

## **CLIMATE AND RESILIENCY (EX) TASK FORCE**

Climate and Resiliency (EX) Task Force Dec. 14, 2021, Minutes

Technology Workstream Center of Excellence (COE) Recommendation (Attachment One)

Catastrophe Modeling COE Proposal (Attachment One-A)

Center for Insurance Policy and Research COE Frequently Asked Questions (Attachment One-B)

Draft Climate Risk Disclosure Survey (Attachment Two)

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## Draft Pending Adoption

Draft: 12/21/21

Climate and Resiliency (EX) Task Force  
San Diego, CA  
December 14, 2021

The Climate and Resiliency (EX) Task Force Dec. 14, 2021. The following Task Force members participated: Ricardo Lara, Co-Chair, Mike Peterson, Bryant Henley, and Camillo Pizzaro (CA); Raymond G. Farmer, Co-Chair, Michael Wise and Michelle Proctor (SC); Colin M. Hayashida, Co-Vice Chair (HI); James J. Donelon, Co-Vice Chair, represented by Nick Lorusso (LA); Kathleen A. Birrane, Co-Vice Chair, and Alexander Borkowski (MD); Mark Afable, Co-Vice Chair, and Sarah Smith (WI); Andrew R. Stolfi, Co-Vice Chair (OR); Lori K. Wing-Heier (AK); Jim L. Ridling (AL); Michael Conway (CO); Andrew N. Mais represented by George Bradner and Wanchin Chou (CT); Karima M. Woods and Sharon Shipp (DC); Trinidad Navarro represented by Frank Pyle (DE); David Altmaier and Susanne Murphy (FL); Amy L. Beard represented by Victoria Hastings (IN); Gary D. Anderson (MA); Eric A. Cioppa (ME); Grace Arnold (MN); Jon Godfread represented by Matt Fischer (ND); Eric Dunning (NE); Russel Toal represented by Jennifer Catechis (NM); Barbara D. Richardson (NV); Adrienne A. Harris and Yue Chen (NY); Judith L. French (OH); Jessica K. Altman (PA); Elizabeth Kelleher Dwyer (RI); Scott A. White (VA); Michael S. Pieciak represented by Kevin Gaffney (VT); Mike Kreidler and Jay Bruns (WA); and Jeff Rude (WY). Also participating were: Elizabeth Perri (AS); Susan Berry (IL); Troy Downing (MT).

### 1. Adopted its 2021 Summer National Meeting Minutes

Commissioner Altmaier made a motion, seconded by Commissioner Altman, to adopt the Task Force's Aug. 15 minutes (*see NAIC Proceedings – Summer 2021, Climate and Resiliency (EX) Task Force*). The motion passed unanimously.

### 2. Heard a Recommendation from the Technology Workstream

Mr. Lorusso said the Technology Workstream was charged with applying technology, such as predictive modeling, to understand and evaluate climate and natural catastrophe risk exposures. He said other groups at the NAIC are also considering catastrophe models within their work. The Catastrophe Risk (E) Subgroup of the Property and Casualty Risk Based Capital (E) Working Group is evaluating wildfire models to consider adding wildfire for informational purposes only into the risk-based capital (RBC) framework. The Catastrophe Insurance (C) Working Group is planning to consider revisions to the *Catastrophe Computer Modeling Handbook*.

Mr. Lorusso said the Technology Workstream met Sept. 20 in regulator-to-regulator session, pursuant to paragraph 6 (consultations with NAIC staff regarding technical guidance) of the NAIC Policy Statement on Open Meetings, to consider the need for support services related to the use of catastrophe models in insurance, including discussion of what other NAIC committees had planned and the relevant research of the Center for Insurance Policy and Research (CIPR). Acknowledging the benefit of a shared resource for state insurance regulators regarding catastrophe models, on Sept. 21 the Technology Workstream exposed a proposal (Attachment One-A) for the CIPR to create a Catastrophe Model Center of Excellence (COE). The Workstream collected comments until its open meeting on Nov. 4, where it heard comments on the proposal and addressed the questions received. Following the Nov. 4 meeting, the Workstream issued a frequently asked questions (FAQ) document (Attachment One-B) to address the comments and clarify the intent of the COE. The Workstream held another open meeting on Nov. 22 to adopt a recommendation (Attachment One) for the NAIC's CIPR to create a COE.

Commissioner Lara said the Task Force plans to meet during an interim meeting before the 2022 Spring National Meeting to consider the recommendation for adoption.

### 3. Heard a Presentation Regarding the Proposed Redesigned NAIC Climate Risk Disclosure Survey

Commissioner Stolfi (OR) said the Climate Risk Disclosure Workstream met on Nov. 19 to expose its proposed redesigned NAIC Climate Risk Disclosure Survey. He said the Workstream was charged to consider appropriate climate risk disclosures within the insurance sector, including an evaluation of the NAIC Climate Risk Disclosure Survey and evaluation of alignment with other sectors and international standards. Commissioner Stolfi said the NAIC adopted the Climate Risk Disclosure Survey in 2010, which includes eight questions regarding how insurers consider climate-related risks in their risk and investment management practices, including how insurers identify and assess climate-related risks and their potential impact to the company's business strategies. It also considers how insurers engage with stakeholders on the topic of risk management. The survey is voluntary for states to use. For the past several years, six states participated in the survey, which represented approximately 70% of the market measured by direct written premium. In 2021, 15 states participated, representing nearly 80%

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of the market. All insurers writing at least \$100 million in direct written premium with business in any participating state are required to complete the survey annually. For the past two years, insurers were allowed to submit using the Financial Stability Board's (FSB's) Task Force on Climate-Related Financial Disclosure (TCFD) in lieu of the eight survey questions. In 2020, eight TCFD reports were filed with the California Department of Insurance (DOI) as part of the annual reporting requirement. In 2021, 28 TCFD reports were received.

