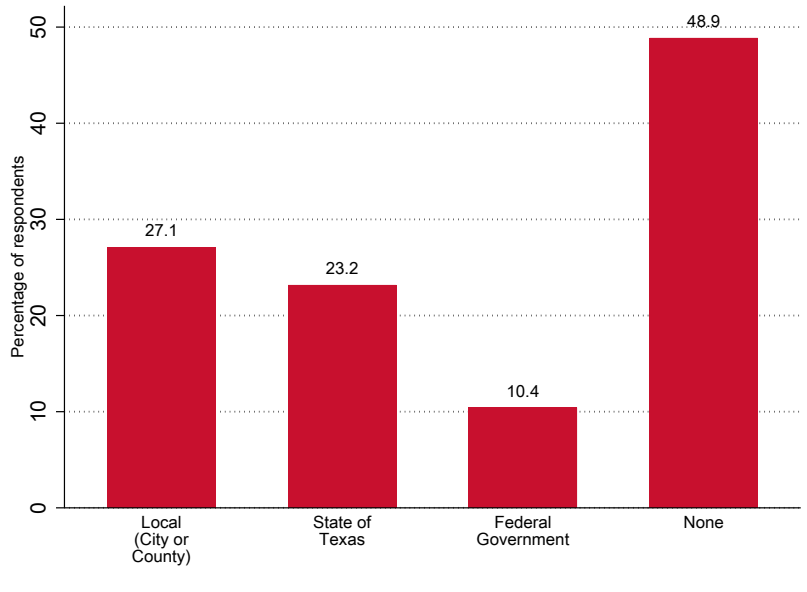


Table A15: Did you receive help from local (city or county), State of Texas, and/or Federal Government members in the aftermath of Hurricane Harvey?

Received Government Assistance	%
Local (City or County)	27.1
State of Texas	23.2
Federal Government	10.4
None	48.9

About half of the respondents (48.9%) said they did not receive any help from either local (city or county), the state of Texas, or the Federal Government following Hurricane Harvey. About a quarter of respondents (27.1%) said they received help from their city or county, with about another quarter (23.2%) receiving help from the state of Texas. A tenth of respondents (10.4%) said they received Federal Government assistance (see Figure A15).

Figure A16: Have you received an offer for buyout of your property from the government due to Hurricane Harvey?

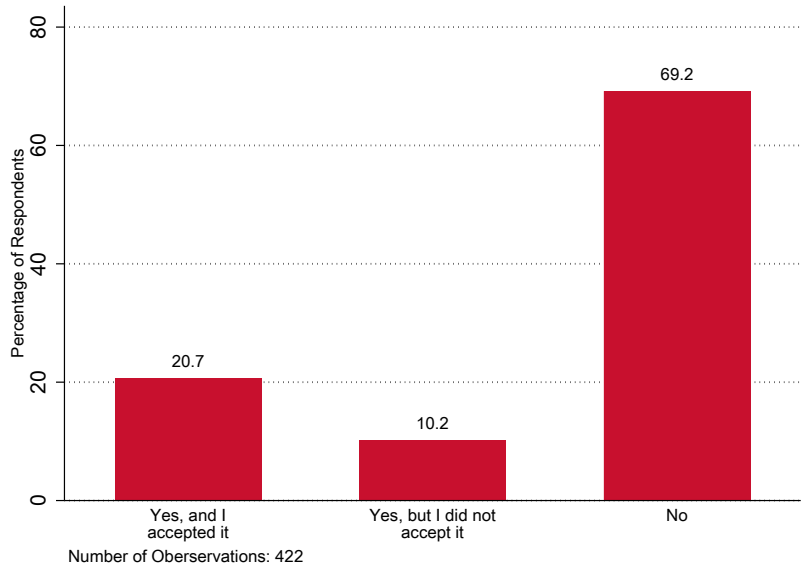


Table A16: Have you received an offer for buyout of your property from the government due to Hurricane Harvey?

Offer to Buyout	No.	%
Yes, and I accepted it	87	20.7
Yes, but I did not accept it	43	10.2
No	292	69.2
Total	422	100.0

A little more than two-thirds of respondents (69.2%) have not received any sort of property buyout offer from the Federal Government. Conversely, 20.7% of respondents received a buyout offer for their property and accepted it. The remaining 10.2% of respondents received a buyout offer but did not accept it (see Figure A16).

Figure A17: What type of help/assistance did you receive from your neighbors in the aftermath of Hurricane Harvey?

