Examining the impact of 2020 on Hoosiers: COVID, Black Lives Matter, and Climate Change in Indiana

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INTRODUCTION

In the late winter months of 2020, the American media began reporting the detection of an unfamiliar and deadly virus, first in China and soon thereafter in parts of the United States (US) and Europe. In the weeks that followed, it became clear that COVID-19 would prove both broader in its spread and deadlier in its impact than most had previously imagined. As state-issued stay-at-home orders and other lockdown measures were implemented to contain and prevent community transmission, businesses shuttered and a global recession took hold.

Also in 2020, the murder of George Floyd by a police officer in Minneapolis in May raised issues of racial inequity and criminal justice reform in America and internationally. Black Lives Matter activists massed in essentially every major city in the United States—and were often met by counter protesters who sought to defend the need for policing. As the pandemic continued, social unrest over racial inequities was further compounded by findings that people of color have experienced a disproportionate burden of COVID infections and deaths.

While the long-term consequences of these events remain unknown, it is unquestionable that 2020 was a profoundly exceptional year that focused attention on equity, policing and community wellbeing.

Like the rest of the nation, Indiana has weathered the pandemic's adverse health and economic impacts—including 13,396 deaths as of late June 2021—alongside major debates over racial equity. One unexpected outcome of 2020's destabilizing effects in Indiana is an observed shift in how the Indiana public views climate change. Existing social science research suggests that 2020 should have led to increased climate change skepticism. For instance, social-psychological theories, such as the *finite pool of worry* theory, postulates that worrying is a draining process, and that individuals can only do so much of it. Imminent threats, like financial hardship or health concerns, that strike some Americans more than others can diminish concerns about more abstract and distant issues like climate change. A similar theory, *post-materialism*, suggests that the public sees environmental stewardship as a "luxury" that can only be prioritized after more basic needs are met). Evidence for these positions is apparent in data from before and after the 2008 "Great Recession," which triggered a decline in environmental concern and a rise in climate skepticism in the United States and abroad. In 2020, in addition to COVID-19 related health risks, the US unemployment rate hit its highest level since the Great Depression. Indiana was not spared. At one point roughly 12 percent of the state's adult population was applying for unemployment insurance benefits. These positions and circumstances suggest Hoosiers would likely have become more skeptical of climate change since 2019.

It is possible, on the other hand, that rates of belief in the occurrence of anthropogenic climate change have increased. Indeed, some preliminary evidence suggests that since the emergence of COVID-19, the American public has become more concerned about climate change. This might suggest a *snowball of trust* hypothesis, wherein the vindication of a particular scientific prediction, such as the risk of pandemic, acts to increase trust in other scientific predictions, in this case climate change. Certainly, an awareness of the likelihood that catastrophic threats, widely predicted by the scientific community, will eventually materialize has likely never been more widespread.

In this report, our central aim is to document how Hoosiers' attitudes have changed after living through the pandemic year, including how their views on climate change have shifted. We do so by taking advantage of and building upon our recent work. The *Environmental Resilience Institute* at *Indiana University* fielded and completed a statewide general public survey between 2019 and early (pre-pandemic) 2020, called the *Hoosier Life Survey*. In that first survey, we documented Hoosiers attitudes and behaviors on a range of topics.

In the wake of the health-, economic- and justice-related crises of 2020, we designed and fielded a second survey—the *Hoosier Life Survey 2.0*—in which we followed up with our original survey respondents. The Hoosier Life Survey 2.0 was fielded between October 2020 and March 2021. Our questions focused on understanding how Hoosiers had been directly impacted by the events of 2020, as well as how their attitudes on a suite of related topics may have shifted over the course of the year. The below results reflect the views of the approximately 1,200[1] Hoosiers who responded to both our 2019 and 2020 surveys.

HOW DID 2020 IMPACT HOOSIERS?

