

ENVIRONMENTAL RESILIENCE INSTITUTE

## THE HOOSIER LIFE SURVEY

POLITICS AND CLIMATE CHANGE AT THE CROSSROADS



Principal investigators<sup>1</sup>:

Matthew Houser, PhD Environmental Resilience Institute and Department of Sociology

Eric Sandweiss, PhD Department of History

Beth Gazley, PhD O'Neil School of Public and Environmental Affairs

Elizabeth Grennan Browning, PhD Environmental Resilience Institute and Department of History

Heather Reynolds, PhD Department of Biology

James Shanahan, PhD The Media School

## THE HOOSIER LIFE SURVEY:

Politics and Climate Change at the Crossroads

#### **AMONG OUR KEY FINDINGS:**

A majority of Hoosiers (more than 50 percent), regardless of political affiliation, identify at least "somewhat" as an environmentalist.

Approximately 58 percent of Democrats believe that humans are the primary cause of climate change, while only 16 percent of Republicans believe the same. A greater share of Republicans (26 percent) believe that climate change is not happening at all.

The type of community in which a respondent lives—rural, small town, suburban or urban—appears to shape the relationship between politics and climate change beliefs. Only 6 percent of rural Republicans believe that humans are the primary cause of climate change, compared to 23 percent of suburban Republicans. Similarly, rural Democrats (49 percent) were less likely to attribute climate change primarily to human actions than were their suburban (66 percent) and urban (63 percent) counterparts.

Younger Democrats and Republicans are much likelier than their older counterparts to believe that humans are the primary drivers of climate change.

Female Democrats and Republicans are likelier than their male counterparts to believe that climate change is harming people in the United States right now.

**Even Hoosiers' perception of how their local weather has changed is shaped by their political affiliation**, with Democrats and Independents more likely than Republicans to believe that extreme events such as heavy rains have occurred more frequently over time.

A majority (56 percent) of Republicans express skepticism about the potential of technologies to solve major issues such as environmental change. Based on past research, this attitude may, conversely, signal a willingness among Republicans to support climate-change responses that rely on less technologically intensive measures.

A majority of Hoosiers, regardless of political affiliation, generally support local policies and programs to address the risk of climaterelated extreme weather events. Even policies and programs specific to reducing carbon dioxide emissions generally receive widespread support.

Regardless of party affiliation, Hoosiers widely support a hypothetical scenario for funding environmental resilience programs through a tax on corporations, assessed proportionately in relation to their contribution to elevated pollution levels.

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## Preparing for Environmental Change in Indiana: The Hoosier Life Survey

Environmental changes such as extreme weather events, rising temperatures, floods, or droughts affect people across the globe. But whatever their source and however great their extent, these conditions also touch us at local levels that we experience each day—around the house, across our community, on the farm, and throughout the state where we live. The global challenge of environmental change is an Indiana challenge, too.

#### What is the Hoosier Life Survey?

The Hoosier Life Survey (HLS) is the nation's most comprehensive statewide public-opinion survey of environmental change to date. The HLS addresses how environmental changes—particularly extreme weather events—are perceived, how they affect people in their homes and towns, what Hoosiers are doing about it, and what they expect for the future. This research, sponsored by Indiana University's Environmental Resilience Institute (ERI), was funded by IU's Prepared for Environmental Change Grand Challenge initiative.

Between August and December 2019, ERI reached out to 10,000 adult (18+) Hoosiers across Indiana—from Chicago's suburbs to Cincinnati's metropolitan fringe, from the Grand Chain of the Wabash to the shore of northern Indiana's historic Limberlost Swamp. In total, 2,739 Hoosiers—representing 90 of the state's 92 counties—responded. Thanks to their participation, *ERI can now offer scientists, public officials, and the general public new insight into how climate change affects Hoosiers in their everyday lives.* 

#### What does the HLS tell us?

We asked our Indiana neighbors more than 100 questions, organized in sections titled Who You Are, Where You Live, What You Value, What You've Heard, You and the Environment, and What You Do. Taken together. our respondents' answers show us what Hoosiers think about environmental change—its origins, its extent, its impact on their families. The survey tells us, too, how Hoosiers learn about the issues vital to their future—whom they trust, to whom they listen, from whom they'd like to hear more. It highlights **how much** Indiana residents are already doing—or are prepared to do-to build resilience<sup>3</sup> in the face of one of the grand challenges of our time. And it reveals the role of **political and personal values**—along with social, demographic, and economic differences—in **dividing** Indiana's citizens in their approach to that challengeas well as the fundamental things that we share despite such differences.