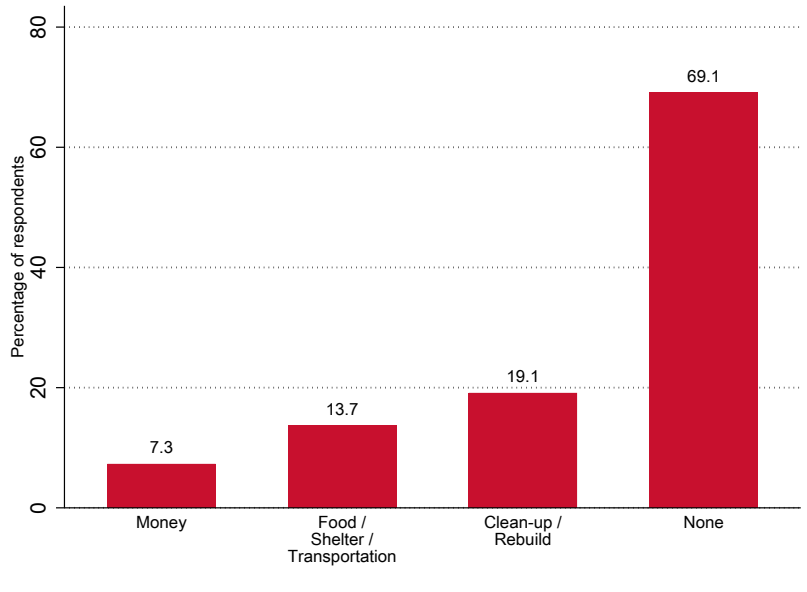


Table A17: What type of help/assistance did you receive from your neighbors in the aftermath of Hurricane Harvey?

Help from Neighbors	%
Money	7.39
Food/Shelter/Transportation	13.7
Clean-Up/Rebuild	19.1
None	69.1

In the aftermath of Hurricane Harvey, the vast majority of respondents (69.1%) did not receive any sort of help or assistance from their neighbors. Some respondents (19.1%) received clean-up and rebuilding help from their neighbors. Approximately 13.7% of respondents said they received assistance from the neighbors in the form of food, shelter, or transportation. A small percentage of respondents (7.3%) said they received monetary assistance from their neighbors (see Figure A19).

Figure A18: What type of help/assistance did you receive from your family in the aftermath of Hurricane Harvey?

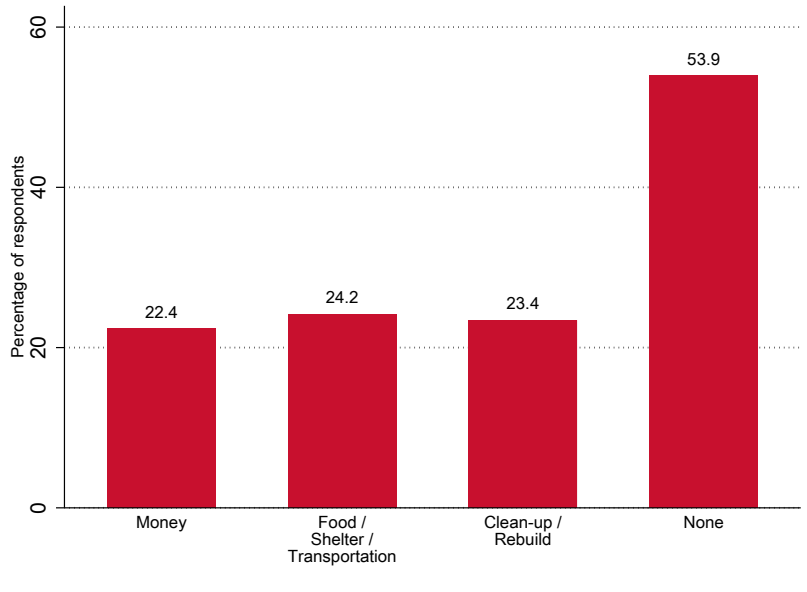


Table A18: What type of help/assistance did you receive from your family in the aftermath of Hurricane Harvey?

Help from Family	%
Money	22.4
Food/Shelter/Transportation	24.2
Clean-Up/Rebuild	23.4
None	53.9

Respondents were asked about the type of help/ assistance they received from family after the aftermath of Hurricane Harvey. Over 53% did not receive any help or assistance, some (22.4%) said they received monetary assistance, 24.2% received food, shelter, and transportation assistance, while about 23% received help with clean-up and rebuild (see Figure A18).