The TCFD includes four themes: 1) governance; 2) strategy; 3) risk management; and 4) metrics and targets. The FSB created the TCFD in 2015 and formally adopted its reporting framework in 2017. Internationally, multiple jurisdictions have proposed or finalized laws and regulations to require disclosure aligned with TCFD recommendations, some coming into effect as early as 2022. The Financial Stability Oversight Council (FSOC) published a *Report on Climate-Related Financial Risk* in October, which, among other things, said that regulators across the financial system should review their existing public disclosure requirements and consider updating and standardizing them to promote the consistency, comparability, and decision-usefulness of information on climate-related risks and opportunities. Furthermore, it was recommended that disclosures build on the four core elements of the TCFD.

Commissioner Stolfi said the Climate Risk Disclosure Workstream decided to align its redesigned survey to the TCFD recommendations and include insurance-specific questions. He then described the proposed survey questions and their origin (Attachment Two). All questions provide for a narrative response. Several questions are repeated as closed-ended, yes or no, or multiple-choice. This information is requested to quickly discern steps companies are taking to manage their climate-related risks and provide trending over time.

Commissioner Stolfi said comments are due on the proposed survey by Jan. 10. The Workstream plans to meet again in early 2022 to review the comments received and consider the revised survey for adoption. The Workstream will report its final recommendation to the Task Force before the 2022 Spring National Meeting.

Director French asked if there would be room for explanation for insurers that do not have a clear answer for the closed-ended questions. Commissioner Stolfi said that the closed-ended questions always include a narrative question as well. The insurer filling out the survey can use the narrative question to explain their answers within the closed-ended question. Director French asked if the survey would continue to remain voluntary for states or if the objective is for the majority of states to participate. Commissioner Stolfi welcomed other states to opt in, but he said the recommendation of the Workstream is for the survey to continue to be voluntary for states.

#### 4. Received a Status Report from the Solvency Workstream

Commissioner Birrane said the Solvency Workstream is focused on climate-related financial risk and the prudential oversight by U.S. insurance regulators to ensure that the risk is identified, analyzed, and appropriately addressed. The Workstream met on Sept. 30 to hear a presentation from the New York Department of Insurance regarding its Guidance for New York Domestic Insurers on Managing the Financial Risks from Climate Change. The Workstream also heard a summary of prior panel discussions and heard feedback from industry regarding the financial solvency tools to consider for updates related to climate risk. The Workstream then held three regulator-to-regulator discussions pursuant to paragraph 6 (consultations with NAIC staff regarding technical guidance) to discuss financial solvency tools.

The Workstream met in an open meeting on Nov. 8 to expose a list of questions to gather thoughts from regulators and interested parties regarding potential updates on financial solvency tools related to climate risk. Comments on the questions were due on Dec. 8. NAIC staff have begun compiling the comments for the Workstream to review during a future meeting. The Solvency Workstream will review the comments received and consider the need for enhancements to financial solvency tools. After a transparent, collaborative, iterative process, the Solvency Workstream hopes to make its final recommendations to the Task Force in the first quarter of 2022.

#### 5. Received a Status Report from the Innovation Workstream

Commissioner Hayashida said the Innovation Workstream has met twice since the Summer National Meeting. On Sept. 9, the Workstream met to hear from Sola Insurance about a parametric product offered as an endorsement to a homeowners policy. The product uses data from the National Weather Service to detect tornado activity.

The Workstream also met Oct. 6 to hear a presentation from Guy Carpenter about community-based insurance for disaster resilience. He said Guy Carpenter is part of a project team, led by the Wharton Risk Management and Decision Processes Center, to increase the financial resilience of lower to middle income households in New York City to escalating flood risk

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through inclusive insurance programs. The Center for NYC Neighborhoods will buy a parametric risk transfer policy to fund an emergency disaster relief grant program. The New York City Mayor's Office of Resilience (MOR) sought out the public-private partnership to prepare for flooding.

### 6. Received a Status Report from the Pre-Disaster Mitigation Workstream

Ms. Smith said the Pre-Disaster Mitigation Workstream has been focused on its charge to collect and share resources with consumers and other stakeholders, seeking out best practices to encourage consumer risk awareness. In August, the Workstream distributed a list of mitigation actions to reduce the risk of future loss. Comments were collected on the list of mitigation actions, and the Workstream met Oct. 5 to hear comments received. The National Association of Mutual Insurance Companies (NAMIC) commented that the actions of individual home and property owners may be less effective than actions taken at a community or municipal level. On Oct. 5, the Workstream also heard a presentation from Leslie Chapman-Henderson (Federal Alliance for Safe Homes [FLASH]) regarding its recently released *Buyer's Guide to Resilient Homes*.

Ms. Smith said the Workstream also met Nov. 18 to hear a presentation from Dave Snyder (American Property and Casualty Insurance Association—APCIA) and Karen Collins (APCIA) regarding industry-led mitigation efforts. During that meeting, the Workstream also heard about grass roots campaigns in Wisconsin and South Carolina to increase consumer awareness, encourage stronger building codes, and incentivize building retrofits through grant programs to increase the resilience of vulnerable communities. The Wisconsin Office of the Insurance Commissioner developed a campaign, "Stronger Wisconsin," to share information with consumers about measures to protect themselves from increasingly common weather events from severe winter storms to flooding. The campaign is bridging the gap between state agencies, municipalities, and consumers. The Workstream is considering a workshop in spring 2022 to build on its earlier work with building codes, mitigation, and resiliency funding, this time with a focus on wildfire.

Amy Bach (United Policyholders—UP) said UP has been working closely with the California DOI regarding risk reduction resources for property owners and mitigation measures with the Insurance Institute for Business & Home Safety (IBHS). She also mentioned the Federal Advisory Committee on Insurance (FACI) is working on parallel efforts to consider the availability of insurance products and addressing the protection gap through public-private partnerships and other mechanisms.