HLS's in-depth, localized data enrich and focus the findings of other studies such as the Yale Climate Opinion Maps or the Pew Research Center's US Public Views on Climate and Energy report. While these national surveys provide useful guidance to Americans seeking to understand and prepare for environmental change, the HLS—combined with the ERI's Hoosier Resilience Index, ERI Toolkit, and the Indiana Climate Change Impacts Assessment, coordinated by the Purdue Climate Change Research Center—provides a model for universities and states wishing to tailor their understanding of environmental change and resilience strategies to the particular geographies and political and social settings in which practical, local actions can be taken. For more information on the HLS findings, see the interactive <u>HLS</u> Opinion Map and HLS Summary Report.

#### **Politics and Climate Change at the Crossroads**

This report, the first in a series that will focus on particular HLS findings, highlights the role of political affiliation in Hoosiers' perceptions of, and preparation for, environmental change. We begin with the presumption that while individual actionsfrom consumer and eating habits to household and transportation practices—are important elements of any preparation for climate change, such actions are not enough, on their own, to increase our resilience at the scale that may be demanded of us in coming years. An openly deliberated public policy—whether at the national, state, or local level—is the tool that Americans have always employed to motivate, enable, and, if necessary, compel action across a diverse population. Because public support is critical to the fairness and the efficacy of such policy, we consider a close understanding of that opinion to be key to this deliberation.

Indiana's 2020 primary elections provide an opportune moment at which to take stock of the political dimension of Hoosiers' support for climate change-related public policy, as well as to measure whether and how other key climate change-specific attitudes relate to political affiliation. Drawing on the statewide Hoosier Life Survey, this report focuses on relationships between political affiliation, Hoosiers' views of climate-resilience policy and programs and Indiana residents' beliefs and concerns about climate change. Hoosiers who answered our survey spanned the political spectrum. The survey asked:

Generally speaking, do you usually think of yourself as Republican, Democrat, Independent, or something else?

#### Out of the response options<sup>1</sup>,

32% identified as *Republican*16% identified as *Independent, lean Republican*17% identified as *Independent (no lean)*3% identified as Independent, *lean Democrat*22% identified as *Democrats*

For the purposes of this report, respondents who identified as Republican or as Independents who lean Republican were grouped together as "Republican," while the same was done for Democrats and for Independents who lean Democrat. In the pages that follow, we look at a few of the ways in which three major political affiliations— Republican, Independent, and Democrat—divide or connect Hoosiers in terms of their climate change views and support for related policy.

In general, we find that strong partisan disagreements continue to characterize Hoosiers' perceptions, explanations, and plans for the climate-driven challenges that scientists tell us are already here. Personal differences (including categories such as gender, age, or community type) complicate, but do not override, these political differences. Nevertheless, our findings suggest that policies and public conversations focused on shared experiences and specific, feasible solutions may bring Indiana citizens together in ways that more abstract discussions do not.

<sup>1</sup> The 176 respondents who identified as "something else" were excluded from this analysis. For a similar finding of the relative proportion of Hoosier political affiliations, see the party-identification breakdowns reported in the Pew Research Center's 2014 Religious Landscape Study.

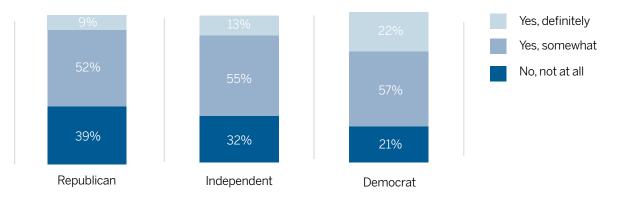
## BELIEFS AND ATTITUDES

#### **Beliefs and Attitudes**

A majority of Hoosiers, regardless of political affiliation, consider themselves to be at least "somewhat" of an environmentalist—a finding that suggests that environmental concerns are widely shared across the state (Figure 1). Still, Hoosiers' beliefs and attitudes about climate change vary considerably by political affiliation.

In general, Democrats are most likely to perceive climate change as a clear and present threat and to support personal or political action in response. Approximately 93 percent of Hoosiers who identify as Democrats believe that climate change is happening, compared to 79 percent of Independents and 58 percent of Republicans (Figure 2). While a majority of Hoosiers—of all political affiliations—thus believe that climate change is happening, deeper divisions emerge as one examines their responses to other questions about the sources and severity of that change, as well as about the appropriate response.