Figure A19: What type of help/assistance did you receive from your friends in the aftermath of Hurricane Harvey?

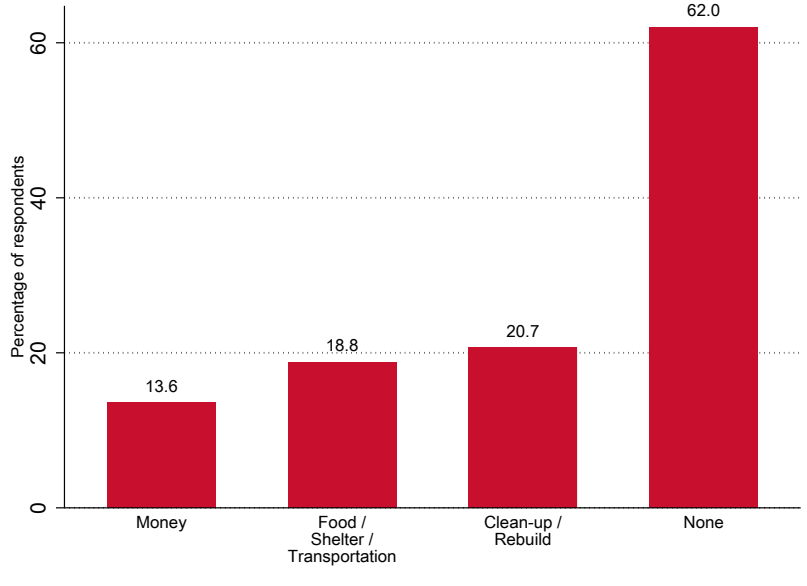


Table A19: What type of help/assistance did you receive from your friends in the aftermath of Hurricane Harvey?

Help from Friends	%
Money	13.6
Food/Shelter/Transportation	18.8
Clean-up/Rebuild	20.7
None	62.0

On help/assistance received from friends, over 62% reported receiving zero assistance from friends in the aftermath of Hurricane Harvey. About 13% received monetary support from friends, 18.8% received food, shelter, and transportation assistance from friends, and 20.7% receive clean-up and rebuild help from friends (see Figure A19).

Figure A20: What type of help/assistance did you receive from your co-workers in the aftermath of Hurricane Harvey?

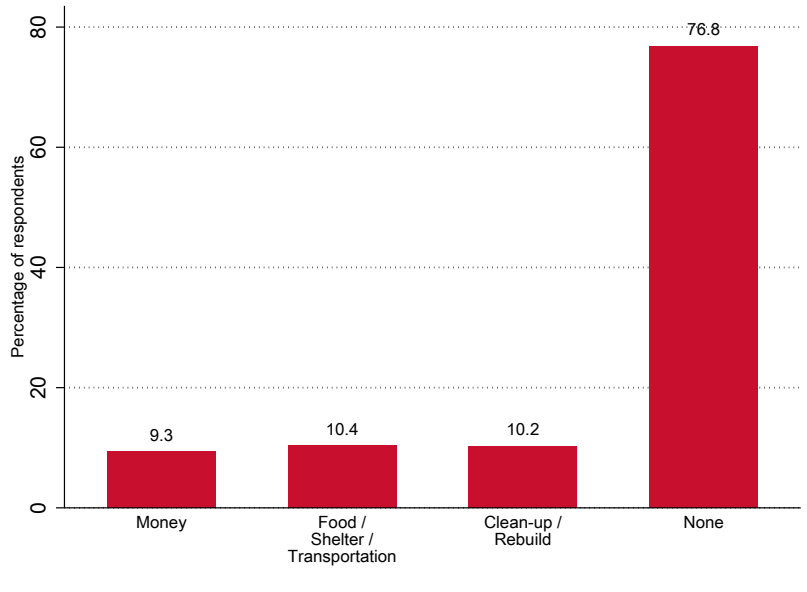


Table A20: What type of help/assistance did you receive from your co-workers in the aftermath of Hurricane Harvey?

Help from Co-workers	%
Money	9.3
Food/Shelter/Transportation	10.4
Clean-up/Rebuild	10.2
None	76.8

About 77% of respondents received no help/assistance from co-workers. About 9% received monetary assistance from co-workers and about 20% received assistance in form of food, shelter, transportation, clean-up, and rebuild assistance from co-workers (see Figure A20).

Figure A21: What type of help/assistance did you receive from the members of your church in the aftermath of Hurricane Harvey?

