New Report Focuses on Using Science to Accelerate Climate Action

--Report Kicks Off Launch of Science for Climate Action Network, Delivering Climate Guidance to Local Governments on Issues Spanning Artificial Intelligence to City Bonds--

Local governments have a new science-based resource to tackle climate challenges with the release of the report, 'Evaluating Knowledge to Support Climate Action' and launch of the Science for Climate Action Network. The report, published in Weather, Climate and Society and summarized in the Bulletin of the American Meteorological Society, was authored by nearly forty science and local government experts. The intent is to help local governments use science in the U.S. National Climate Assessments and other sources to reduce greenhouse gas emissions and adjust to now-unavoidable climate impacts.

With climate change intensifying, communities are working on solutions, but as the report highlights, new types of support are needed, including science that is more accessible, trusted, and relevant to local challenges. The report recommends a new framework that applies climate reports like the U.S. National Climate Assessment in a sustained, user-oriented process instead of a one-off release.

"Local governments and communities need help to use climate science to evaluate how mitigation and adaptation opportunities interact with their broader goals," said **Richard Moss**, the lead author of the report. "This new approach will make it easier to develop science-based pathways to address climate threats to local economic growth, infrastructure, and public health."

Building on a key recommendation of the report, to integrate climate science in routine decision making such as capital improvement planning and zoning, a *Science for Climate Action Network* is launching to provide guidance on a range of technical issues including bond ratings and infrastructure design. The network will convene teams of scientists, climate experts, and state and local officials to identify best practices in an ongoing process. The network will work with the latest science and technology, including the use of artificial intelligence to process city data and citizen science to collect missing data on impacts.

This committee first met and started its efforts to improve ongoing climate science resources to local governments in 2016 as part of the National Climate Assessment process. The committee disbanded in August 2017 when the Trump administration decided to let it lapse.

"While the federal government continues to deny climate change and ignore the dire need to strengthen the resilience of our communities, New York and the U.S. Climate Alliance are taking action," said **New York Governor Andrew Cuomo.** "Last year we proudly reconvened the advisory committee to

put a spotlight on this global catastrophe, and this report will provide important recommendations to communities across the country as we work to address climate change."

Recognizing the need to provide sustained resources to local government leaders, New York Governor Cuomo and leading groups re-convened the advisory committee. Twelve of the original fifteen members and eight additional experts worked to prepare the report over the last year. The reconvened committee was made possible with financial support from the New York State Energy Research Development Authority, Columbia University's Earth Institute, and the American Meteorological Society.

The network intends to be a resource for cities, states, and tribal governments across America. "As an island state, Hawai'i understands the grave risks posed by climate change. We know that success can be achieved only when everyone works together from a common set of facts, and this report is a welcome contribution to our efforts. The proposed approach – one that integrates citizen and community science – can propel Hawai'i's resiliency measures forward in innovative ways," said **Hawaii Governor David Ige**.

Following the release of the report, the *Science for Climate Action Network* will focus on providing resources to governments and groups to help limit warming and adapt to the changes that are already occurring. A convening process is planned to identify top-priorities and products for local governments in a robust stakeholder engagement process.

[Science for Climate Action Network](#) works collaboratively with individuals and organizations across the country who are taking actions to limit and adapt to changing climate conditions.

"With the urgency for climate action growing daily, the launch of the Science for Climate Action Network is an important step to supporting cities and others across the nation with the climate science necessary to adapt to a changing world." **Daniel Zarrilli, OneNYC Director & Chief Climate Policy Advisor, NYC Office of the Mayor**

"The National Climate Assessment process makes it clear that climate change is not only an issue for polar bears or future generations: we care about a changing climate because it affects us here and now. The information in these assessments provides crucial input for cities, communities, businesses, states and more to build resilience to future change. The Science to Action Network connects the dots between the latest science and how we can use it to make smart, informed decisions that ensure a better future for us all." **Katharine Hayhoe, Atmospheric Scientist and Professor of Political Science at Texas Tech University**

"The urgent challenge of climate change requires an interdisciplinary response that brings together the science and policy communities. Connecting scientific research to key decision-makers is a core part of

the Earth Institute's mission. We have been pleased to partner with Richard Moss and the Independent Advisory Committee to complete their report on a new network that will provide authoritative and usable knowledge that enables communities, regional and city governments, businesses and federal organizations to best prepare for the damaging effects of climate change." **Alex Halliday, Director, The Earth Institute, Columbia University**

"It will take all segments of society to meet the challenges of a changing climate. SCAN recognizes this and seeks to reinforce the great efforts already underway by local governments, non-profits and organizations. With SCAN's approach to adopt problem-centric, collaborative learning using sound science and technology that is fit for purpose, communities and organizations will develop and implement strategies more confidently and effectively." **Mary Glackin, Vice President, Weather Business Solutions, IBM, and President-elect, American Meteorological Society**

"As climate change accelerates and more communities need to react, they need information that they can trust is appropriate and usable. We in the science community look forward to working with the Science to Action Network to provide better support by working with users to identify which methods and data are appropriate for different uses, locations, and time frames." **Keith Seitter, Executive Director, American Meteorological Society**