#### Figure 1: Many hoosiers report being an "environmentalist"



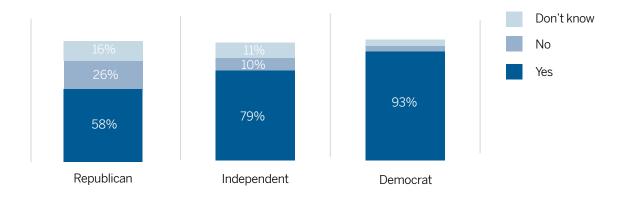
Question: Do you consider yourself an environmentalist?

## BELIEFS AND ATTITUDES

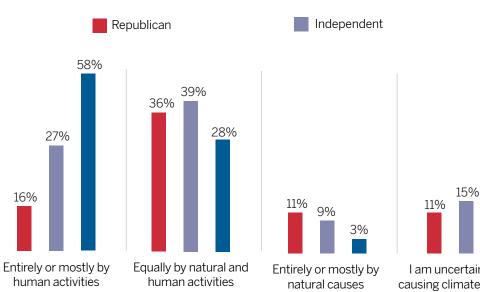
The scientific community widely agrees that humans are the primary cause of contemporary climate change (Cook, et al., 2016). Across party lines (by majorities of 52 percent of Republicans; 66 percent of Independents; 86 percent of Democrats), Hoosiers acknowledge at least some human role in climate change (see Figure 3). However, only among Democrats do a majority (58 percent) believe that humans are its primary cause.

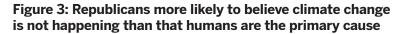
Indeed, the fraction of Hoosier Republicans (16 percent) who consider humans to be the primary agents of climate change is smaller than the portion of that party's affiliates (26 percent) who believe that climate change is not happening at all. This skepticism—about the reality of climate change itself—is further reflected in the fact that only a minority (41 percent) of Hoosier Republicans agree that most scientists believe climate change is occurring at all (Figure 4).

### Figure 2: Majority of Hoosiers across political parties believe climate change is happening Question: Is climate change happening?

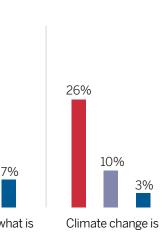


## BELIEFS AND ATTITUDES





Question: Do you think climate change is caused by:



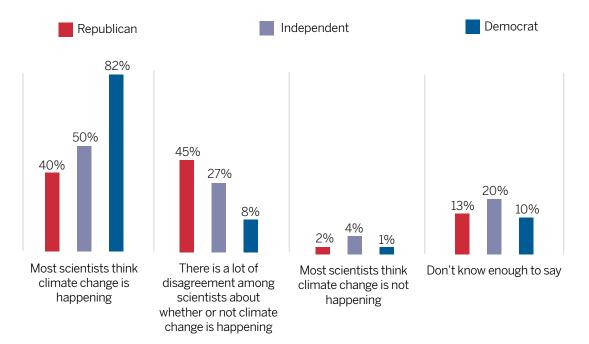
Democrat

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I am uncertain what is causing climate to change

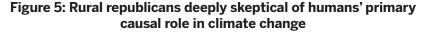


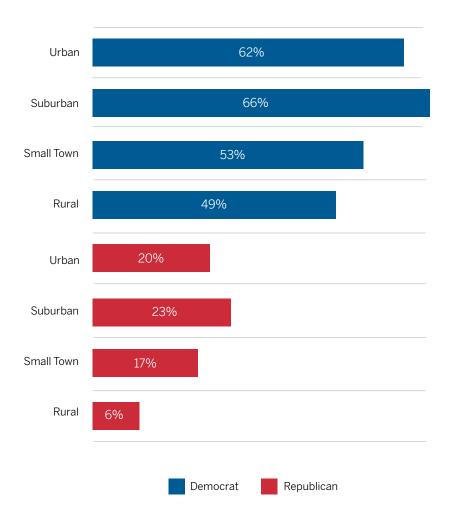
Figure 4: Majority of Republicans believe there is not scientific consensus on climate change



#### **Community Type and Politics**

Even within political parties, key differences in public attitudes sometimes appear. Rural Republicans, for example, are especially skeptical of humans' key causal role in climate change, as shown in Figure 5. Generally speaking—and regardless of party affiliation—urban and suburban residents are likelier to accept a primary human role than are the residents of small towns and rural areas. These intra-party differences in belief may stem from distinct demographic patterns, with suburbanites having on average higher incomes (not shown) than other groups, and with city and suburb residents being younger on average than their small town and rural counterparts. (See Climate Change, Age, and Politics on page 10 for more information about the role of age and climate change beliefs.)





