

(carbon)plan

DEC 20 2022

Steven E. Seitz
Director, Federal Insurance Office (FIO)
U.S. Department of the Treasury
1500 Pennsylvania Avenue
NW Washington, D.C. 20220

RE:Proposed Climate-Related Financial Risk Data Collection

Dear Director Seitz,

Thank you for the opportunity to respond to FIO's proposed data collection request.¹ For context, CarbonPlan is a nonprofit research organization dedicated to improving the scientific integrity and transparency of climate solutions. Our team has estimated climate-driven changes in fire risk,² produced global downscaled climate impact datasets,³ and published commentary on the use of climate data in physical financial-risk assessments.⁴

We welcome FIO's proposed data collection and believe this important effort will facilitate a better understanding of how physical climate risks threaten insurance access. We encourage FIO and the Department of the Treasury to continue to focus on the physical risks of climate change, an area of concern with broad implications for the U.S. economy.

Insurance markets across the country are beginning to grapple with climate risk, and consumers are already paying the price. According to the California Department of Insurance, for example, insurance companies dropped up to 14% of their policies in some counties in the year following the 2018 Camp Fire (see Figure 1).⁵ Non-renewals by policyholders also

¹ United States Department of the Treasury, [Federal Insurance Office Climate-Related Financial Risk Data Collection](#), 87 Federal Register 64,134 (Oct. 21, 2022).

² William R.L. Anderegg, Oriana Chegwiddden et al., [Future climate risks from stress, insects and fire across US forests](#), *Ecology Letters* 25: 1510-1520 (2022).

³ Oriana Chegwiddden et al., [Open data and tools for multiple methods of global climate downscaling](#), CarbonPlan (June 30, 2022).

⁴ Sadie Frank and Oriana Chegwiddden, [Why climate data matters to climate-related financial risk assessments](#), CarbonPlan (Aug. 1, 2022).

⁵ California Department of Insurance, [Number of New, Renewed, and Non-Renewed Homeowners' Policies](#) (Dec. 20, 2021).

increased following the Camp Fire, which could potentially indicate affordability concerns that go beyond simple policy availability.⁶ In parallel, enrollment also rose substantially in the state's FAIR program — an insurer of last resort that offers expensive, limited coverage.⁷ Put simply, these data show that people living in climate-risky places are increasingly unable to rely on private insurance to protect them from financial risk following a disaster.⁸

These helpful data from California's insurance regulator indicate that climate-related disasters can lead to significant insurance market impacts. While this information is useful for identifying high-level trends, it is not sufficient to facilitate a detailed understanding of *where* risk is located — a crucial consideration given that physical risks are spatially heterogeneous across finer geographies. At the national level, publically available data are inconsistent, incomplete, and geographically coarse, which similarly inhibits the ability of market stakeholders and policymakers to assess the financial impacts of climate risk to U.S. insurance markets.

A comprehensive, granular analysis of insurance affordability and availability in the face of climate risk is much-needed, and we welcome FIO's proposed efforts to collect data that would address today's critical information gaps. In our comments below we respond to each of FIO's questions. We provide suggestions that we hope FIO will find useful for their data collection efforts, with particular emphasis on methods for screening for climate-risky states. Ensuring a robust initial screening is important because physical risks are likely to be pronounced for local firms in markets where risk is non-diversifiable.⁹ We also strongly encourage FIO to publish the data it collects, as it could help address critical information gaps facing public interest researchers and policymakers across the country.¹⁰

⁶ We have not evaluated the causal factors that could explain trends in policyholders' non-renewal decisions, but believe that tracking data on non-renewals is important to assess the affordability of policy offerings that are exposed to climate-related financial risks.