"Numerous scientific assessments have affirmed that human-caused climate change is real and poses serious risks for humanity. The task at hand is to make science actionable, and the American Meteorological Society is ready to collaborate with the Science for Action Network community to evaluate and then share rigorous and usable science, to the benefit of all." **Paul Higgins, Director, Policy Program, American Meteorological Society**

"Climate change is creating a public health emergency in America and around the world. Cities, counties, states, businesses, civic and faith organizations—indeed, our nation as a whole—must rapidly transition to clean energy and become far more resilient to impacts of climate change that can no longer be avoided. Making these changes will not be easy, but doing so quickly and effectively can help ensure a better, healthier, more sustainable future for our children and grandchildren. The Science for Climate Action Network was created to help make this transition possible." **Ed Maibach, Professor and Director, Mason Center for Climate Change Communication**

"The effects of climate change are increasingly dramatic, real-time, and dynamic. Governments, communities and the private sector, striving to keep abreast of climate science, need real-time access to the latest climate assessments and tools that support climate action. The Nature Conservancy is pleased to be a part of a new Science for Climate Action Network that creates a dynamic assessment process to help fill this need." **Lynn Scarlett, Vice President, Policy and Government Affairs at The Nature Conservancy**

"A citizen-based approach to the National Climate Assessment will empower people to recognize and manage climate-related risk. It will also extend the utility of federal investments in climate science to every sector and region in the US." **Kathy Jacobs, Director of the Third National Climate Assessment**

"As a leader in the recently published 4th National Climate Assessment, I think it is critical that we develop additional ways to help the American people to plan for the potential impacts that climate change presents to us. The 5th National Climate Assessment will be essential for national preparedness and needs to be produced, while efforts such as SCAN are needed to extend and sustain the assessment process to support communities in developing science-based adaptation and mitigation strategies." **Donald Wuebbles, Professor of Atmospheric Sciences, University of Illinois, and co-lead NCA4 Climate Science Report**

"Climate resilience is still a new process in most communities and the field is young enough that technical support from state and federal sources is not yet in place. Community leaders are often intimidated by what we call the 'data wall' because they are not sure what data is appropriate for their region and specific needs. Having a system that provides credible data that is appropriate for their use, easy to understand, and affordable to access is critically important as more and more communities begin to take action to protect themselves from the impacts of changing climate conditions." **Tonya Graham, Executive Director, Geos Institute**

"Now is the time to scale up and accelerate efforts by providing real-world guidance and tools that empower all communities to act. With SCAN, we are applying what we've learned about high-impact regional collaborations of researchers and those managing climate risk to a national scale, empowering participants across the country to create a better future." **Maria Carmen Lemos, Professor and Associate Dean, School for Environment and Sustainability, University of Michigan**

"This report provides a much-needed vision -- and practical plan -- for a future in which climate science is user-focused in every aspect. Pursuing this vision means getting serious about the crucial role communities have in using citizen science to contribute knowledge to address inequities and build capacity where it is needed most." **Ryan Meyer, Executive Director, Center for Community and Citizen Science, UC Davis**

"Decision-makers preparing for climate change often face a confusing array of potentially useful scientific data. By developing new methods to evaluate the fitness of scientific approaches for different applications, the Science for Action Network can provide ongoing guidance on best practices that helps decision-makers use current science effectively. The same methods can be used to track scientific progress over time and encourage innovations that provide more usable information on the issues that matter most to decision-makers." **Andrew Jones, Scientist and Deputy Director of the Climate Readiness Institute at Lawrence Berkeley National Laboratory**

"Artificial intelligence and machine learning are used daily across the country to improve our understanding and prediction of daily and high-impact weather forecasting. AI and machine learning

can improve climate resilience and improve understanding and communication of probabilities of risk, but to realize its potential we want to work closely with decision makers and stakeholders through efforts such as the Science for Action Network." **Dr. Philippe Tissot, American Meteorological Society, Committee on Artificial Intelligence and its Applications to Environmental Science**

"Based on demonstrated early successes, the Independent Advisory Committee report concludes that Artificial Intelligence (AI) can contribute to transforming how society responds to climate risks. For realizing the full potential of AI-based climate resilience, the Committee recommends launching test-beds and private-public-government sector partnerships." **Dr. Auroop Ganguly, Northeastern University**

"Since our organization focuses on rural communities, it is critical that rural leaders have ongoing access to local data. With fewer resources to do adaptation planning, plus more conservative political environments, these decision makers primarily want LOCAL data. Easy access and inexpensive data is vital." **Nancy Gilliam, Ph. D., Executive Director, Model Forest Policy Program**

"The Superior Watershed Partnership) would like to stress the need for local climate data in Marquette, Michigan and in the entire Upper Peninsula of Michigan. The Upper Peninsula has 917 miles of Lake Superior shoreline; with changing lake levels, increased extreme weather events and the rural nature of our communities, solid data is a necessity for climate adaptation planning." **Emily Leach, Great Lakes Conservation Corps, Climate Adaptation Task Force**

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