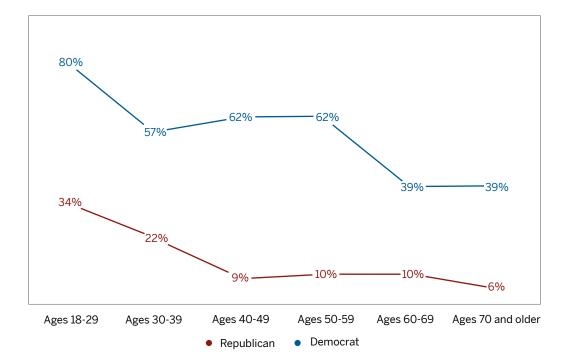
% who believe that climate change is primarily caused by humans

#### **Climate Change, Age, and Politics**

Like community type, age offers another example of a subfactor that explains variations within the otherwise monolithicseeming divisions of party identification. Scientists expect that the worst of climate change's impacts will truly emerge by 2050-2080 (Widhalm et al. 2018). Younger Hoosiers will thus bear the costs of our inaction should we fail to undertake immediate and extensive efforts. The fact that generations who did not cause this ecological crisis will most suffer from it has not been lost on young people, and the injustice of climate change has served as a rallying cry for youth movements around the world. Like their peers across the country, younger Hoosiers have grown up having to grapple with this issue in a way that previous generations would not have experienced.

It may be for these reasons that younger Hoosiers express greater acceptance of key dimensions of climate change, for instance, that it is caused by humans. This trend, as shown in Figure 6, holds true for both Republicans and Democrats. Republicans consistently express less belief in humans' role in climate change than do Democrats. However, the youth of the party express this opinion in different degrees from older generations. This distinction may suggest a different-looking Republican party in the coming decades.

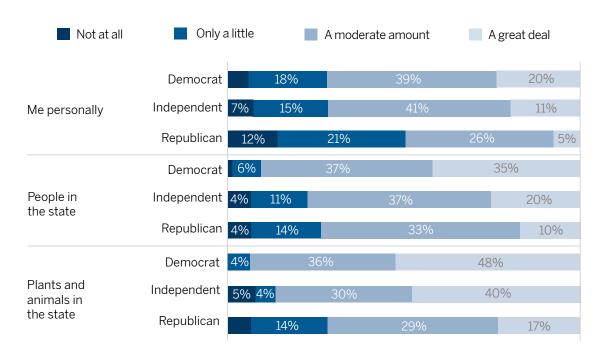
#### Figure 6: Younger Hoosiers express greater belief in humans' causal role



% that reported believing climate change is caused primarily by human activity

#### **Perceived Risk**

People's perception of the likely severity of climate-based harm is critically important to determining the likelihood of their taking actions or supporting policy. Among Hoosiers, perceived risk from climate change clearly relates to political views (Figure 7). While just 17 percent of Republicans believe that Indiana's plants and animals will be harmed a "great deal" by climate change, 39 percent of Independents and 46 percent of Democrats register the same belief. These party-linked disparities in perceived risk become still more expansive when we ask our respondents about the harm that they anticipate climate change will bring to humans—either generally (people in the state) or personally (themselves). Only 5 percent of Republicans, for example (in contrast to 20 percent of Democrats) believe that they will be personally harmed a great deal by climate change. More than one-third (35 percent) of Democrats anticipate a great deal of harm to people across the state; among Republicans, that expectation is shared by only 10 percent.



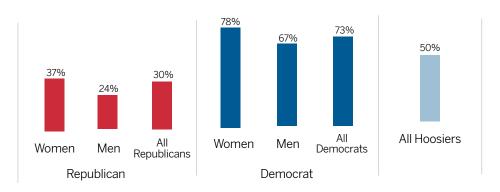
**Figure 7: Perceived risks from climate change vary greatly by political affliation** How much harm respondents expect climate change will cause to...

\*Don't know" and "climate change is not happening" responses are not shown

#### **Gender and Environmental Concern?**

Another element of perceived risk—the question of when climate change will begin to cause harm—suggests still other ways in which personal differences work to complicate the more basic divide of political affiliation. On average, 50 percent of Hoosiers believe that Americans are being harmed by climate change right now. This figure masks a predictably strong divide between the two major parties on this question, with 30 percent of Republicans (compared to 73 percent of Democrats) holding this view. Within each party, however, it bears note that women were more likely than their male counterparts to believe that climate change is harming people now (see Figure 8). Women have long been active leaders of the environmental movement in the United States and it is unsurprising to find, within their respective parties, more concern and awareness among women of climate change's impact on the American public (McCright and Xiao 2014).