COVID-19

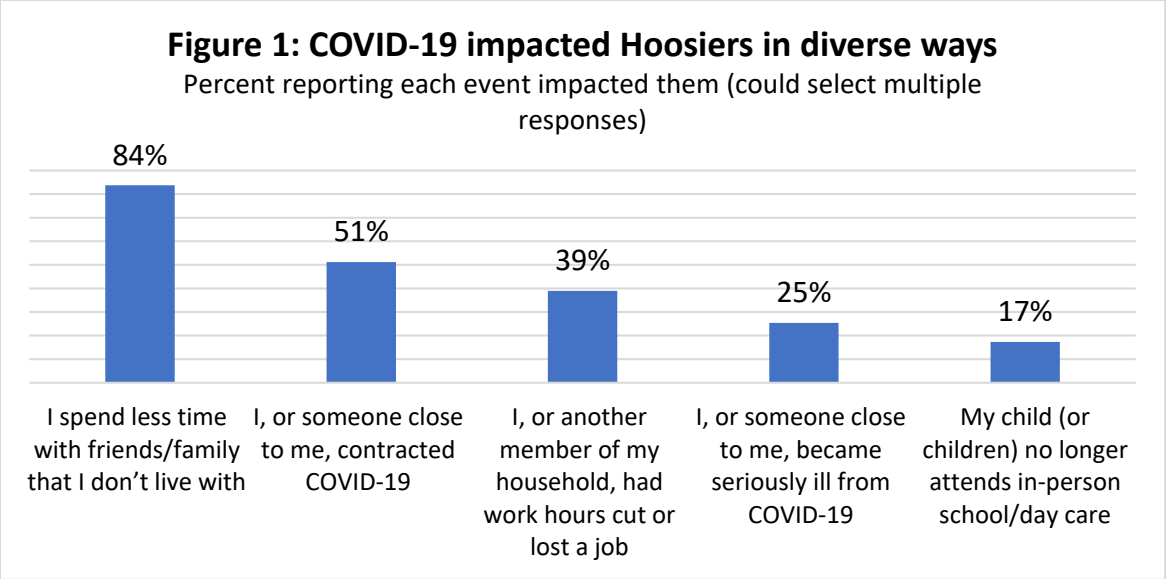
[1] To ensure maximum statistical accuracy for each analysis, we use pairwise deletion to address missing data. In consequence, the exact number of respondents will vary across questions. Unless otherwise noted, total sample size ranges between approximately 1,180-1,220 for this report. Our most conservative estimate for the confidence interval is +/-4.48% accounting for the design effects of sample weights (i.e., deff)

When asked how their lives were in 2020 compared to 2019 (Table 1), the vast majority of Hoosiers unsurprisingly ranked life as worse to some degree, with 28% saying “much worse” and 37% saying “a little worse.” Approximately 70% of those who said life was worse to some extent reported that COVID-19 was the major event that led them to feel this way (Table 2).

The impacts of COVID-19 on Hoosiers were diverse and numerous (Figure 1). Most prominently, Hoosiers spent less time with their friends and family who do not live with them (84%). Over half of those individuals who took our survey (51%) said they knew someone who contracted COVID and nearly 40% said they or someone else in their household had employment impacted by COVID, including losing a job or having hours cut. While heartbreaking, these and the other widely reported impacts of COVID on Hoosiers are ultimately not surprising given the pervasiveness of the pandemic, and the extent of business closures to slow the spread of the disease.

Table 1: Compared to your life in 2019, has the year 2020 generally been better, about the same, or worse for you and those in your household?	
Much worse	28%
A little worse	37%
About the same	26%
A little better	8%
Much better	3%

Table 2: What event or trend was most important in how you decided to answer the previous question? Please choose only one.	
COVID-19	70%
Civil Unrest	7%
Political Events	8%
Climate Change and Extreme Weather	0%
The Economy	4%
A Personal Event	12%
*Includes only respondents who rated life as much worse or a little worse.	



Economy

Hoosiers also felt the economic impact of pandemic-related business lockdowns. Given that 39% of our respondents reported that they or someone in their household had lost a job or work hours, it is unsurprising that approximately 28% of state residents reported that their household income declined in 2020, relative to 2019 (see Table 3). Our data cannot speak to why the percentage of those who reported lower expected incomes does not equate with those who reported some type of employment loss. It could be that the income of these individuals was supplemented by unemployment insurance or stimulus checks, or that they were able to find employment elsewhere.