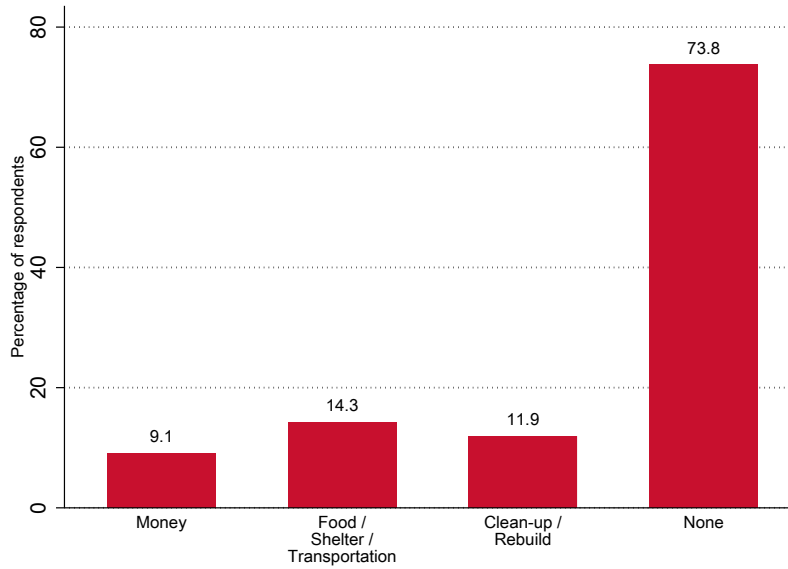


Table A21: What type of help/assistance did you receive from the members of your church in the aftermath of Hurricane Harvey?

Help from Church members	%
Money	9.1
Food/Shelter/Transportation	14.3
Clean-up/Rebuild	11.9
None	73.8

On type of help/assistance from their church, about 73.8% received zero help from their church. However, 9.1% received monetary gifts, 14.3% received food, shelter, and transportation help, and about 12% received help with clean-up and rebuild from the members of their churches (see Figure A21).

Figure A22: What was your main aid network during the time you or a member of your household were unemployed?

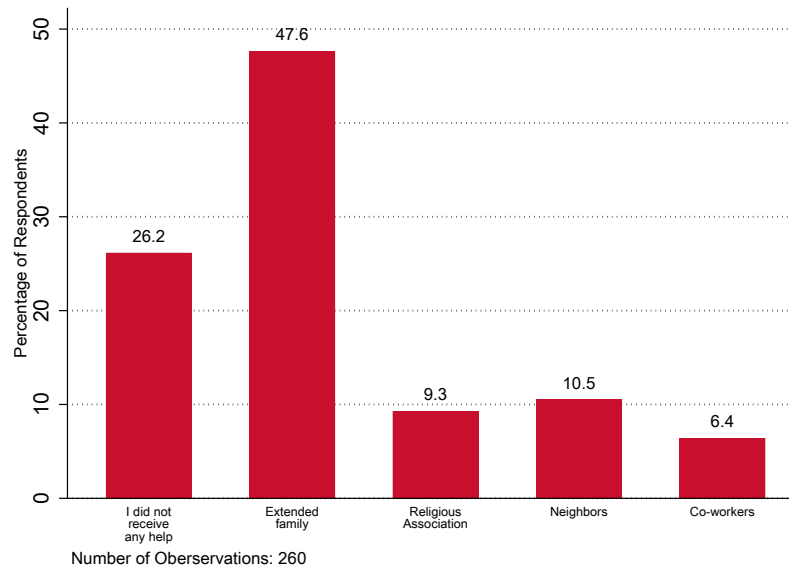


Table A22: What type of help/assistance did you receive from your co-workers in the aftermath of Hurricane Harvey?

Main Aid Network	No.	%
I did not receive any help	68	26.2
Extended family	123	47.6
Religious Association	24	9.3
Neighbors	27	10.5
Co-workers	17	6.4
Total	259	100.0

When asked about the main aid network during the time a members of a households were unemployed as a result of Hurricane Harvey, over 47% received unemployment aid from extended family, another 19% received aid from a religious association (9.3%) and about 10% said they received unemployment aid from neighbors. About 6% received unemployment aid from a co-worker and more than 26% did not receive any help (see Figure A22).

Figure A23: A number of policies have been both proposed and adopted by local governments... Which of the following do you support?