### 7. Heard an Update on Federal Activities

Brooke Stringer (NAIC) said President Joe Biden's May 2021 executive order on climate-related financial risk mandated a range of federal studies to analyze the risks climate change poses to the U.S. financial system and lays the groundwork for eventual policy changes. She said the Order directs the Federal Insurance Office (FIO) to assess climate-related issues or gaps in insurance supervision and the potential for major disruptions of insurance coverage in regions of the country particularly vulnerable to climate-related impacts. The NAIC submitted a comment letter in response to the FIO's request for information underscoring the long-running history and focus of state insurance regulators to assist consumers and protect policyholders while maintaining well-functioning markets.

Ms. Stringer said that in October, the Financial Stability Oversight Council (FSOC) released its *Report on Climate-Related Financial Risk*, which included several policy recommendations to build capacity and expand efforts to address climate-related financial risks, fill data gaps, enhance public climate-related disclosures, and assess climate-related risks to financial stability. The FSOC intends to form two new committees to help financial regulators better understand climate-related risks to the financial system.

The U.S. Securities and Exchange Commission (SEC) remains focused on climate risk disclosure. SEC Chair Gary Gensler directed SEC staff to develop a mandatory climate risk disclosure proposal for the Committee's consideration by the beginning of 2022. Ms. Stringer also said the Build Back Better reconciliation bill is making its way through the U.S. Congress. It includes President Biden's policy priorities, including \$555 billion for initiatives to combat climate change and promote clean energy production and resilience investments. Build Back Better has been passed in the U.S. House of Representatives but not the U.S. Senate.

Finally, Ms. Stringer said the NAIC is supportive of the Disaster Mitigation and Tax Parity Act, introduced by Sen. Dianne Feinstein (D-CA) and Rep. Mike Thompson (D-CA). If enacted, the Act would ensure that state-based disaster mitigation grants receive the same federal tax exemptions as federal mitigation grants.

### 8. Heard an Update on International Activities

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Ryan Workman (NAIC) said the International Association of Insurance Supervisors (IAIS) held its annual conference in November, which included a panel focused on emerging good practices in climate risk scenario analysis for insurers and steps supervisors can take to advance scenario analysis as an effective risk assessment tool for insurers. He said the IAIS created a Climate Risk Steering Group. Commissioner Stolfi is the NAIC representative for that group, and Ms. Yue (Nina) Chen (New York Department of Financial Services [DFS]) serves as vice chair. The Steering Group has three workstreams. The first will develop a gap analysis of the IAIS global standards for insurance supervision to consider whether changes are needed to account for climate-related risk. The second will share examples of effective practices for developing climate scenario analysis in the insurance sector. The third will consider how to integrate climate related financial risks in the annual data collected as part of the Global Monitoring Exercise (GME).

Mr. Workman said the Sustainable Insurance Forum (SIF) met in October to discuss: 1) impacts of climate-related risks on the insurability of assets; 2) broader sustainability issues, including its scoping study *Nature-Related Risks in the Global Insurance Sector*; and 3) climate risks in the actuarial process. Director Farmer is the NAIC representative. Maryland recently became an SIF member, joining California, New York, Vermont, and Washington.

Mr. Workman said in October, the EU-U.S. Insurance Dialogue Project held a public virtual meeting. Commissioner Birrane and Commissioner Doug Ommen (IA) represented the NAIC. In October, they developed two working groups focused on climate-related topics to include: 1) climate risk financial oversight, including climate risk disclosures, supervisory reporting, and other financial surveillance; and 2) climate risk and resilience, including innovative technology, pre-disaster mitigation and adaptation efforts, and modelling.

Finally, Mr. Workman said in early November, the NAIC participated in the COP26 Sustainable Insurance Series hosted by the UN Environment Programme's (UNEP) Principles for Sustainable Insurance Initiative (PSI). The event was held in conjunction with the United Nation's (UN's) COP26 Summit. Commissioner Altmaier, Commissioner Birrane, Director Farmer, Commissioner Kreidler, Commissioner Lara, and Commissioner Mais participated in panels focused on the actions of insurance supervisors regarding climate-related risk and resiliency, including coordination through the NAIC.

Having no further business, the Climate and Resiliency (EX) Task Force adjourned.

[ClimateResiliencyTFmin](#)



**MEMORANDUM**

TO: Members of the Climate and Resiliency (EX) Task Force

FROM: Technology Workstream of the Climate and Resiliency (EX) Task Force

DATE: Nov. 22, 2021

RE: Recommendation for the NAIC’s Center for Insurance Policy and Research to Create a Catastrophe Model Center of Excellence

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The NAIC Climate and Resiliency (EX) Task Force charged the Technology Workstream to apply technology, such as predictive modeling tools, to understand and evaluate climate and natural catastrophe risk exposures. In particular, the Technology Workstream was tasked with determining whether technical support services were needed by state insurance departments regarding the industry’s use of catastrophe models.

The Workstream met Aug. 6, June 7, and March 24 in regulator-to-regulator session, pursuant to paragraph 6 (consultations with NAIC staff members related to NAIC technical guidance) of the NAIC Policy Statement on Open Meetings, to hear about NAIC activities related to the use of catastrophe models in insurance. Content included a 2020 Center for Insurance Policy and Research (CIPR) research paper, *Application of Wildfire Mitigation to Insured Property Exposure*, which explores the economic benefits and costs of employing wildfire resilience strategies in nine communities in California, Colorado, and Oregon. Analysis was conducted using the RMS North America Wildfire Models highlighting the benefit of working with catastrophe model vendors for regulatory resilience priorities. Acknowledging the benefit of having a central resource for state insurance regulators regarding catastrophe models, as well the need for its discussed support services, on Sept. 21, the Technology Workstream issued a request for comments on a proposal (Appendix A) for the NAIC’s CIPR to create a Catastrophe Model Center of Excellence (COE). Comments were collected up to its open meeting on Nov. 4, during which the Workstream heard comments on the proposal, answered questions, and clarified the intent of the COE. The Workstream met again on Nov. 22 to provide an overview of a Frequently Asked Questions document (Appendix B), developed to provide answers to the questions received during the open comment period, as well as to provide additional clarification regarding the role of the COE and services to be provided if the proposal is adopted through the Executive (EX) Committee and Plenary.