#### Figure 8: Women in both parties more likely to believe climate change is causing harm now

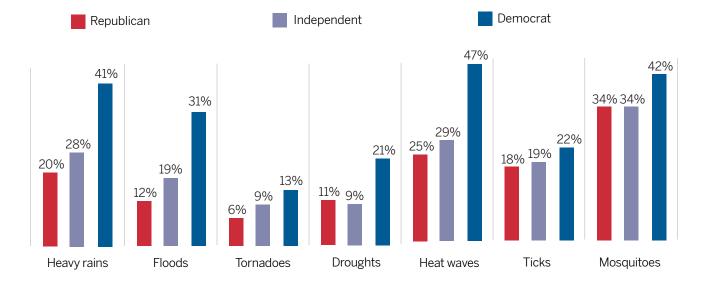


% who believe climate change is harming people now

## PERCEIVED CHANGE

#### **Perceived Change**

Party affiliation does more than just help to predict varying opinions about the causes and risks of environmental change. It also relates closely to Hoosiers' divergent perceptions of a seemingly shared experience: local climate or weather. Democrats are more likely to perceive an increasing occurrence of climate-related events, such as heavy rains, floods, and heat waves, than are their Republican counterparts (Figure 9). Even within a single geographic area, people's perception of the weather appears to track with their political leanings. Indianapolis residents who identify as Republicans, for example, are much less likely than their Democratic neighbors (by a rate of 25 percent versus 47 percent, respectively) to believe that they experience more heat waves now than they did when they first began living in the area (Figure 10). This distinctive pattern comes despite scientific evidence that suggests that such events are increasing in frequency and intensity in the state, and have been doing so, in some cases, for decades (Widhalm et al. 2018). Mosquitoes proved the one exception to the party-line difference in perception of climate-related change, with Indianapolis residents of all affiliations about equally likely to perceive that the insects have increased in prevalence over time.



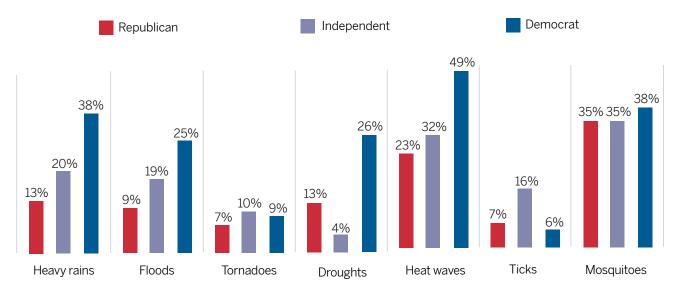
# Figure 9: Party affliation shapes how Hoosiers perceive changes in local climate % reporting "more" of the each type of change in their community overtime

16

## PERCEIVED CHANGE

#### Figure 10: Indianapolis residents perceive different changes depending on party affliation

% reporting "more" of the each type of change in their community overtime



All Respondents are from the Indianapolis metro area, n=298

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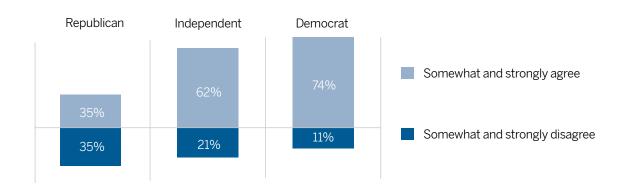
## PUBLIC POLICY

#### **Public Policy**

In contrast to Democrats, relatively few Republicans feel that government policies or programs will reduce the risks of future extreme-weather events (Figure 11). Republicans are also less likely to believe that technology can solve "almost every problem humans face" (Figure 12).

Such findings need not be taken as evidence that Republicans are less likely to respond in any manner to the stresses of environmental change. Past studies, for example, have shown that a lower rate of confidence in the potential of technology—and, with it, increased pessimism about the possibility of a future "magic bullet" solution—actually increases individuals' willingness to take immediate adaptive action (Gardezi and Arbuckle 2020). This attitude may then speak to a potential interest among Hoosier Republicans in pursuing immediate, non-technical responses to threats, including those that arise from climate change; such responses, in turn, can often be more effective than technologically intensive practices.

