American Institutes for Research

DATE: 11 Oct 2022

FROM: Ashley Tyler, Program Coordinator

TO: David Myers, President and Chief Executive Officer

SUBJECT: Recommendation to Use Report Findings in Research

Members of the executive staff held a meeting on 3 October 2022 to review the report, *Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Volume II, Southeast* (NCA4). It identifies the dangers of climate change and its impact on southeastern urban infrastructure due to rising heat temperatures and sea level rise in low-lying regions. In the meeting, we discussed the quality and credibility of the report. We concluded that the facts, its analysis, and the findings all lean toward proving climate change's impacts in the southeastern United States, with stated risks and recommendations about how to adapt. This document addresses the information contained in the report and recommendations about how to use or respond.

BACKGROUND

In keeping up with our mission statement on the AIR web page, About AIR: Mission Focused, Evidence Driven, "to generate and use rigorous evidence that contributes to a better, more equitable world" (American Institutes for Research, n.d.), NCA4 provides sufficient evidence in good quality and adequate depth, as temperatures and climates from decades and various cities in states all across the southeastern region were documented. The report includes information from institutes such as the Cooperative Institute for Climate and Satellites - North Carolina (CICS-NC) on page 747. CICS-NC's website is up-to-date and the institution is specifically dedicated to climate research in North Carolina and providing that information to the public. On the title page of NCA4, under the *Recommended Citation for Chapter* section, authors from various reputable southeastern institutions such as the U.S. Geological Survey, Southeast Climate Adaptation Science Center, University of South Carolina, Tall Timbers Research Station, North Carolina State University, National Oceanic and Atmospheric Administration, and Centers for Disease Control and Prevention all formed the U.S. Global Change Research Program in Washington, D.C., which is "federally mandated by Congress to coordinate federal research and investments in understanding the human and natural forces shaping Earth's environment and their impacts on society" (U.S. Global Change Research Program, n.d.). As we are in agreeance that climate change is real and is a problem, the document's information and data can assist in further research.

SUMMARY

In the *Increasing Heat* section on page 752 of NCA4, there are statements about more heat waves in the summer due to growing urban areas. This information concurs with our familiarity with climate change, stated on the AIR web page, Climate change and Resilience, "higher temperatures and more extreme weather are linked to increased conflict and increases in food insecurity" (American Institutes for Research, n.d.). We can combine the data of higher temperatures in the report with our research to create domain models and to strengthen our mission of "increasing the resilience of marginalized populations to climate change" (American Institutes for Research, n.d.). Information is also given about what cities are growing and experiencing trends of exceeding the national heat wave average, which have a "higher percentage than any other region in the country," (Carter et al., 2018, para 4). With this information, we may also need to focus our efforts more on the southeastern region populations.

The facts in the report are consistent with the findings, which are highly persuasive in addressing climate change and its effects. One such effect is the transformation of the natural ecosystem. Paragraph two of page 769 states that there have been past climate changes that have gone from cool to warm, which transformed forests by warmer temperatures, sea level rise, and melting glaciers (Carter et al., 2018, para 2). Additionally, figure 19.15 of page 770 shows how increasing winter temperatures from past to present can change plant hardiness zones. The findings are in concurrence with our knowledge that "climate change can result in a larger likelihood of droughts, floods, and other environmental disasters, which then may have major implications resulting in negative economic consequences" (American Institutes for Research, n.d.). Our work, stated on the AIR web page, Climate change and Resilience, consists of "randomized controlled trials and quasi-experimental studies to determine the impact of social protection and agriculture programs on climate resilience" (American Institutes for Research, n.d.). This combined data can be used to provide information in making sure the agriculture programs are revised to allow businesses to adapt and plan accordingly.

RECOMMENDATION

Due to the nature of our institution, I recommend the aforementioned points be taken into consideration to include in our research to help government agencies, organizations, institutions, and policymakers study and implement evidence-based programs and policies that improve outcomes. As stated on the AIR web page, About AIR: Mission Focused, Evidence Driven, we have clients from various U.S. departments such as Departments of Labor, Agriculture, Education, and Justice who would also benefit from this research to use as evidence to improve the lives of citizens. In doing this, we also uphold our human services mission, as stated on the AIR website's home page, to support our "stakeholders in developing a better understanding of the factors that shape the outcomes for the communities" (American Institutes for Research, n.d.).

If there are any questions or concerns, please call Ashley Tyler at 808-123-1234, or email at atyler22@students.kennesaw.edu.

cc: Jessica Heppen, Senior Vice President

Enclosure: *Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Volume II, Southeast*

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