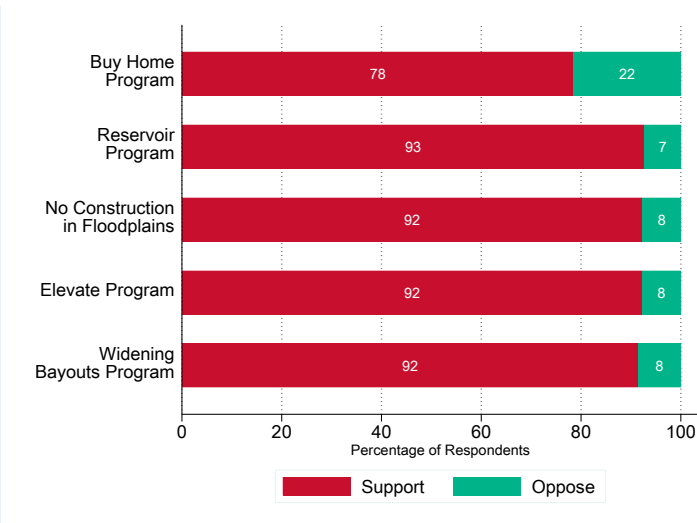


Table A23: A number of policies have been both proposed and adopted by local governments. Which of the following do you support?

Policy	Support		Oppose		Total No.
	No.	%	No.	%	
Buy Home Program	649	78.5	178	21.5	827
Reservoir Program	830	92.7	65	7.3	895
No Construction in Floodplains	878	92.4	73	7.6	950
Elevate Program	885	92.3	74	7.7	959
Widening Bayouts Program	820	91.5	76	8.5	896

Respondents were asked about their support for proposed policies to mitigate the impacts of future Hurricanes. Around 78 percent of respondents support government buy-home program. Approximately 93 percent of respondents support reservoir control program, and 92 percent support banning construction on floodplains, an elevation program, and a bayou widening program (see Figure A23).

Figure A24: Do you agree or disagree with the following statements:

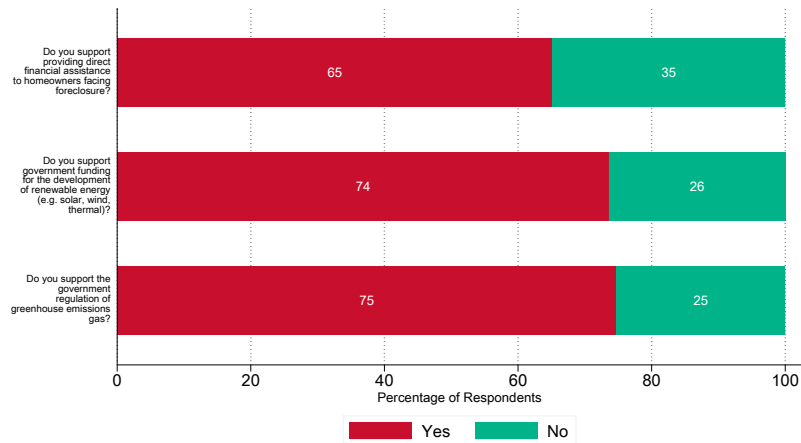


Table A24: Do you agree or disagree with the following statements?

Policy Statement	Yes		No		Total No.
	No.	%	No.	%	
Do you support providing direct financial assistance to homeowners facing foreclosure?	520	65.2	278	34.8	798
Do you support government funding for the development of renewable energy?	689	73.6	247	26.4	937
Do you support the government regulation of greenhouse emissions gas?	647	74.7	218	25.3	865

About 65 percent agree that direct financial assistance should be provided to homeowners facing foreclosures. Additionally, around 74 percent of respondents agree that government should fund the development of renewable energy, and about three-quarters agree that government should regulate greenhouse emissions (see Figure A24).

Figure A25: How worried are you about global warming?