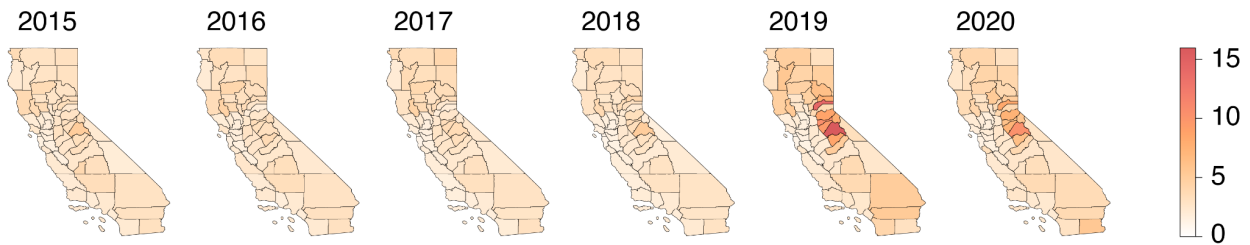
⁷ Hilda Flores, [California FAIR Plan wildfire insurance: What is it, and how can I get it?](#), *KCRA Sacramento* (July 12, 2022).

⁸ Pauline Bartolone, [Their Home Survived The Camp Fire — But Their Insurance Did Not](#), *NPR Weekend Edition* (Feb. 17 2019).

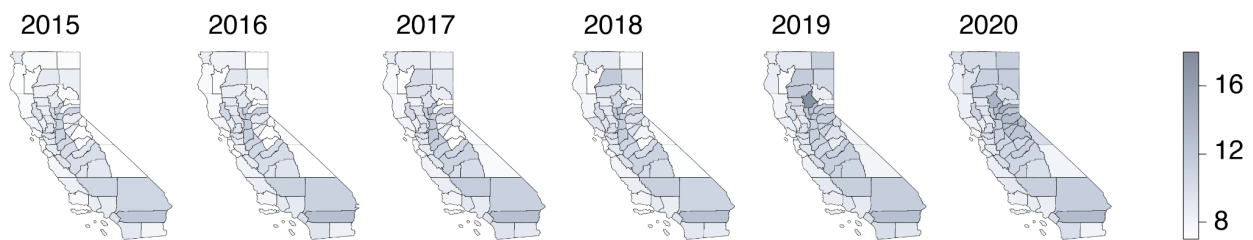
⁹ For instance, one small insurer in Paradise, California went bankrupt after the 2018 Camp Fire. Holly Yan and Chris Boyette, [Insurance company goes under after California's most destructive wildfire](#), *CNN* (Dec. 4, 2018). Insurers along the Gulf Coast are also experiencing solvency issues from storm losses that may impact insurance availability. Adam Zuvanich, [FedNat insolvency puts Gulf Coast property owners at risk of losing insurance coverage](#), *Houston Public Media* (Sep. 29, 2022).

¹⁰ Jake Bittle, [Why Republicans are coughing up billions of dollars to save Florida's insurance market](#), *Grist* (Dec. 19, 2022).

% dropped by insurer each year



% non-renewed by policy holders each year



% market covered by state each year

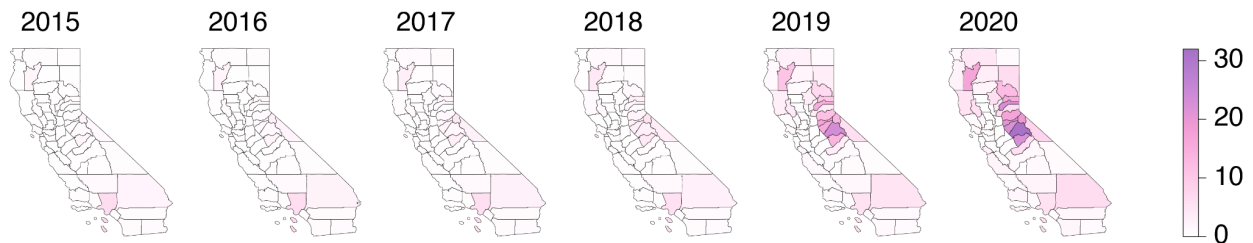


Figure 1 Changes in California's insurance market, based on publicly available data from the California Department of Insurance. The top row depicts the percentage of policies non-renewed by insurers each year, which can help identify changes in insurance availability. The middle row shows the percentage of policies not renewed by policyholders, which could reflect multiple factors and can help assess broader insurance market impacts that go beyond nominal policy availability trends. The bottom row shows the percentage of all insurance policies covered by the state-sponsored FAIR program. There are notable increases in the non-renewal of private insurance policies as well as the role of the public program in 2019 and 2020, following major wildfire events in the Sierra Nevada foothills.