Table 3: Compared to your household income in 2019, do you expect your 2020 household income to be...	
Lower	28%
About the same	52%
Higher	21%

Racial Injustice and Protests

As noted earlier, COVID-19 was not the only crisis in 2020. After the murder of George Floyd in May 2020, and then Dreasjon Reed in Indianapolis in May 2020, we also witnessed both a local and global uproar around issues of racial injustice and police reform. Like any movement, the actions taken by protesters and counter protesters influenced public perception of these issues. As we see below, many in the Indiana public reported shifting attitudes on issues related to criminal justice reform and the Black Lives Matter movement (Table 4). Looking across political parties, we see that generally the state appears to have become more divided on these issues. Compared to six months ago, 51% of Republican[2] respondents reported "much less" or "somewhat less" support for the Black Lives Matter movement, while 68% of Democrats were

[2] For this report, "Republican" represents respondents who selected "Republican" or "Independent, Lean Republican. "Democrat" represents respondents who selected "Democrat" or "Independent, Lean Democrat." Those who selected "other" political affiliation (n=71) were omitted from all political-focused analysis. This coding reflect grouping we used previously in the Hoosier Life Survey Politics Report.

somewhat more and much more supportive of this movement (Figure 2). Conversely, Republicans were much more likely than Democrats to express increased support for full funding of the police in Indiana (see Figure 3). As these trends indicate, the dramatic protests and rallies around issues of racial inequality impacted the attitudes of key segments of the Hoosier public in drastically distinct ways.

Table 4: Compared to 6 months ago, how has your support of the following changed?					
	Much less supportive	Somewhat less	No change	Somewhat more	Much more supportive
Efforts to reduce racial bias	5%	4%	50%	19%	23%
Full funding for police in Indiana	9%	9%	41%	14%	27%
Black Lives Matter movement	23%	5%	33%	18%	20%

Figure 2: Reported change in support for Black Lives Matter movement differs greatly by political party

Question: Compared to 6 months ago, how has your support for the Black Lives Matter movement changed?

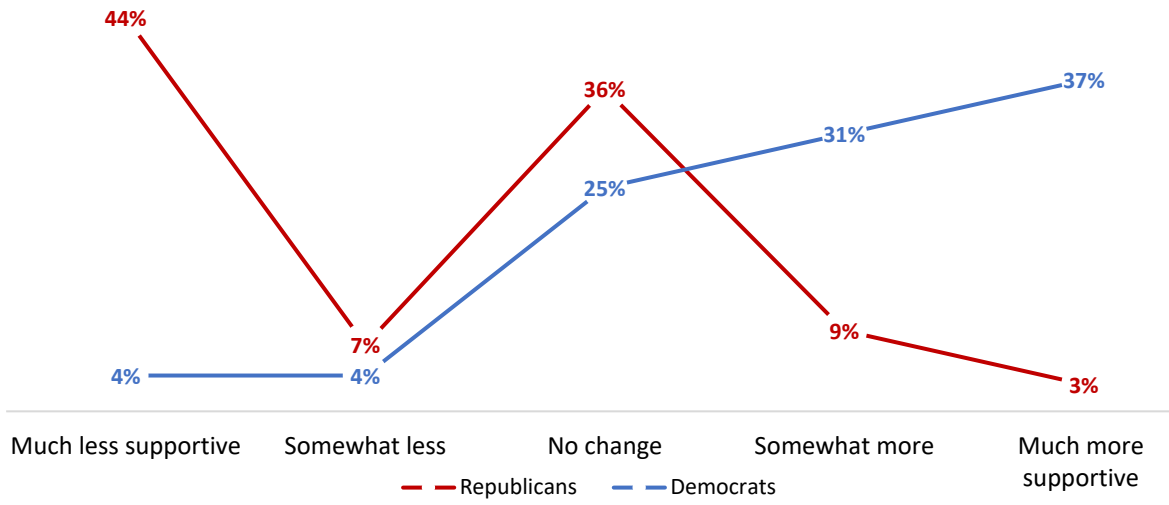
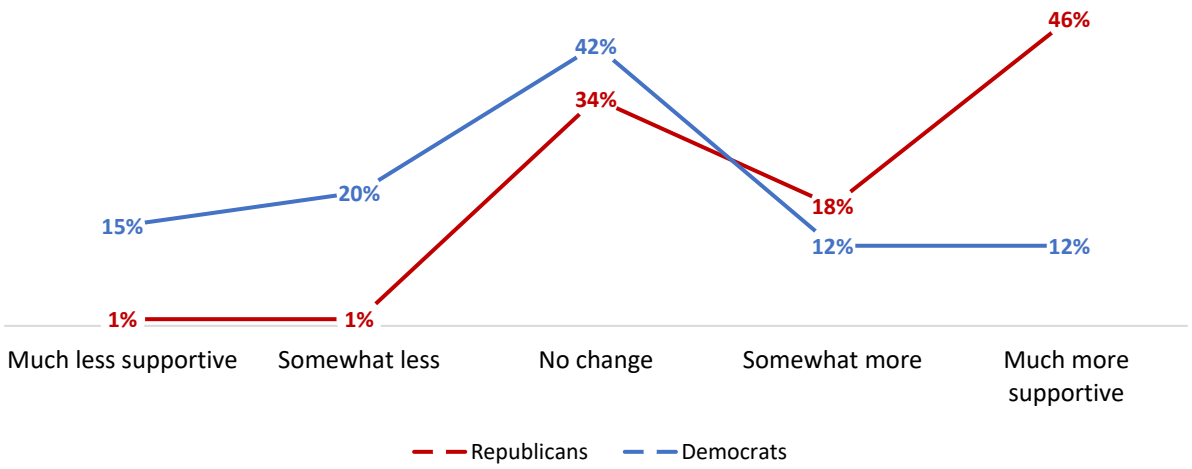