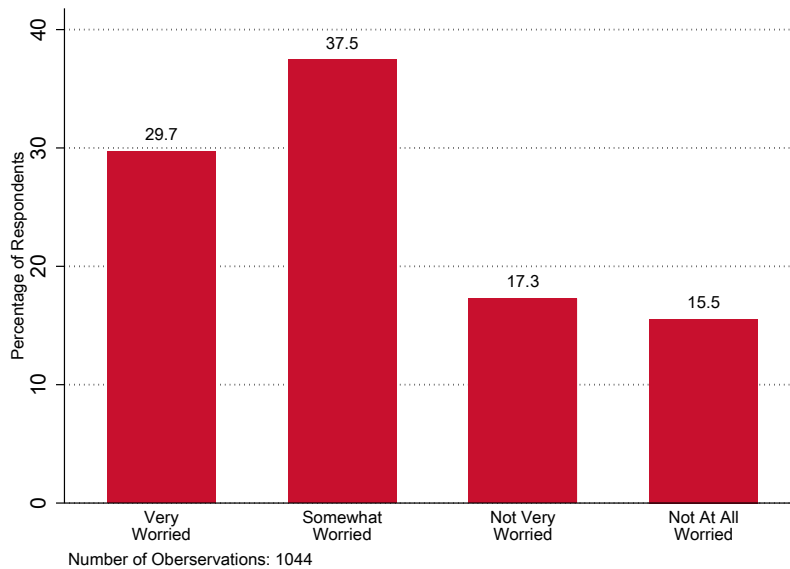


Table A25: How worried are you about global warming?

Worried about Global Warming	No.	%
Very Worried	310	29.7
Somewhat Worried	390	37.5
Not Very Worried	180	17.3
Not At All Worried	162	15.5
Total	1,042	100.0

Slightly over two-thirds (67.2 percent) of respondents are very worried or somewhat worried about global warming; in contrast, 17 percent are not very worried and 16 percent are not worried at all (see Figure A25).

Figure A26: What do you think is the main cause of global warming?

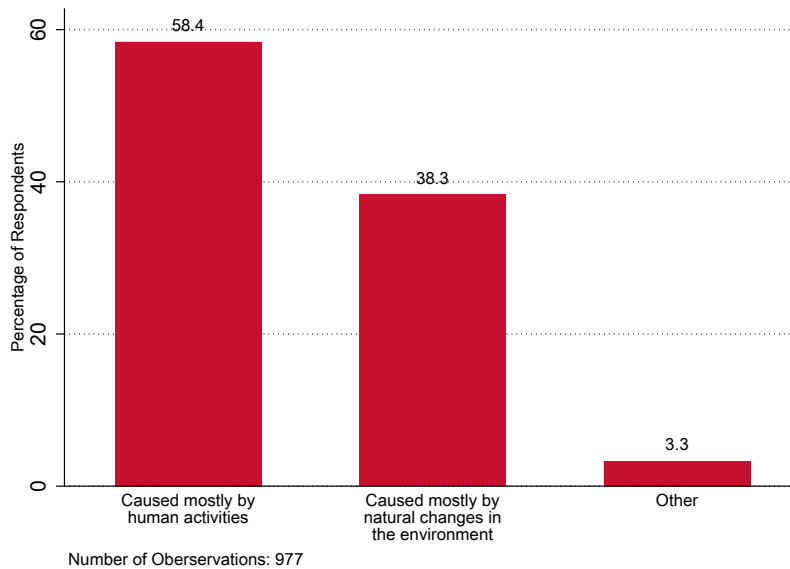


Table A26: What do you think is the main cause of global warming?

Main cause of global warming	No.	%
Caused mostly by human activities	570	58.4
Caused mostly by natural changes in the environment	374	38.3
Other	32	3.3
Total	976	100.0

When asked about the main cause of global warming, close to three-fifths of respondents (58.4 percent) believe it is mostly due to human activities. Thirty-eight percent think global warming is caused mostly by natural changes to the environment, and about 3 percent attribute global warming to other causes (see Figure A24).

Figure A27: When do you think global warming will start to harm people in the United States?

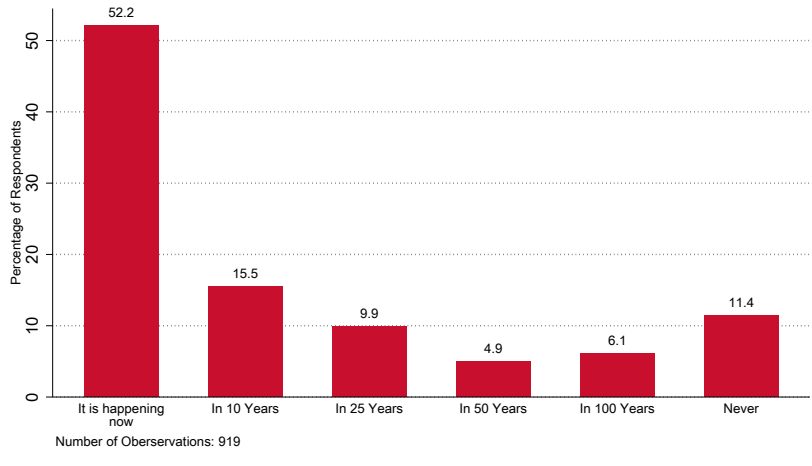


Table A27: When do you think global warming will start to harm people in the United States?