If adopted, the COE would: 1) facilitate insurance department access to catastrophe modeling documentation and provide assistance in distilling the technical information received; 2) provide general technical education/training materials on the mechanics of commercial models and treatment of perils and risk exposures; and 3) conduct applied research analysis using various model platforms to proactively answer the regulatory “so what” questions that may need to be addressed for regulatory resilience priorities.

The support services offered through the COE will not take the place of individual state insurance department activities involving catastrophe models such as model and rate filing review, nor would the

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COE approve vendor models. The COE will engage with all vendors willing to participate for all perils with technical documentation available for state insurance regulators. The COE will establish a governance structure to ensure that the COE remains transparent and impartial. The COE will periodically report to relevant NAIC committees, including the Technology Workstream of the Climate and Resiliency (EX) Task Force and the Catastrophe Insurance (C) Working Group of the Property and Casualty Insurance (C) Committee.

Furthermore, the COE will provide only fact-based information and relevant objective analysis, as requested. The COE will conduct research using catastrophe models to support risk mitigation and resilience efforts, critical for reducing future probable losses.

The COE will safeguard information received from participating catastrophe modeling vendors through legally binding data-use agreements. Some funding will be necessary to support the ongoing work of the COE, including staff salaries and resources for model access. The expenses associated with COE activities would be subject to the NAIC budget process.

The Technology Workstream voted on Nov. 22 to recommend that the NAIC’s CIPR create a catastrophe modeling COE. We believe this will be a valuable resource for state insurance departments and recommend that the Climate and Resiliency (EX) Task Force will consider moving the proposal forward to the joint Executive (EX) Committee and Plenary to consider for adoption during the 2022 Spring National Meeting.

[Tech WS COE Recommendation](#)



APPENDIX A

**A Proposal to Establish a Catastrophe (CAT) Modeling “Center of Excellence”  
(COE) within the NAIC’s Center for Insurance Policy & Research (CIPR)**

September 20, 2021

## **Introduction**

The leadership and members of the NAIC have determined natural CAT risks and resiliency to be a top priority and organized several workstreams to pursue objectives intended to help ensure homes and businesses are protected from insured perils arising from natural CATs, while keeping markets stable through financially strong insurers and reinsurers. For example, the Catastrophe Risk (E) Subgroup has spent many years working to develop risk-based capital (RBC) factors for hurricane and earthquake exposures and, more recently, grappling with how best to address wildfire, flood, and convection storm perils. Separately, the Catastrophe Insurance (C) Working Group is charged with maintaining the NAIC *State Disaster Response Plan*, the *Disaster Assistance Program*, and the *Catastrophe Computer Modeling Handbook*. The Working Group has also commenced work to determine ways in which the private flood market can be facilitated and monitored by the state insurance regulators. The Climate and Resiliency (EX) Task Force has taken on significant work, which will require a deeper understanding of all aspects of climate and natural CAT risks. Further, many state insurance regulators are taking on new roles in working to create risk resilient communities within their jurisdictions.

Given these increased pressures and new roles, state insurance regulators need to improve their understanding of the CAT modeling technologies used by insurers and reinsurers. This means having access to the same knowledge, insights, and tools used by insurers. In doing so, state insurance regulators can more effectively engage with insurers and state and federal policymakers when discussing how best to maintain critical insurance coverages for their states’ economies and developing new regulatory policy. The NAIC can play an instrumental role fulfilling these needs.

In this regard, the Technology Workstream of the Climate and Resiliency (EX) Task Force was assigned the task of considering the potential application of technology, such as early warning systems and predictive modeling tools, to better understand and thereby evaluate insurers’ climate and natural CAT

risk exposures. In particular, the Technology Workstream was tasked with determining whether technical support services were needed by state insurance departments regarding the industry's use of CAT models.

To help facilitate the members' consideration of such a need, NAIC/CIPR staff conducted two presentations on June 7 and Aug. 6, 2021, wherein staff laid out a range of support services for state insurance departments when encountering the use of commercial CAT models by insurers in rate making processes, solvency functions, and/or other insurance business decisions (e.g., strategic, reinsurance, claims management). NAIC/CIPR staff addressed potential support services in the areas of: 1) facilitating access to CAT modeling documentation; 2) providing technical education and training; and 3) conducting applied research to proactively address regulatory climate risk and resilience priorities. Finally, an additional related benefit highlighted is the ability to provide future support services for other modeled CAT risk beyond climate and natural CATs, including casualty/liability, cyber, terrorism, and infectious diseases such as pandemics. This additional support work could potentially influence other NAIC related committee activities, as appropriate.

## **Proposal**

As outlined in the introduction above, the time has arrived for the NAIC to establish a permanent support group—i.e., the NAIC CAT Modeling COE—to provide the NAIC and state system of insurance regulation with the necessary technical expertise, tools, and information to effectively regulate the insurers and reinsurers exposed to catastrophic events for a secure and stable insurance marketplace. We believe this COE would be best positioned within the NAIC's CIPR given CIPR's: 1) existing knowledge, expertise, and recent NAIC applied research track record in this field; and 2) its ability to effectively work with modelers and state insurance regulators from a neutral perspective within the NAIC. Below is a complementary and integrated series of technical support services envisioned by the COE:

- 1) Facilitating insurance department access to CAT modeling documentation and assistance in the distilling of this information.
- 2) Providing general technical education/training materials on the mechanics of commercial models and treatment of perils and risk exposures.
- 3) Conducting applied research analysis utilizing various model platforms to proactively answer the regulatory "so what" questions that may need to be addressed for regulatory resilience priorities.