Figure 3: Reported change in support for police funding differs greatly by political party

Question: Compared to 6 months ago, how has your support for full funding of the police in Indiana changed?



RISKS, CLIMATE CHANGE VIEWS, AND CHANGE OVER TIME

Given Hoosier experiences over 2020, it isn't surprising that many respondents' attitudes on a range of topics have shifted since 2019. Respondents to the Hoosier Life Survey 2.0 were more likely to expect their family to be harmed by a variety of risks within the next 10 years (see Table 5). In general, it appears our state's residents are more pessimistic about the future, feeling more vulnerable than they did in 2019.

Most notably, in 2019, only around 4% of our respondents expected that their family's wellbeing would be harmed by a major disease outbreak. In 2020, about four times that percentage—approximately 16%—of Hoosiers reported that another major disease outbreak (not COVID-19) is "very likely" to harm their family. Over 31% believe that such an event is at least "likely," compared to only 13% in 2019.

Table 5: When you think about <u>your family's well-being</u> in the next 10 years, how likely do you think it is that your family will be harmed by any of the following possible events?

	2019	**2020**
Reponses/Crises	**Major disease outbreak**	**<u>Another</u> major disease outbreak (not COVID-19)**
Likely	13%	31%
Very likely	4%	16%
Total	**17%**	**47%**
	Extreme weather	**Extreme weather**
Likely	29%	32%
Very likely	21%	23%

Total	**50%**	**55%**
	Government shutdown	**Government shutdown**
	2019	**2020**
Likely	29%	31%
Very likely	16%	18%
Total	**45%**	**49%**
	Economic crisis	**Another economic crisis**
Likely	34%	40%
Very likely	23%	24%
Total	**58%**	**64%**

Climate change

As noted in the introduction, several existing perspectives from the social sciences suggest that years like 2020, through increased worry about more proximate concerns, will have increased climate change skepticism.

Our findings, however, do not support this. Rather, we generally see that our sample of Hoosiers had relatively small, but still notable increases in supportive attitudes about climate change between 2019 and 2020. Specifically, we see an approximately 5% increase in the percentage of Hoosiers who reported believing that climate change is happening (see Table 6) and also a 5% increase in the percentage who report believing that humans are the primary cause of these changes (see Table 7). While minor, these represent rather substantial changes given the short period in which they are recorded. It is certainly possible that re-surveying the same individuals over time produced some type of bias in our results, potentially contributing to this increase in beliefs (sometimes this is called “test-retest bias”). However, other research suggests that climate skeptics are highly resistant to efforts to shift their attitudes and could even become more entrenched in skepticism, should these individuals feel that their views are being manipulated in anyway. We emphasize caution in interpreting these figures then, but also feel it is reasonable to assume they indicate actual attitudinal shifts among the Indiana public.

Table 6: Do you believe climate change is happening (whether caused by human activity or not) to any degree?		
	2019	2020
No	12%	9%
Yes	79%	84%
Don't know	9%	8%

Table 7: Do you think climate change is caused...		
	2019	2020
Entirely or mostly by humans	43%	48%
Equally by humans and nature	38%	35%
Entirely or mostly by natural causes	10%	8%
Uncertain	10%	9%

*Excludes those who do not believe climate change is happening or "don't know." Total n=1,038.

Whose views shifted? When we break the question down by political party (Tables 8 and 9), we see that Hoosiers who identify as Republican were more likely to report changing their attitudes and/or beginning to agree that climate change is happening than Independents or Democrats.