When Global Warming will hurt the U.S.	No.	%
It is happening now	479	52.2
In 10 Years	142	15.5
In 25 Years	91	9.9
In 50 Years	45	4.9
In 100 Years	56	6.1
Never	105	11.4
Total	918	100.0

A majority of respondents (52%) think that global warming is already hurting people in the United States. About 16 percent believe the harm will occur in the next decade, 10% think it will be in the next 25 years, and 5% believe global warming will start hurting the U.S. in the next half decade. Six percent of respondents see the harm to the U.S. occurring in 100 years, whereas 11% believe it will never happen (see Figure A27).

Figure A28: Do you agree or disagree with the following statements:

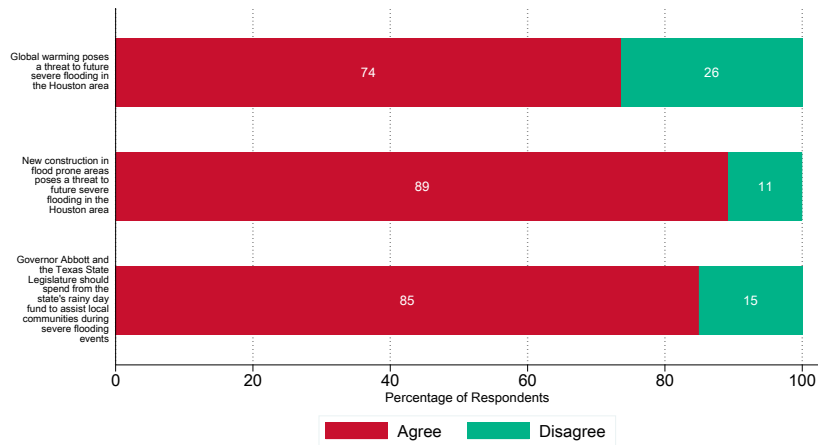


Table A28: Do you agree or disagree with the following statements?

Statements about Global Warming	Agree		Disagree		Total No.
	No.	%	No.	%	
"Global warming poses a threat to future severe flooding in the Houston area."	624	73.6	224	26.4	848
"New construction in flood prone areas poses a threat to future severe flooding in the Houston area."	820	89.3	99	10.7	918
"Governor Abbott and the Texas State Legislature should spend from the state's rainy day fund to assist local communities during severe flooding events."	747	84.9	132	15.1	880

Nearly 74 percent of respondents agree with the statement that global warming is a threat to future flooding in the Houston area. Close to nine in ten respondents (89%) worry about the impact of new construction in flood prone areas on future flooding events. About 85 percent of respondents agree with the statement that the state of Texas should use its rainy day fund to assist those harmed by severe flooding events (see Figure A28).

Figure A29: How confident are you that your elected county and city officials know how to prevent the negative impact of future flooding in the Houston area?

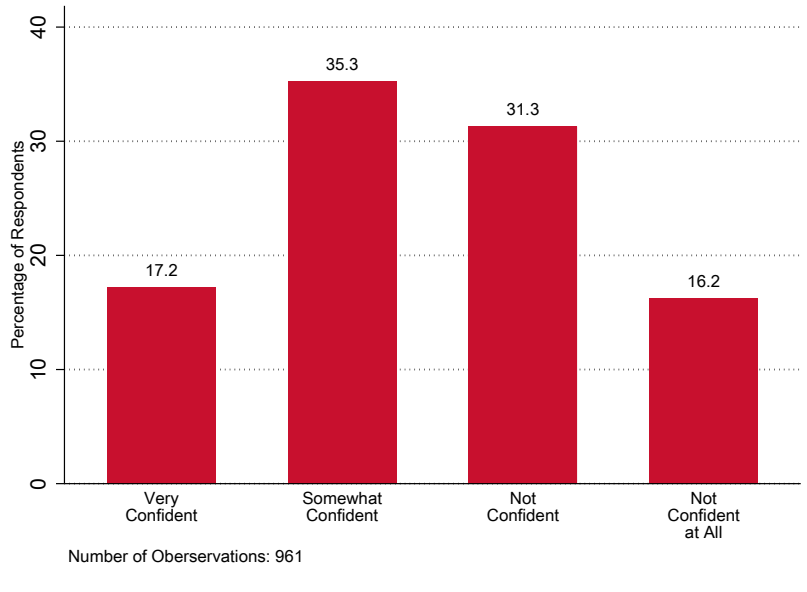


Table A29: How confident are you that your elected county and city officials know how to prevent the negative impact of future flooding in the Houston area

Confidence	No.	%
Very Confident	165	17.2
Somewhat Confident	338	35.3
Not Confident	300	31.3
Not Confident at All	156	16.2
Total	959	100.0

A majority of respondents (52.5%) are very or somewhat confident that elected county and city officers know how to prevent the negative effects of future flooding events in the Houston area. About 47.5% of respondents, on the other hand, are not confident or not confident at all (see Figure A29).