- 1. Focus on Underwriting: FIO proposes to focus this data collection on insurers' underwriting for homeowners' policies to assess the impact of physical risk on the availability of insurance coverage for policyholders as well as whether the available insurance coverage is affordable for policyholders. Please provide your views on FIO's focus on insurers' underwriting.**

We believe the focus on underwriting is important and appropriate to support FIO's stated goal of understanding impacts on policyholders.

- 2. Selection of Insurance Lines: FIO proposes collecting information on homeowners' multi-peril policies. Should FIO consider data collection for any other lines of business? To what extent should FIO's assessment include [National Flood Insurance Program (NFIP)] policies and private flood insurance policies?**

We support the proposal to collect information on homeowners' multi-peril policies.¹¹ We also recommend that FIO collect data on private flood insurance policies, as these markets have been growing in recent years.¹² To the extent that data collection is non-duplicative across agencies, we also support FIO collaborating with FEMA to assess any impacts to NFIP, given that FEMA already collects data on NFIP and data sharing could benefit both agencies. While we recognize that additional private data collection could increase insurance companies' reporting obligations, flooding is a distinctly costly and climate-sensitive hazard that warrants specific and additional consideration.

- 3. Selection of Insurers: FIO proposes selecting insurers that meet either of the following criteria: (1) insurers writing \$100 million or more in annual homeowners' insurance premiums in 2021 or (2) additional insurers that would allow FIO to capture at least 80 percent in each of the 10 Potential Climate-Vulnerable States identified above. Please provide your views on the appropriateness of these thresholds and whether they should be modified.**

We believe the proposed thresholds are reasonable for establishing nationwide impacts via large insurers and for an initial targeting of highly-exposed geographies. Ideally all U.S. insurers would be surveyed, including the smaller insurers that operate outside of the selected states and are likely to remain disproportionately in areas abandoned by large insurers.¹³ We

¹¹ We encourage FIO to ensure that wildfire impacts are covered in the data collection and note some confusion in the template regarding what perils are included, as opening the template in different computer applications produces different information. We recommend that FIO explicitly include wildfire if it determines that wildfire could fall outside of certain multi-peril policies.

¹² Insurance Information Institute, [Facts + Statistics: Flood Insurance](#); Chad Hemenway, [Private Flood Insurance Market Growing; NFIP 'Adrift': AM Best](#), *Insurance Journal* (Nov. 28, 2022).

¹³ Jake Bittle, [Why Republicans are coughing up billions of dollars to save Florida's insurance market](#), *Grist* (Dec. 19, 2022).

recognize, however, that a truly comprehensive approach could present administrative challenges at the outset of FIO's efforts in this area.

In addition, we encourage FIO to explicitly consider adjusting the data collection targeting on an annual basis. For example, language in the final data collection could indicate that FIO intends to collect data annually and might choose to update key considerations, such as the threshold coverage target, the method for establishing that target has been met, and/or the selected list of Potential Climate-Vulnerable States in future years.

4. Inclusion of Data Elements: The data template includes elements related to insurers' policies, claims, premiums, and losses. Are there any additional data elements you would propose to include? Are there any data elements you would propose to exclude? How should FIO's analysis consider other potential elements such as additional living expenses or Reinsurance?

We strongly support FIO collecting information on reinsurance, as reinsurance availability can have downstream impacts on policyholders.¹⁴ The inclusion of reinsurance information could take the form of qualitative reporting, e.g. "Has your ability to secure reinsurance been materially impacted by weather- or climate-related losses?"