This change for Republicans is more significant than one may think at first glance. In the United States, Republican affiliation (or conservative ideology) is considered one of the most consistent predictors of an individual's climate change views. And in general, Republicans across the country have become more skeptical of climate change over time. Our data therefore suggests that something about 2020 dislodged a non-trivial proportion of this group's views, a group that has not only been deeply skeptical of climate change but is also deeply entrenched in their skepticism.

Table 8: By political party—Do you believe climate change is happening (whether caused by human activity or not) to any degree?

	Republicans		Independents		Democrats	
Year	2019	2020	2019	2020	2019	2020
No	23%	16%	7%	9%	4%	2%
Yes	61%	72%	81%	77%	94%	95%
Don't know	15%	12%	12%	14%	2%	3%

Table 9: By political party—Do you think climate change is caused...

	Republicans		Independents		Democrats	
	2019	2020	2019	2020	2019	2020
Entirely or mostly by humans	19%	21%	34%	34%	62%	67%
Equally by humans and nature	52%	49%	41%	39%	28%	27%
Entirely or mostly by natural causes	18%	18%	8%	17%	5%	4%
Uncertain	11%	12%	17%	10%	6%	3%

*Excludes those who do not believe climate change is happening or "don't know." Total n=1,104.

Given this context, the obvious question is why did Republican's change their views on climate change? This is a particularly pertinent question when posed in relationship to the more substantial shift in terms of belief that climate change is happening (an 11% point increase). What about 2020 had this effect? Noted earlier, most existing evidence would suggest that climate change skepticism should have become more pronounced. Consequently, we are still generating and testing hypotheses that help to explain these shifts. However, some preliminary analysis is beginning to help explain at least some portion of the decreased skepticism among Republicans.

It may be that shifting political party dynamics contributed somewhat to changing views of climate. The percentage of our respondents who identified as Republican (either Republican or Independents who lean Republican) increased by 2% (see Table 10). These "new" Republicans, compared to those who remained in the party between 2019-2020, express distinct climate views (and potentially represent largely former Independents who went Republican for the 2020 elections). Approximately 84% of "new" Republicans believed climate change was happening in the 2019 survey, a much higher percentage than those who identified as Republicans at the time (59%). The vast majority of this new batch of conservatives appears to have brought their climate change beliefs with them to the party. Almost 82% of new Republicans report believing that climate change is happening in 2020. Importantly, this influx of believers is, in absolute terms, a very small number of Republicans and it ultimately helps to explain only a small portion of the shift in attitudes among Indiana conservatives.

Another contributing factor may be declining media consumption. Conservative-leaning media sources—such as Fox News—cover climate change in a manner that promotes climate skepticism. For instance, one study found that 86% of all climate discussion on Fox News in the first half of 2019 were dismissive of the climate crisis. We see, in Table 11, that Republicans who reported decreased media consumption levels were also more likely to begin to believe climate change is happening in 2020. This result applies to "staunch" Republicans (who remained Republicans in 2019-2020), and thus helps to explain their shifting views (results not shown). While this may help to explain an openness to new information on climate change, it does not necessarily point to what caused the shift in attitudes.

Another possibility is that some Republicans held more supportive views of climate change than they originally reported in 2019. Concerns about being perceived as non-conforming with one's group can constrain the emergence of scientifically accurate attitudes about climate change. As information about climate change and data products showing widespread belief in climate change continue to emerge throughout Indiana, it may be that skeptical Republicans just feel more able or willing to express a long-held belief in our survey.

Also notable, we saw a 4% decrease in the percent of Independents who believe climate change is caused primarily by humans (Table 9). Independents' attitudes on climate change have long been known to be in flux and can be shaped be a variety of proximate experiences, including extreme weather events. What contributed to Independents' views on human causation is not immediately clear in our data.

Finally, the percentage of Democrats who believe humans cause climate change increased by 5% (Table 9). Our data suggests hearing more about climate change in the media during 2020 and reporting more trust in Indiana Scientists were factors associated with increased belief in humans' causal role among Democrats. About 22% of those whose increased trust in Indiana scientists began to believe in humans' causal role in 2020, compared to 13% whose trust level stayed the same. Similarly, around 18% of Hoosiers who reported hearing more about climate change in the media during 2020 also began to believe climate change is caused primarily by humans, compared to 13% who reported the same level of climate-related media consumption. Obviously, these variables do not completely explain shifting attitudes.

Ultimately, continued analysis and research are needed and will reveal additional factors which contributed to this increase in climate change acceptance among Republican and Democrat Hoosiers.