The first element from above provides for the CAT Modeling COE to facilitate insurance department access to CAT modeling documentation and other information, as well as centralizing accumulated knowledge and expertise to aid in the deciphering and distillation of CAT models. The COE would assist

with managing both CAT model vendor relationships and insurance department needs. As such, the COE would be briefed on the modeling technologies and inputs in a similar fashion as insurers and reinsurers are and have access to the same modeling documentation to develop internal expertise. This knowledge and expertise would then be actively shared with state insurance regulators for use in regulatory processes and other considerations. Critically, this information would be collected and stored on an NAIC regulator-only technological platform with proper CAT modeling vendor Data Use Agreements (DUAs) in place to allow for proprietary model information sharing, part of which has been a stumbling block to regulatory access to date.

The second element from above provides for technical education/training materials on the mechanics of commercial models and treatment of perils and risk exposures for state insurance regulators. Importantly, this technical training would be utilized to enhance regulatory operational activities, thereby bringing the science to operations. For example, it would allow for state insurance departments and the NAIC to reimagine the NAIC [Catastrophe Computer Modeling Handbook](#), which could become the foundational authoritative literature on state insurance regulator use of CAT models. As state insurance regulators gain more practice with these models, the NAIC is also well-positioned to develop best practices on industry use, as well as state insurance regulator use. Consequently, the NAIC [Financial Condition Examiners Handbook](#) and the [NAIC Own Risk and Solvency Assessment \(ORSA\) Guidance Manual](#) could be improved to account for the latest developments and best practices in CAT risk assessment. Further from a solvency perspective, both the development of related RBC CAT charges and climate stress testing would benefit greatly from such a technical foundation.

The third element from above provides for conducting applied research analysis to utilize various model platforms to proactively answer the regulatory “so what” questions that may need to be addressed. CAT models are not limited to use by the insurance industry; they are tools for CAT risk assessment. State insurance regulators can apply these tools in much the same way as the industry, albeit for regulatory resilience priorities (e.g., how to increase the uptake and proliferation of home hardening activities related to hurricane and wildfire risk). Such mitigation activities are critical to reduce expected losses and improve the availability and affordability of coverage currently and in a future warming climate. Applied research utilizing CAT models can demonstrate the economic value of such mitigation activities, laying the proper foundation for policy discussions to address increasing property owner mitigation implementation.

Lastly, it is important to note that these identified support services will not be taking the place of individual state department of insurance (DOI) activities involving CAT models, such as model and rate filing reviews, nor will the CAT Modeling COE be approving vendor models. Rather, the support services will allow the COE to engage with state insurance regulators as a trusted partner with a sufficient level

of CAT modeling expertise to enable the conduction of ongoing CAT modeling regulatory activities more effectively.

## Plan of Action

In the past year, many of the above support services have already transpired and/or are currently underway. These include: 1) regulator-only technological platform infrastructure development and DUA executions; 2) NAIC Insurance Summit and CIPR events focused on CAT modeling education concerning wildfire and flood models, CAT model climate change incorporation and climate risk assessment, and casualty CAT modeling; 3) successful completion of a California, Colorado, and Oregon DOI [wildfire mitigation report](#) and wildfire CAT model technical documentation done in conjunction with the Insurance Institute for Business & Home Safety (IBHS) and Risk Management Solutions (RMS), which was further leveraged by the Catastrophe Risk (E) Subgroup for wildfire RBC factor development and the Catastrophe Insurance (C) Working Group *Catastrophe Computer Modeling Handbook* updates. Therefore, this proposal will not be to start such CAT modeling COE support service activities, but rather to build upon and leverage these activities for further enhancement and formalization at the NAIC.

Following the meeting of the Technology Workstream on Aug. 6, 2021, the proposal was released to the member states for further comments and questions. Comments were considered, and a revised proposal was approved for public exposure by the Technology, Solvency, and Pre-Disaster Mitigation Workstreams on Sept. 20, 2021.

Following the Sept. 20 regulator-only meeting, the proposal was released to interested parties for further comment and questions for 30 days. Comments will be considered by the Technology Workstream following this feedback and revisions may be made to the proposal, as agreed upon.

If the proposal advances through the above process steps, it will be prepared for recommendation to the Climate Risk and Resiliency (EX) Task Force at the NAIC 2021 Fall National Meeting in San Diego, CA.

We anticipate there would be no new charges associated with creation of the COE; i.e., the expenses associated with the COE resources would be effectively absorbed by the NAIC budget and have no special assessments, fee for services, etc. These resources may include: 1) recruiting a vendor/insurance department CAT modeling relationship manager and a CAT model research analyst; 2) funding for education/training development and implementation and the licensing and/or running of models for applied research to support and/or enhance regulatory operational activities; and 3) addressing regulatory resilience priorities.

## Conclusion

In the face of extreme weather and the future climate significantly affecting property insurance markets, state insurance regulators need to have access to the same knowledge, insights, and CAT modeling tools used by insurers and reinsurers to assess and address climate risk and resiliency; i.e., knowledge and tools that are available for state insurance regulators to access, understand, and utilize. To accomplish this, we propose that the NAIC establish a permanent support group—i.e., the NAIC CAT Modeling COE—housed within the NAIC’s research unit; i.e., CIPR. We have laid out a proposal and plan of action that would build upon the work that the NAIC/CIPR has already been conducting around climate and CAT risks and allows the NAIC/CIPR to bring science to the operation of the DOIs in a way that is additive to the existing regulatory system, easy to access, and tailored to the needs of the state insurance regulators.

We welcome feedback on the proposal and plan of action. Please send questions or comments to Jennifer Gardner at [jgardner@naic.org](mailto:jgardner@naic.org).