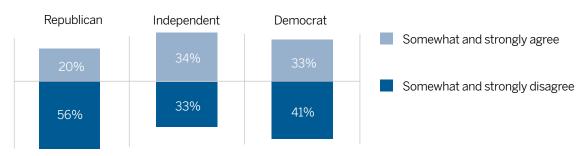
Despite their wariness of reliance upon government or technological intervention, and despite the significant partybased divisions in general climate change attitudes and views, Hoosiers of all party affiliations share a generally high level of support for implementing policies to address the threats of actual climate change-related impacts at the community level. In other words, talking about the *solutions* to climate change appears to be less contentious across party lines than talking about the *problem* itself.



### **Figure 11: Most Democrats believe government action is an effective way to combat extreme events** Question: Level of agreement that government policy and programs can

reduce future extreme weather risks; those that feel neutral are not shown

## PUBLIC POLICY



#### Figure 12: Republicans less likely to be optimistic about potential of technologies

Question: Level of agreement that advances in technology and science can solve almost every problem humans face; Those that feel neutral are not shown

We asked Hoosiers to tell us which among a variety of climate-related policies or programs they would support in their communities, if state funds were available to support such programs. Each question represented an expertdriven solution to a dimension of climate change, including risks and impacts that Indiana is expected to experience with increasing frequency over the next couple of decades. While the level of enthusiasm varies, in most cases a majority of Hoosiers—from all political affiliations—tend to support the proposed policy (Figure 13). Figure 13: Hoosiers' support for climate change resiliency policy is high, but shaped by political affiliations

% who support or strongly support each policy being implemented in their community

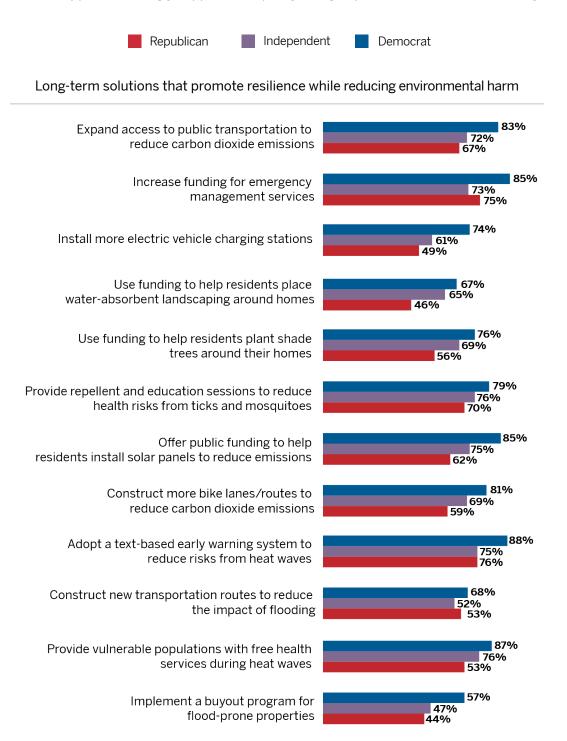
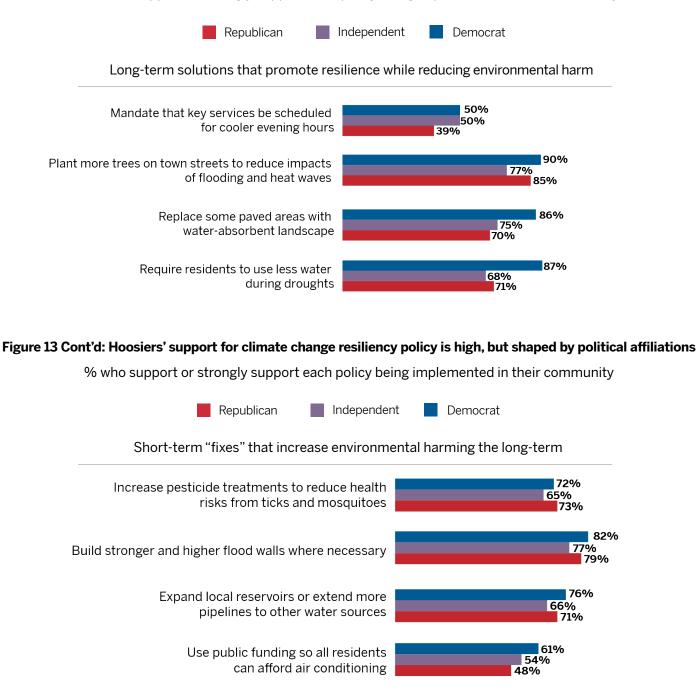


Figure 13 Cont'd: Hoosiers' support for climate change resiliency policy is high, but shaped by political affiliations

% who support or strongly support each policy being implemented in their community



## PUBLIC POLICY

As Figure 13 shows, our survey framed each policy with a specific intention, the larger goal of which was either a) to prepare communities for extreme weather events related to climate change or b) to reduce greenhouse gas emissions. Both ends are critical to achieving resilience to climate change. On average, Hoosiers who identified as Republicans or Independents were less supportive than their Democratic neighbors of both types of policies—although the margin of difference proved greater for greenhouse gas-reduction policies than it was for weather-responsive policies (Figure 14).