Table 10: Change in Political Affiliation		
	2019	2020
Republican	36%	38%
Independent	16%	13%
Democrat	41%	41%
Other	7%	9%

Table 11: How decreased media consumption contributed to Republican's changing view on climate			
	Change in Total Media Consumption (2020-2019)*		
Change in climate change belief since 2019	Decreased	Stayed the same	Increased
Less recognition that climate is changing	5%	21%	12%
No change since	67%	62%	76%
Began to believe climate change is happening	29%	18%	12%
*includes the total hours consuming the following media sources: Reading printed newspapers; Reading online newspapers, news stories, magazines, or other readings; Listening to internet radio or podcasts; Listening to news on the radio (not through the internet); Watching news videos online; Watching TV news; Browsing social media, such as Facebook. *Figures reflect Republican respondents only.*			

MAJOR PROBLEMS NOW AND IN THE FUTURE

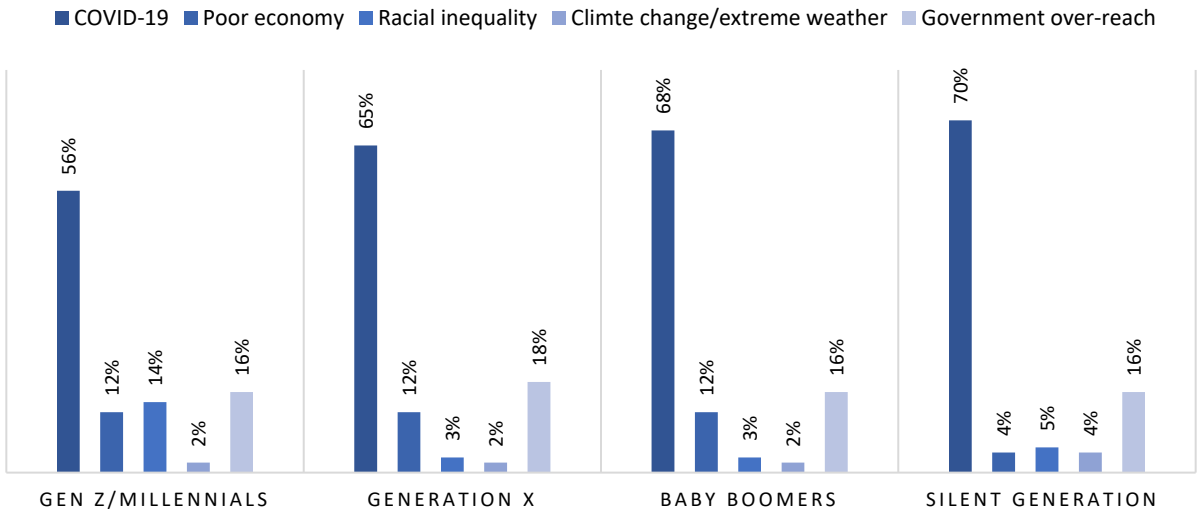
Given the pressing need to address COVID-19, it is not surprising that the majority of respondents rated this disease as the most important problem facing Indiana right now (63%) (see Table 12). Interestingly, younger Hoosiers[3] were more likely than their older counterparts to perceive racial inequality as the most pressing problem in the state (see Figure 4).

Table 12: Which of the following do you feel is the most important problem facing Indiana <u>right now</u>?	
COVID-19	63%
Poor economy	11%
Racial inequality	7%
Climate change/extreme weather	2%
Government over-reach	16%

[3] Age based definitions of the generational cohorts are as follows: Generation Z (age 18->24); Millennials (age 25->40); Generation X (age 41->56); Baby Boomers (age 57->73); and the Silent Generation (age 74 and above). These definitions are based on those used by the Pew Research Center. See here.

Figure 4: Generational differences in perceptions of major problems facing Indiana

Question: Which of the following do you feel is the most important problem facing Indiana right now?