[CATModelCOE Proposal](#)



APPENDIX B

**NAIC/Center for Insurance Policy and Research (CIPR) Catastrophe  
Model**

**Center of Excellence (COE)  
Frequently Asked Questions (FAQ)  
November 16, 2021**

**Governance & Oversight**

**Topic: Vendor and Insurer Continued Engagement with Departments of Insurance (DOIs)**

**Is the intent for the COE to become the primary point of contact between state insurance regulators and modelers?**

No. As stated in the proposal, “identified support services will not be taking the place of state DOI activities involving CAT models, such as model and rate filing reviews, nor will the CAT Modeling COE be approving vendor models.” However, we do envision the COE providing access to CAT modeling expertise to support state insurance regulator understanding, training, etc.

**Will state insurance regulators continue to be open to discussions with modelers (and insurers) about models?**

Yes. In fact, the COE will seek to improve communication between state insurance regulators and modelers/insurers, supplying state insurance regulators with expertise and information to help facilitate such discussions.

**Topic: Transparency and Potential Bias of Modeled Results/Usage**

**How will the COE engage with interested stakeholders to remain transparent?**

Most NAIC support resources interact with a committee for reporting and oversight. In this instance, at least for now, we propose that the catastrophe resource center will report to the Technology Workstream under the Climate and Resiliency (EX) Task Force, as well as coordinate with the Property and Casualty Insurance (C) Committee.

**How will the COE work to ensure impartiality of vendor models?**

The COE will make every effort to engage with all vendors willing to participate for all perils with available technical documentation. Furthermore, the COE will establish a governance structure to ensure that partiality is not provided to any model or vendor.

**Would the COE be engaging to connect learnings from the CAT model to specific insurer rate-making, solvency, and/or business—i.e., strategic, reinsurance, claims management—decisions?**

The COE support services will not take the place of state DOI activities involving CAT models, such as model and rate filing reviews, nor will the CAT Modeling COE be approving vendor models. The COE will work to understand models objectively from a general sense, not for individual rate filings or solvency assessments. We acknowledge that each insurer has their own risk profile that would need to be considered on an individual basis, which is outside the scope of the COE.

**Topic: Objective Science**

**Would the kind of information the COE conveys be facts-based or would it include opinions or analysis?**

The information provided to the state DOIs would be fact-based with relevant objective analysis, as requested. Providing this type of information to states highlights the importance of the placement of the COE within the NAIC's independent research center, the CIPR.

**Topic: Addressing Regulatory “So What” Questions Through Applied Research**

**What are regulatory “so what” questions in support service #3 of the proposal conducting applied research analysis?**

State insurance regulators are responsible for maintaining well-functioning competitive insurance markets. Forward-looking models can be utilized to help analyze market performance, especially regarding the need for improved resilience. As stated in the proposal, CAT models are tools for catastrophe risk assessment. State insurance regulators can apply these tools in much the same way as the industry, albeit for regulatory resilience priorities. For example, models can be used to identify high-risk areas and where proliferation of home hardening activities can improve resilience to natural hazards, including hurricane, flood, severe convective storm, tornado, wildfire, and earthquake. Such mitigation activities are critical to reduce probable losses. Lower losses over time can improve the availability and affordability of coverage in the future. Applied research utilizing CAT models can demonstrate the economic value of mitigation activities. One

description provided via public comments that we considered useful is, “conducting applied research analysis that utilizes or analyzes the potential to utilize CAT models to further public and private risk mitigation and resiliency efforts; benefits and opportunities at the individual consumer or business; or public agency at the community, regional, state, or national level.”

**Regarding conducting applied research analyses utilizing CAT models, we would like to understand the research and support expectations from the COE on modelers.**

We envision working with modelers on applied research activities as applicable. We are requesting funding to allow for modeler engagement.

**Depending on the expected level of granularity for COE work, additional questions may be relevant, such as whether the COE (NAIC/CIPR) would need to be prepared to go to a hearing to testify or respond to discovery?**

It is not anticipated that the COE would maintain granular information about individual insurer use of CAT models. The level of detail would be around the actual CAT model to provide education and training to state DOIs.

**Will the COE be used to conduct research and analysis into the markets for CAT models. Will conflicts of interest or market failures distort the use of CAT models?**

No. It is not envisioned that the COE would set out to conduct this type of research and analysis.

**Implementation Considerations**

**Topic: COE Communication of Various Results, Information, and Observations to DOIs**

**Given the complexity of models and breadth of expertise required to build and maintain them, there is a risk that any third party cannot adequately communicate the nuances and justification of models. Will the COE plan to coordinate model presentations from the modelers, rather than only relaying this information second-hand?**

Yes. The COE would plan to coordinate model presentations from modelers.

**How will information, observations, and/or questions about models be conveyed to state insurance departments? What kind of output will be generated?**

We plan to hire a relationship manager responsible for communicating with the CAT model vendors and state insurance regulators. A regulator-only technology platform will help facilitate information sharing with state insurance regulators.

Research output could take multiple forms depending upon the nature of the analysis undertaken.

**What kinds of data fields will be included? Will others provide input into the design?**

The data fields selected would be contingent on the models being used and the research project under consideration. Data fields would follow from model inputs and outputs.

**Will the COE reviews and/or output be designed to be geography-specific?**

Yes. That is possible.

**Once a model has been reviewed, what renewal process is envisioned?**

Models will not be reviewed, nor would they be posted on the state insurance regulator-only website. However, model technical documentation and information will be updated as new versions of the models are released.

**Topic: Model Vendor Intellectual Property (IP) Protection**

**How will the COE safe-guard intellectual property of the participating CAT model vendors?**

All modeling documentation, access, and usage will be centralized and monitored through the COE via legally binding data use agreements. The NAIC has an extensive track record of experience in collecting and protecting proprietary information. The actual models will not be posted on the state insurance regulator website, only the model documentation will be posted.