## Out of 4 possible policies, the typical Hoosier from each party supported:



**2.36** Policies to reduce greenhouse gases



**2.76** Policies to reduce greenhouse gases



**3.22** Policies to reduce greenhouse gases

## Out of 16 possible policies, the typical Hoosier from each party supported:



10.09

Policies to prepare for climaterelated extreme events were supported by Democrats



## 10.64

Policies to prepare for climaterelated extreme events were supported by Democrats



### 12.11

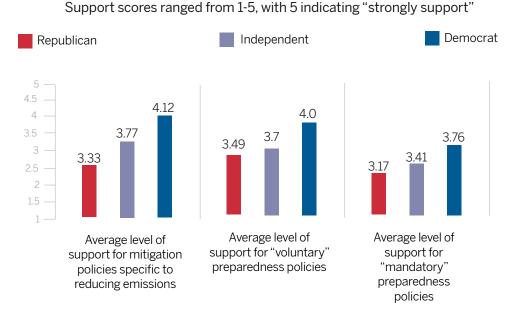
Policies to prepare for climaterelated extreme events were supported by Democrats

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### PUBLIC POLICY

While Democrats, on average, express the greatest level of support for all sorts of preparedness and mitigation policies (Figure 15), they nevertheless responded differently to these different categories. Policies framed as specifically intended to reduce greenhouse gas emissions—expanding public transportation, installing more electric car charging stations, public funding for rooftop solar panels and construction of bike routes—received higher levels of support among Democrats, on average, than did preparedness-specific measures.

Preparedness policies that we phrased as "mandatory" or "required" received less support, on average, from all political affiliates than did those that implied a voluntary response. This finding suggests the dilemma that public officials dealing with climate change-driven mediation or resilience opportunities will face: that policies with a voluntary opt-in approach—while arguably less effective in themselves—will gain the widest support and thus prove easier to implement.

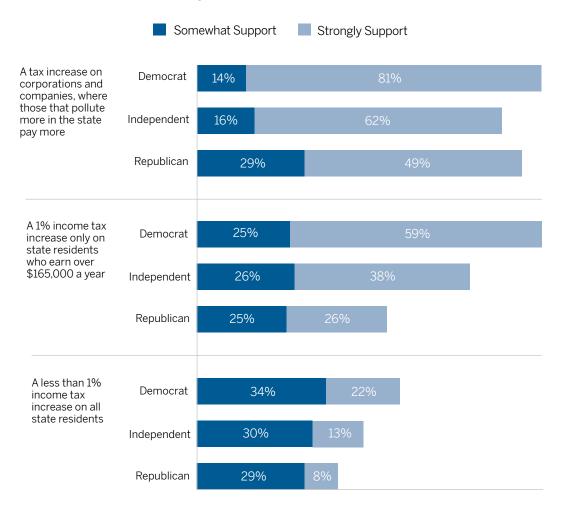


## Figure 15: "Mandatory" preparedness policies receive less support on average

### Taxes

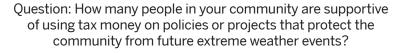
We also asked Hoosiers how they would distribute the cost burden of policies such as those enumerated in the previous section. Overall, Democrats were the group most supportive of each of our three hypothetical tax situations: that all people should bear a small cost, that the wealthiest Hoosiers should be taxed to support the interest of all, or that companies and corporations who create the most pollution should bear the costs of cleaning up its negative impacts on the public (Figure 16). Notably, however, a majority of all Hoosiers from each party support the latter two models: taxing corporations and companies and taxing those Hoosiers who earn over \$165,000 a year (roughly three times the state's current median household income) to fund resilience programs and policies in the state. Despite this rather broad, self-reported support for some manner of taxation, the vast majority of Hoosiers from all parties do not believe that "most" people in their communities support such taxes—with Republicans being especially likely to believe that no one in their community would support taxes to fund resilience efforts in the state (Figure 17).