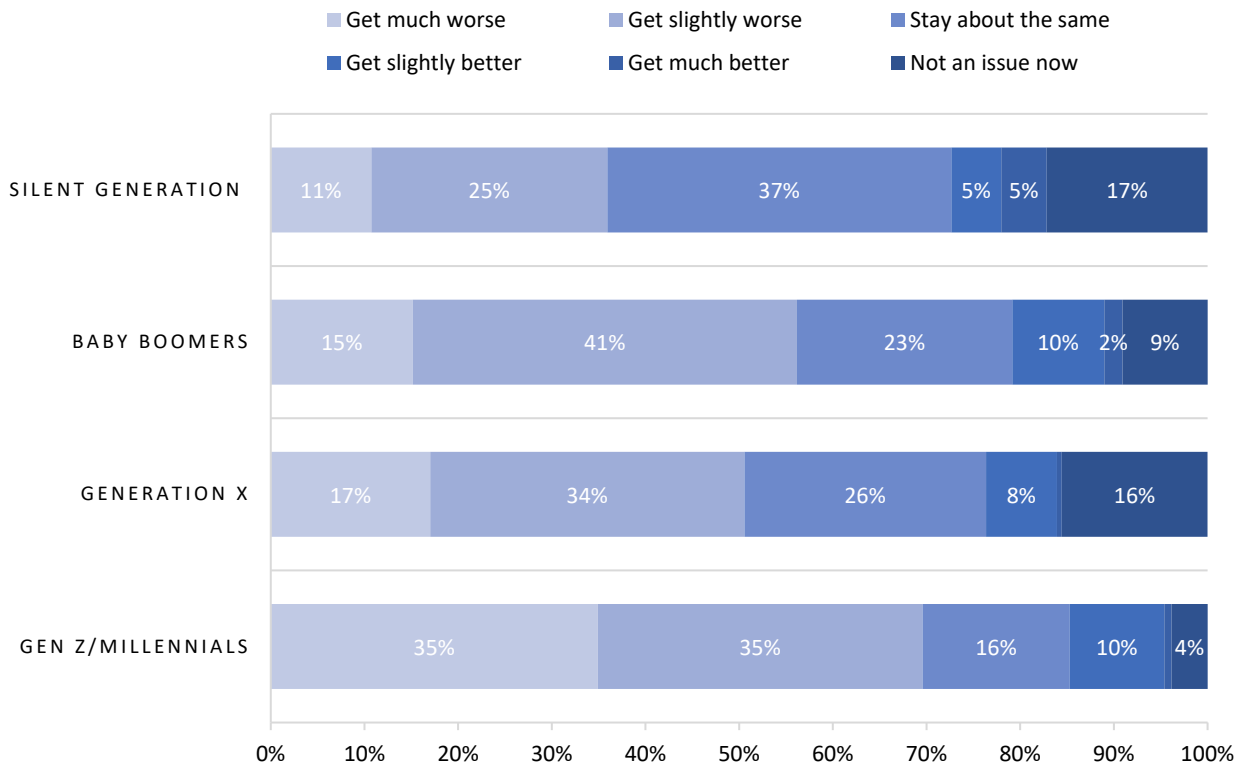


When we ask how these problems will change over time (Table 13), we saw key differences in the public's views based on generation. Most notably, younger Hoosiers were much more likely than their older counterparts to expect the impacts of climate change to become more severe in their lifetimes (see Figure 5). (In the original Hoosier Life Survey, younger Hoosiers were likewise shown to be more likely to report views on climate change that accord with contemporary scientific evidence.) Similarly, nearly half of younger Republican Hoosiers (48%)—those in Generation Z or Millennials—also expect climate change to become slightly or much worse in their lifetime (results not shown).

Table 13: In your opinion, how will the following problems change in your lifetime?

	Get much worse	Get slightly worse	Stay about the same	Get slightly better	Get much better	Not an issue now
COVID-19	14%	13%	8%	20%	42%	4%
Poor economy	18%	20%	18%	25%	13%	6%
Racial inequality	10%	12%	25%	36%	9%	8%
Climate change and extreme weather	23%	35%	23%	9%	1%	9%
Government over-reach	29%	26%	26%	9%	2%	9%

Figure 5: 70% of Hoosier youth expect the problem of climate change to get worse is their lifetime



CHANGING NATURE OF TRUST

We also saw minor shifts related to who Hoosiers trust to provide them with information about preparing for weather extremes (see Table 14). We doubt these changes in attitudes, on average, reflect experiences directly related to climate extremes. Instead, it is likely that Hoosiers' information consumption over the past year was largely driven by a desire to seek out information related to or make personal risk-based decisions about COVID-19. These experiences may have shifted who Hoosiers trust. Compared to 2019, Hoosiers were slightly more likely to say they trusted scientists, especially those based in Indiana (44% → 49%). We also see a similar degree of increased reported trust in family (34% → 39%) and, most of all, in one's own judgement (52% → 60%). On the flip side (or perhaps the outcome of more discerning consumers), we see a small decrease in the average level of trust in the media to provide information related to extreme weather (31% → 27%). And certainly, some Hoosiers felt more committed to trusting their own gut in decision-making as a means of coping with conflicting public health messaging about COVID-19 and navigating questions of how much personal health risk seemed reasonable. This dynamic may increase as expert views on the origin of COVID-19, vaccine safety, and the efficacy of various treatment options continue to change.