**Topic: Interaction with Modelers and Other External Experts**

**Will modelers engage in discussions with the COE about specific models? Do you expect insurers would be involved in model-related discussions?**

Yes. The COE would be engaged with modelers on the modeling technologies and inputs in a similar fashion as insurers and reinsurers and have access to the same modeling documentation to develop internal expertise. It is possible that insurers could be involved in model-related discussions with the COE, but the COE will not review individual insurer's use of models.

**Is the CIPR planning to license and use modeler software or engage in paid consulting studies for their research and development of processes?**

Yes, depending on COE resources and the specific research use case. The CIPR would be willing to either license modeler software and/or engage in paid consulting studies for research and educational/training purposes, as directed by the appropriate NAIC authorities.

**How will results and underlying assumptions from licensed models be communicated to state insurance regulators?**

Any use of a licensed model, including distribution of modeled results, would be subject to the model license agreement and/or model vendor negotiated research consulting contract. Underlying assumptions from the various models utilized would be collected via the model technical documentation as part of the model vendor data use agreement. Note that it is possible that the model technical documentation, including underlying model assumptions, could be collected through a COE data use agreement without an associated model-based research project. If we were to license a model, the actual model would not be posted on the state insurance regulator-only website.

**Will modelers be involved in establishing workflows, best practices, agendas, and expectations of the COE, including timing?**

We anticipate that modelers will be actively engaged with the COE staff, advising on these items as appropriate.

**How many vendors is the COE considering supporting?**

The COE will not be “supporting” vendors, but rather the COE will collect model documentation and engage with model vendors. The COE will engage with any model vendor serving insurance markets where the information is relevant to state insurance regulators.

**Does the COE anticipate looking to external experts for some of the implementation or ongoing work?**

Yes. External collaboration would be welcome, whether that be with industry experts, public agencies, or the academic community.

**Topic: Resources - Staffing and Funding**

**How many states do you expect to be interfacing with the COE?**

The COE will be a resource of the NAIC potentially interfacing with all 56 jurisdictions.

**Beyond recruiting for the identified new roles of CAT modeling relationship manager and CAT model research analyst, how many people at the NAIC/CIPR will be contributing to COE activities? Do you expect that to change over time?**

The CIPR director, the NAIC solvency enterprise risk management (ERM) advisor, and potentially Property and Casualty Insurance (C) Committee staff support will have a role in supporting the work of the COE. We anticipate that additional technical and administrative support resources may be necessary as the workload and demand for services evolve with demonstrated success.

**Will the staffing level proposed by the NAIC be able to provide meaningful analysis in the broad category of catastrophe modeling?**

Prior to the creation of the COE, CIPR and NAIC staff have provided meaningful analysis on wildfire CAT modeling and applied wildfire resilience research. We aim to build off this success and need to start somewhere. Every little bit helps for the states, as stated by one industry commenter, “[t]he staffing issues mentioned above regarding experts at the NAIC are even larger for state insurance departments. Most states are not going to have enough or the right staff to review these models. They will have to rely on others to evaluate catastrophe model validity, and most likely will have to rely heavily on the decisions and evaluations made by others.”

**Have long-term plans been prepared? Are there budget implications?**

No long-term plan has been developed for the COE. The expenses associated with the COE would be subject to the NAIC budget process and have no special assessments or fees for service.

[CIPR COE FAQ](#)

## PROPOSED REDESIGNED NAIC CLIMATE RISK DISLCOSURE SURVEY

### PURPOSE STATEMENT

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The purpose of the *Climate Risk Disclosure Survey* is to:

- Enhance transparency about how insurers manage climate risks and opportunities as well as identify good practices and vulnerabilities.
- Provide a baseline supervisory tool to assess how climate-related risks may affect the insurance industry.
- Promote insurer strategic management and encourage shared learning for continual improvement.
- Enable better-informed collaboration and engagement on climate-related issues among regulators and interested parties.
- Align with international climate risk disclosure frameworks to reduce redundancy in reporting requirements.

Link to NAIC Survey: <http://www.insurance.ca.gov/0250-insurers/0300-insurers/0100-applications/ClimateSurvey/upload/QUESTIONS-AND-GUIDELINES-CLIMATE-RISK-SURVEY-REPORTING-YEAR-2020.pdf>

Link to Financial Stability Board's Task Force for Climate-related Financial Disclosure (TCFD) Recommendations (see pdf pg. 22/doc pg. 14):

<https://assets.bbhub.io/company/sites/60/2020/10/FINAL-2017-TCFD-Report-11052018.pdf>

**Narrative and closed ended questions follow, grouped into the Financial Stability Board's Task Force for Climate-related Financial Disclosure (TCFD) four topics.**

**Can be presented as (1) two separate parts of the same survey, narrative and closed ended, with option to attach narrative answers as file if it exists already (e.g., like current TCFD reports) so that only closed ended need to be completed, or (2) closed ended questions directly incorporated into narrative questions, with possible option to attach a report and only answer closed ended questions.**

***Italics* indicate that the question is copied from TCFD.**

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**Governance – narrative questions**

1. *Disclose the organization's governance around climate-related risks and opportunities.*
  - Identify and include any publicly stated climate risk goals
  - Describe where climate risk disclosure is handled within the organization’s structure, e.g., at a group level, entity level, or a combination. If handled at the group level, describe what activities are undertaken at the company level.
  - A. *Describe the board's oversight of climate-related risks and opportunities.*
    - Describe who on your board or committees is responsible for the oversight of managing the climate-related financial risks.
  - B. *Describe management's role in assessing and managing climate-related risks and opportunities.*

**Governance – closed ended questions answered in addition to the narrative**

1. Is Climate Risk Governance done at a group level, entity level, or a combination? (Multiple-choice answers)
  - a. Based on answer/if group level: Are any activities undertaken at the Company Level? (Y/N)
2. Does the company have publicly stated climate risk goals? (Y/N)
3. Does your board have a member, members, a committee, or committees responsible for the oversight of managing the climate-related financial risk? (Y/N)
4. Does management have a role in assessing and managing climate-related risks and opportunities (Y/N)

**Strategy – narrative questions**

2. *Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material.*
  - Describe how the company defines materiality.
  - Describe the steps the company has taken to engage key constituencies on the climate risk and resiliency.
  - Describe the companies plan to assess, reduce, or mitigate its greenhouse gas emissions in its operations or organizations.
  - A. *Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term by completing the chart below.*
    - Define short, medium, and long-term, if different than 1-5y as short term, 5-10y as medium term, and 10-30y as long term.