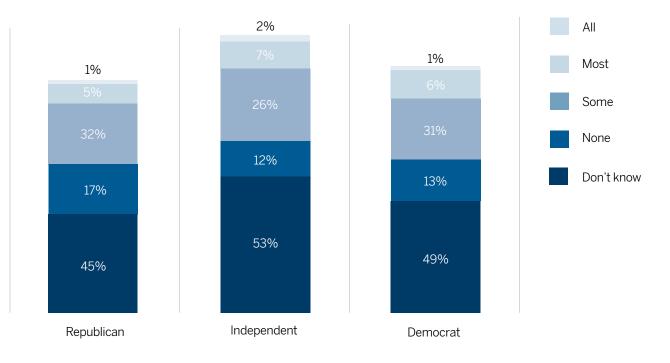
## Figure 16: Hoosiers widely support taxing corporations and companies to address extreme weather



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## Figures 17: Republicans more likely to believe no one supports using tax money to fund community resilience





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#### **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 (Widhalm et al. 2018). 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.

A larger, more general HLS summary—The Hoosier Life Survey: Assessing Hoosier Preparedness for Environmental Change, Extreme Weather and Other Risks, is available online at: https://eri.iu.edu/tools-and-resources/hoosier-life-survey/hls-summaryreport.pdf . To find complete survey results—and to tailor them to address the questions that most interest you and your neighbors—visit the interactive HLS Opinion Map, at: https://eri.iu.edu/tools-and- resources/hoosier-life-survey-opinion-map.html.

#### **Appendix 1: Methods**

The survey from which data for this report was drawn was sent out to 10,000 Hoosiers between August and December 2019. The survey focused on gathering a broad range of information related to Indiana residents' views of their community, environmental changes and risk, climate change beliefs, the household- and communitylevel actions they were taking or supported being pursued, and their personal values. Surveys were sent to Indiana households using a spatially stratified sampling approach. To ensure adequate coverage of people across the entire state and for later geographically specific analysis, our team developed eight in-state regions, defined by clusters of counties. Each of Indiana's 92 counties was included in a region. From each region, 1,250 home addresses were drawn at random from the United States Postal Service's list (for a total of 10,000), which was purchased from a private address-based sampling vendor.

In mailing surveys to these households, a modified Dillman approach was used with a total of five mailing waves (Dillman, Smyth, & Christian, 2014). In an initial wave of mailings, households received a cover letter informing them about the survey, noting the confidentially of their responses and asking them to fill out the survey online. A link to the online survey and user ID number were provided in the cover letter. Roughly two weeks later, a reminder postcard was sent to all sampled individuals who had yet to respond. After approximately another two-week period, respondents who had yet to fill out the survey online were sent a paper booklet version of the survey and another cover letter requesting their participation. A final mailing wave, containing another booklet and cover letter, was sent to all remaining non-participants after another two-week period. Both the initial contact for the webbased survey and the mail-based version contained \$2 pre-incentive payments. Upon completing the survey, respondents could request a \$20 Amazon or Walmart gift card. In total, our response rate was just over 27 percent. Case-wise deletion analysis was used to address missing data in this report, resulting in 1,961 cases being examined. Patterns of missing data were explored, as were relationships between missing responses and key demographics. No consistent patterns emerged, nor were strong relationships identified. In terms of differences between the full and complete samples, average age of respondents was the only significantly different demographic variable, with the complete-case sample being only very marginally younger. Future HLS reports and data products may use data imputation methods depending on analysis type and the variables of interest.

There is also the potential for some bias introduced during the question design. Out of this group, 176 respondents identified as "something else" when asked about their political affiliation. These respondents were dropped from the analysis, leaving a total of 1,785 cases in our sample. Our composite margin of error at the state-level is +/-3.4 at a 95 percent confidence level. On average, our margin of error at the state-level is +/-2.3 at a 95 percent confidence level. 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 region and due to the number of adults in the household, (2) a differential nonresponse adjustment to correct for unequal response rates by stratum/region, and (3) a calibration adjustment to 2018 American Community Survey estimates on gender, age, education, race, and Hispanic origin in the Indiana adult population. Weights were trimmed and scaled to the unweighted number of respondents.

## Acknowledgements:

We appreciate the funding we received for this study from Indiana University's Grand Challenge Initiative, Prepared for Environmental Change. We also would like to thank Indiana University's Center for Survey Research, Jonathan Hines, Lauren Gronek, and Joe Lange, among others, for their critical support in producing this study and report.

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## INDIANA UNIVERSITY ENVIRONMENTAL RESILIENCE INSTITUTE

Address: Environmental Resilience Institute Indiana University 717 E 8th Street Bloomington, IN 47408

Phone: 812-855-8539

Main Email: eri@iu.edu