In addition, we suggest FIO ask insurers to provide information on whether policy non-renewals are the result of the insurer's decision to decline renewal or the policyholder's choice. This critical information is necessary in order to assess the degree to which insurance availability is impacted by companies dropping policies versus policyholders declining coverage themselves, potentially but not necessarily in response to affordability considerations. As the discussion and figure at the beginning of our letter show, the California Department of Insurance already collects this information.¹⁵ We recommend that FIO should add four columns to the template and ask companies to report:

1. Number of new policies
2. Number of renewed policies
3. Number of non-renewed policies, insured-initiated
4. Number of non-renewed policies, insurer-initiated

¹⁴ *Id.*; Kate Aronoff, Florida and the Insurance Industry Weren't Built to Withstand a Flooded World, *The New Republic* (Oct. 12, 2022).

¹⁵ California Department of Insurance, *supra* note 5.

Our recommendation to include these columns mirrors the California Department of Insurance data that informed Figure 1.¹⁶

5. Use of Accident Year Information: FIO proposes collecting ZIP Code level information in the Template on an Accident Year basis, rather than Calendar Year basis. Please provide any additional comments on FIO's proposed use of an Accident Year reporting framework for its proposed data collection.

The use of Accident Year reporting is reasonable. In general, we encourage FIO to ensure that its data collection requirements use harmonized annualized metrics. Harmonization is useful both to reduce collection burdens on companies and to ensure that the data collected is comparable across entities and therefore more useful to other policymakers and the public interest research community.

To the extent that FIO allows for non-harmonized metrics, which we respectfully oppose, it is essential that FIO collect and report adequate information to clearly specify each of the definitions employed by reporting entities in order to facilitate public understanding and subsequent evidence-based analysis. For example, if FIO allows the use of different temporal definitions of Accident Years, FIO should require each reporting entity to specify its precise definition and include that information in FIO's public reporting.

6. Selection of Reporting Period: FIO proposes collecting data for each year from 2017 through 2021. Please provide your views on the appropriateness of this reporting period and whether it should be modified by FIO.

We believe the proposed reporting period is reasonable and appropriate. This period will capture several climate-related disasters, including major wildfires and hurricanes, as well as their aftermaths. As a result, this period would enable FIO to assess year-over-year trends in insurance affordability and availability following disasters, facilitating similar analysis nationwide as the California example shown in Figure 1.¹⁷

7. Collection at ZIP Code level: Please provide your views on FIO's proposal to collect data at a ZIP Code level.

We are pleased to see FIO recognize that state-level data aggregation is insufficient to form an adequate picture of physical risk, which is localized and heterogeneous across geographies. We agree that ZIP-code level data offers a substantial improvement over county and state

¹⁶ California Department of Insurance, *supra* note 5.

¹⁷ We note that if the goal is to establish an overall temporal trend, extending the data collection back further into the historical record would likely be useful.

aggregations. However, even within ZIP-codes, risks will likely be distributed unevenly, such that ZIP-code data collection could mask concentrated patterns of risk.¹⁸

To mitigate this concern, we encourage FIO to collect data at the highest-level of spatial granularity possible. While ideally data would be collected at the address level, we recognize that this might present privacy concerns, so we recommend FIO collect data at the level of the census tract. Using census tracts will provide a more accurate picture of risk without raising privacy concerns, and will help assess population factors that are needed to understand affordability and accessibility impacts on traditionally underserved communities.

8. Collection across all Jurisdictions: FIO is proposing to collect nationwide data for identified insurers to allow for a nationwide understanding and assessment of U.S. insurance markets that may be affected by climate-related events. Please provide your views on FIO's proposal to collect nationwide data from certain insurers.

We support collecting nationwide data from the identified insurers. Large insurers are already likely to face reporting requirements from state regulators who are interested in climate-related risks, and should expect to continue to be asked to make reasonable reporting from states and the federal government, such as what is contemplated in FIO's proposal.