Time Horizon	Risks	Opportunities
Short-term		
Medium-term		
Long-term		

- B. *Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.*
- Discuss how the company provides products or services, or makes investments, to support the low carbon transition or help customers adapt to climate risk? (This can include underwriting and/or investments.)
- C. *Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2 degree Celsius or lower scenario.*

### **Strategy - closed ended questions answered in addition to the narrative**

1. Has the company taken steps to engage key constituencies on the topic of climate risk and resiliency? (Y/N)
2. Does the company provide products or services, or make investments, to support the low carbon transition or help customers adapt to climate risk? (This can include underwriting and/or investments.) (Y/N)
3. Does the company have a plan to assess, reduce or mitigate its greenhouse gas emissions in its operations or organizations? (Y/N)

### **Risk Management – narrative questions**

3. *Disclose how the organization identifies, assesses, and manages climate-related risks.*
- Describe how the company considers the impact of climate related risks on its underwriting portfolio, and how the company is managing its underwriting exposure with respect to physical, transition and liability risk.
  - Describe any steps the company has taken to encourage policyholders to manage their potential climate related risks.
  - Describe how the company has considered the impact of climate related risks on its investment portfolio, including what investment classes have been considered.
- A. *Describe the organization's processes for identifying and assessing climate-related risks.*
- Discuss whether the process includes an assessment of financial implications.
  - Discuss how frequently the company go through the process to assess climate-related risks.
- B. *Describe the organization's processes for managing climate-related risks.*
- C. *Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.*
- Discuss whether climate-related risks are addressed through the company's general enterprise-risk management process or a separate process

- Discuss how frequently the company goes through the process to identify climate-related risks
- Describe the potential impact of climate related risks on the company's underwriting portfolio and how the company is managing its exposure with respect to physical, transition and liability risk.
- Describe how the company considers the impact of climate-related risks on its investment portfolio.

### **Risk Management – closed ended questions answered in addition to the narrative**

1. Does the company have a process for identifying climate-related risks? (Y/N)
  - A. If yes, are climate-related risks addressed through the company's general enterprise-risk management process? (Y/N)
  - B. If yes, how frequently does the company go through the process to identify climate-related risks? (Multiple choice, e.g., annually, etc.)
2. Does the company have a process for assessing climate-related risks? (Y/N)
  - A. If yes, does the process include an assessment of financial implications? (Y/N)
  - B. If yes, how frequently does the company go through the process to assess climate-related risks? (Multiple choice)
3. Does the company have a process for managing climate-related risks? (Y/N)
4. Has the company considered the impact of climate-related risks on its underwriting portfolio? (Y/N)
5. Has the company taken steps to encourage policyholders to manage their potential climate-related risks? (Y/N)
6. Has the company considered the impact of climate-related risks on its investment portfolio? (Y/N)

### **Metrics and Targets – narrative questions**

4. *Disclose the metrics and targets used to assess and manage relevant collateralized risks and opportunities where such information is material.*
  - Describe how your organization uses catastrophe modeling to manage the climate-related risks to your business.
  - Specify for which climate-risks the company uses catastrophe models to assess. (Property, Casualty, Life, Health)
  - Discuss the climate scenarios utilized by the company to analyze its underwriting risks, including which risk factors the scenarios consider, what types of scenarios are used, and what timeframes are considered.
  - Discuss the climate scenarios utilized by the company to analyze risks on its investments, including which risk factors are utilized, what types of scenarios are used, and what timeframes are considered.
- A. *Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.*

- In describing the metrics used by the company to assess and monitor climate risks, consider the amount of exposure to business lines, sectors, and geographies vulnerable to climate-related physical risks [answer in absolute amounts and percentages if possible], alignment with climate scenarios, [1 in 100 years probable maximum loss, Climate VaR, carbon intensity], and the amount of financed or underwritten carbon emissions)
- B. *Disclose Scope 1, Scope 2, and if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.*
- C. *Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.*

### **Metrics and Targets – closed ended questions answered in addition to the narrative**

1. Does your company use catastrophe modeling to manage your company's climate-related risks? (Y/N)
  - A. If yes, for which climate-related risks does the company use catastrophe models? (Multiple choice: Property, Casualty, Life, Health)
  - B. If yes, how does the company use catastrophe modeling to manage climate-related risks? Multiple choice: Financial solvency, underwriting, other – please describe)
2. Does the company use metrics to assess and monitor climate-related risks? (Y/N)
3. Does the company have climate-related targets? (Y/N)
4. Has the company utilized climate scenarios to analyze their underwriting risk? (Y/N)
  - A. If yes, which risk factors do the scenarios consider? (Multiple choice: Physical, Transition, Liability)
  - B. If yes, what type of scenarios are used? (Multiple-choice)
  - C. If yes, what timeframes are considered? (Multiple-choice)
  - D. If no, does the company expect to develop scenario analysis for underwriting in the future? (Open comment)
5. Has the company utilized climate scenarios to analyze their investment risk? (Y/N)
  - A. If yes, which risk factors do the scenarios consider? (Multiple choice: Physical, Transition, Liability)
  - B. If yes, what type of scenarios are used? (Multiple-choice)
  - C. If yes, what timeframes are considered? (Multiple-choice)
  - D. If no, does the company expect to develop scenario analysis for investment management in the future? (Open comment)

 [Draft Proposed Climate Risk Disclosure Survey.docx](#)