Figure A30: Please rate how favorable or unfavorable you feel toward the following politicians

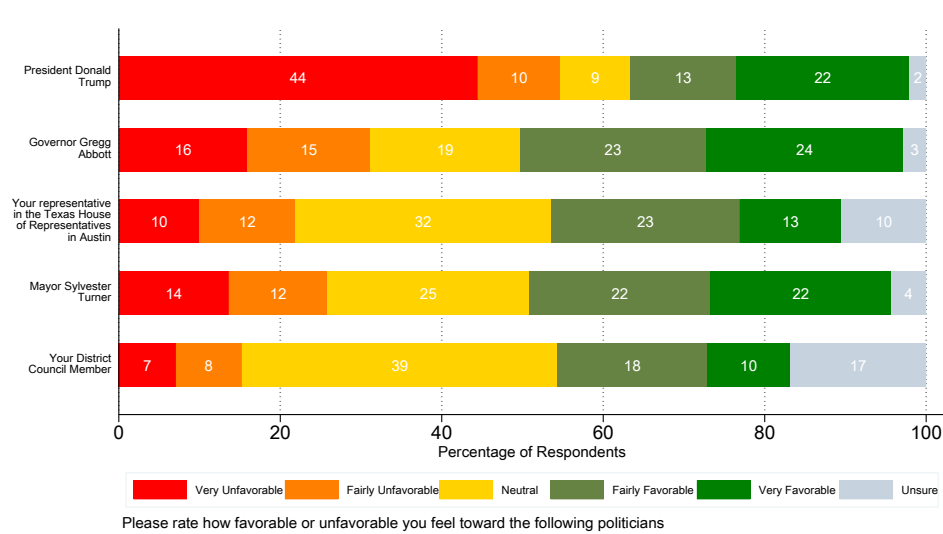


Table A30: Please rate how favorable or unfavorable you feel toward the following politicians

Thermometer	Very Unfavorable		Fairly Unfavorable		Neutral		Fairly Favorable		Very Favorable		Unsure		Total No.
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
President Donald Trump	472	44.4	109	10.3	92	8.6	139	13.1	229	21.5	22	2.0	1,063
Governor Greg Abbott	169	15.9	162	15.2	197	18.5	245	23.0	260	24.4	30	2.8	1,063
Your representative in the Texas House of Representatives in Austin	106	10.0	125	11.8	338	31.8	248	23.3	134	12.6	111	10.5	1,063
Mayor Sylvester Turner	145	13.6	130	12.3	265	24.9	239	22.5	238	22.4	46	4.3	1,063
Your District Council Member	75	7.1	87	8.2	416	39.1	197	18.5	110	10.3	179	16.8	1,063

About 55 percent of Houstonians responding to our survey hold a very unfavorable (44.4%) or fairly unfavorable (10.3%) feeling towards President Trump; conversely, 13% and 22% have a fairly favorable or very favorable feeling towards the President, respectively. Only about 9 percent are neutral towards the President. Forty-seven percent of survey respondents have a fairly or very favorable feeling towards Governor Abbott. Almost one if five are indifferent (18.5%) and about 31% are either fairly or very unfavorable. Respondents' representatives to the Texas House of Representatives in Austin are favorably viewed by 36% of respondents; however, 22% hold negative feelings towards their State Representatives, while 32% are neutral, and 10% are unsure. Mayor Sylvester Turner is favorably viewed with over four in ten respondents (about 22%) who are fairly favorable and 22% who are very favorable of the Mayor. One-quarter of respondents are neutral, and about 26% are fairly or very unfavorable of Mayor Turner. A plurality of respondents (39.1%) are neutral about their district council members, whereas about 17 percent are not sure. Nearly 29% hold very or fairly favorable feelings to their local representatives, and slightly over 15% are either very or fairly unfavorable (see Figure A30).