9. Methodology for Selection of Potential Climate-Vulnerable States: FIO used the FEMA National Risk Index to select the ten states that potentially may be vulnerable to climate-related disasters. Please provide your views on FIO's use of the National Risk Index to select the Potential Climate-Vulnerable States. Are there other data source(s) that FIO should consider in this methodology?

We are pleased to see FIO choose a method for selecting climate-vulnerable states that takes into account multiple important factors, including climate- and weather-related hazards and a focus on dollar damages to assess the salience of risks across different markets and geographies. We believe the FEMA dataset is appropriate for the purposes of targeting FIO's data collection efforts, since losses in recent years are likely to serve as reasonable proxies for potential losses in the near-term future. We also appreciate that the FEMA dataset used for this process is publicly available, which should increase confidence in its proposed use.

¹⁸ Federal Emergency Management Agency, National Risk Index Technical Documentation (Nov. 2021) at 4-9 (noting that the most accurate assessment of risk occurs by using data "at the lowest possible resolution" such as the Census block level); *id.* ("by performing the [expected annual loss (EAL)] calculation at the Census block level, the National Risk Index is more accurately assessing EAL by looking at specific annualized frequency and exposure combinations at the lowest possible resolution"). Because climate-related risk is highly spatially heterogeneous, we should expect that changes in insurance practices might also be spatially heterogeneous. Thus, finer spatial resolution data on insurance activities is likely to be more accurate.

In reviewing the FEMA National Risk Index (NRI),¹⁹ we identified two issues that are relevant to the method FIO selects for identifying Potential Climate-Vulnerable States and suggest potential alternatives for FIO's consideration.²⁰ These suggestions, and the impact of alternative selection choices based on the FEMA NRI dataset, are illustrated in an interactive visualization that is available on our website.²¹ We encourage FIO to explore the implications of alternative methodologies based on our suggestions below.

First, we suggest that FIO consider more closely aligning its selected hazards to those that are identified by current science as being sensitive to climate change.²² While many weather hazards cause insurance losses, the impacts of only certain hazards — like hurricanes, wildfire, and coastal flooding — have clearly established links to changes in climate. Others do not. Since FIO is interested in risks that may change, or are already changing, and not just general natural disasters, we suggest an initial selection by climate change-sensitive risks.

Second, we suggest that FIO consider more closely aligning its underlying screening data with the policy goal of the proposed data collection. Since FIO's proposal appears to focus on homeowners' multi-peril policies, we suggest that FIO consider an exclusive focus on losses to buildings in the NRI dataset.²³ The inclusion of agricultural losses and losses from population equivalence²⁴ are arguably not as relevant to homeowner policies, although they are important to local communities and to other insurance products. The inclusion of these damages would make sense if considered as part of a broader policy objective that is affected by these types

¹⁹ Federal Emergency Management Agency, National Risk Index (2021).

²⁰ The FEMA NRI details expected annual losses from agriculture, buildings, and human life, as well as the summed total of all three of those sectors. It also separates these losses according to a set of 18 hazards. We understand that FIO ranked states according to the summed total expected annual loss due to a subset of 15 climate hazards.

²¹ Oriana Chegwiddden and Sadie Frank, Which states' insurance markets are most exposed to climate risks?, CarbonPlan (Dec. 20, 2022).

²² See, e.g., U.S. Global Change Research Program, Fourth National Climate Assessment, Volume II: Impacts, Risks, and Adaptation in the United States (2018). We support FIO's exclusion of three risks from the NRI hazards: *earthquakes*, *volcanoes*, and *winter weather*. We also suggest excluding from the list of NRI hazards the following terms: *hail*, *lightning*, *wind*, and *tornadoes*, *id.* at 98 (Box 2.6) (noting the lack of scientific understanding necessary to “confidently predict the direction and magnitude of future change” for these hazards), as well as *cold waves* and *ice storms*, *id.* at 86-88 (noting decreased frequency in historical events and projected decrease in intensity of events for cold waves and ice storms). In addition, we recommend excluding *tsunamis*, which are caused by earthquakes, and *avalanches*, which are not adequately assessed in the National Climate Assessment.