Table 14: Question: How much do you trust each of the following sources to provide you with information about how to	**"Trust a lot"**

prepare for the future impact of extreme weather events (e.g., flood, drought, severe storms, etc.) on your community?		
	2019	**2020**
My family, friends, and neighbors	34%	39%
Media sources (TV, radio, newspaper, internet, etc.)	31%	27%
Local public officials (mayor, city managers, etc.)	22%	24%
State public officials (governor, Indiana Department of Natural Resources, etc.)	33%	33%
Indiana-based scientists	44%	49%
Nationally or internationally based scientists	44%	47%
My own judgment	52%	60%

LOOKING FOR MORE?

Scientists predict that, over the next 50 years, our state's average temperature will increase by 5°F to 6°F; that we will see more frequent and intense precipitation events, leading to more flooding, especially in the spring; and that some areas of the state could see up to a sixfold increase in the number of extremely hot days (over 95°F) in the next 30 years. These events will make life harder for many in Indiana and around the world—especially for those who are members of already disadvantaged communities.

With such clear warnings in mind, we seek to tailor this and future Hoosier Life Survey reports in a way that will help Indiana residents, scientists, businesses, and public officials to build resilient communities through greater awareness of personal and household habits, perceptions and beliefs, and informational awareness of Indiana residents.

The full results from our original *Hoosier Life Survey*, including several reports and an interactive data mapping tool, are available on the Environmental Resilience Institute's website, or by following this link.

METHODS REPORT

To assess attitudinal and behavioral change as a result of events in 2020, we used a longitudinal panel approach, which provides us the ability to gather repeated observation on a set of variables for the same sample units over time. In this particular case, we re-surveyed respondents from our 2019 Hoosier Life Survey (HLS1). To gather our existing sample and data, HLS1 surveys were sent to 10,000 Indiana households across the state. Addresses were purchased from a private address-based sampling vendor. In mailing surveys to these households, we used a modified Dillman approach, with a total of five mailing waves.

For the second wave of the HLS survey, we re-surveyed those respondents from our original sample who agreed to participate in future studies. Of our approximately 2,700 respondents to the 2019 survey, 2,021 (76 percent) agreed to receive requests to participate in future studies requests. Our decision to draw from our existing sample reflects a non-probability design. However, such a panel-sampling design is widely considered one of the most effective means to determine the amount of change in key variables of interest—in our case, individual's climate-change risk perceptions, views, and behaviors—and what drives changes in these areas.

That the 2019 HLS, our baseline measure, was completed just before the emergence of COVID-19 in the United States provided us with a unique opportunity to understand the impact of this pandemic and other events in 2020—particularly in its relation to changing views about climate change—on the Indiana public. To ensure our ability to assess this change, we included a subset of key questions from the 2019 HLS in the second wave of the Hoosier Life Survey (HLS2) exactly as they were worded in the original HLS1.

To reach this sample, we used a unique mixed-mode, adapted tailored design approach. This delivery approach capitalized on existing contact information. We split our sample into two categories: those who provided email addresses and those who did not. Of the more than 2,000 HLS1 respondents who agreed to participate in future studies, more than 1,200 provided their email addresses. To this group, we emailed an invitation, including a link to the survey. The online survey was designed and hosted on IU's Qualtrics account, a widely used online survey-design software program. To the approximately 800 HLS1 respondents who agreed to participate but did not provide an email address, we mailed a survey packet and cover letter to their known home address. Non-respondents in both groups received a follow- up notifications. Each respondent who completes the survey was entered to win a $50-dollar gift card (one of 20 available in total) as a post-incentive. Our survey ran between October 2020—March 2021

Of the 2,021 potential respondents, approximately 1,200 returned our survey for an unweighted response rate of approximately 59.4%.

To ensure accurate population estimates for this analysis, survey weights were used. Weighting incorporates: (1) a base weight adjustment for unequal probabilities of selection due to disproportionate stratified sampling by geography and due to the number of adults in the household, and (2) a calibration adjustment to the 2019 5-year American Community Survey estimates for age by sex, education, and race in the Indiana adult population. Weights have been trimmed and scaled to the unweighted number of respondents.

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