²³ Building losses are represented by variables containing “EALB” in their name, as opposed to “EALT” (which represents total losses).

²⁴ FEMA, *supra* note 18 at 4-4 (noting that the NRI dataset calculates damages associated with injury and mortality using a value of statistical life of \$7.6 million per life lost and an assumed equivalence of 10 reported injuries to one mortality event).

of damages, or if FIO determines that agriculture losses and losses from population equivalence are relevant to its policy goals.²⁵

10. Burden Estimate: Please provide your views on whether FIO's burden estimate is accurate and whether there are further ways to minimize the burden of this proposed data Collection.

We do not have relevant expertise to comment on FIO's burden estimate. However, we note that Swiss Re estimates that damages from natural disasters in 2022 — primarily driven by climate-sensitive hazards like hurricanes — will total over \$250 billion, a number that far outstrips the estimated costs of the proposed data collection.²⁶ While not all natural-disaster-related damages are caused by climate change, even a modest change in the frequency, intensity, or financial impact of these events can justify the imposition of a total cost of a few million dollars per year on a national basis — or even tens of millions of dollars per year.

11. Annual Collection: Please provide your views on whether FIO should collect this information from U.S. insurers on an annual basis.

We support FIO collecting data on an annual basis because climate risks will continue to worsen and geographic patterns of market stress could change over time. As we indicated in response to Question 3, we encourage FIO to indicate that it intends to periodically update its data collection parameters so that physical risks are adequately captured.

12. Analysis of Availability: Please provide your views on how FIO should assess the impact of climate-related risks on the availability of insurance.

We encourage FIO to explicitly consider the impacts of climate-related risks on the availability of insurance for low-income and marginalized communities. For instance, if FIO undertakes analysis using the data it collects, we suggest that it assess how spatial patterns of insurance availability and affordability correspond to demographic factors — potentially using the Justice40 screening tool.²⁷

²⁵ Of the full list of hazards and damages included in the FEMA NRI dataset, and contingent on the policy goal of identifying risks specific to buildings under homeowners' multi-peril policies, we suggest limiting the analysis to the estimated annual losses to buildings due to climate-sensitive hazards. Chegwiddden and Frank, *supra* note 21. This approach results in the following list of states: Texas, Florida, California, Louisiana, New Jersey, North Carolina, Mississippi, Tennessee, Alabama, and Washington. Please note that our interactive tool allows users to select whichever particular hazards and loss types that are relevant to the user's interests.

²⁶ Robin Millard, [Disasters Cost \\$268 Billion In 2022: Swiss Re](#), *Barrons* (Dec. 1, 2022).

²⁷ White House Council on Environmental Quality, [Climate and Economic Justice Screening Tool](#) (Version 1.0).

In particular, we believe it will be important to collect information on the percentage of policies dropped as a result of insurer decisions, as discussed in our response to Question 4. This information is necessary to help evaluate whether insurers are deciding to reduce or withdraw coverage options.

13. Analysis of Affordability: Please provide your views on how FIO should assess the impact of climate-related risks on the affordability of insurance.

As with our response to Question 12, we encourage FIO to explicitly consider the impacts of climate-related risks on the affordability of insurance for low-income and marginalized communities. In particular, we believe it will be important to collect information on the percentage of policy non-renewals that are the result of policyholder decisions, as discussed in our response to Question 4. This information is necessary to help evaluate whether affordability concerns might be affecting the decision to purchase insurance.

14. Additional Comments: Please provide any additional comments that may be relevant to FIO's proposed data collection and analyses.

We respectfully urge FIO to publicly release the data it collects in formats that are easy to access and download. Readily available data enables researchers, analysts, and community advocates across the country to do their work, and it is therefore in the public interest to have this data accessible.

* * *

Thank you for the opportunity to submit comments.



Sadie Frank
Program Manager
sadie@carbonplan.org



Oriana Chegwiddden
Research Scientist
oriana@carbonplan.org