U.S. National Advisory Committee
Independent Federal Advisors on the
North American Agreement on Environmental Cooperation

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June 23, 2023

The Honorable Michael S. Regan
Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

Dear Administrator Regan:

The U.S. National Advisory Committee (NAC) to the U.S. Representative to the North American Commission for Environmental Cooperation held its 59th hybrid meeting on May 18, 2023, in El Paso, Texas. This letter represents our advice resulting from that meeting. The main objective of our meeting was to provide advice to the EPA Administrator on ways to empower communities to address climate adaptation challenges.

Our meeting included presentations on: 1) *U.S. Priorities on the CE*C from Mark Kasman, on behalf of Jane Nishida, Assistant Administrator for EPA's Office for International and Tribal Affairs (OITA), 2) *CEC Updates on Operational Plan and EJ4 Climate Change Grants*, from Jorge Daniel Taillant, Executive Director of the Commission for Environmental Cooperation, 3) *JPAC Report-out* from Octaviana Trujillo, Chair of the Joint Public Advisory Committee (JPAC), 4) *Update on Regional Sustainability and Climate Adaptation Challenges*, from Adrian Vazquez, Director, Center of Atmospheric Sciences & Green Technologies, University of Ciudad Juarez, 5) *NADBank Overview and Lessons learned from working with Vulnerable Communities*, from Calixto Mateos, Managing Director, and 6) *Lessons Learned from EPA's Work with Communities*, from Surabhi Shah, Senior Policy Advisor, Office of the Administrator.

The meeting was opened with opening remarks from Federal Advisory Committee Management Division (FACDM) Director Robbie Young-Mackall, who provided an overview of FACMD activities and responsibilities. Dr. Carlos Rincon, Director, El Paso Border Office welcomed the NAC to El Paso. The NAC appreciates the dedicated support provided by the FACMD and thanks Director Young-Mackall, Oscar Carrillo our NAC Designated Federal Officer, and all the FACMD staff and El Paso Border Office for their support in ensuring our meeting was a success. We hope our advice is useful to you in your work with your counterparts in the CEC Council, and wish you continued success in your position.

Sincerely,

Andrew P. Carey
Chair, National Advisory Committee

cc:
Jane Nishida, Assistant Administrator, Office of International & Tribal Affairs (OITA), EPA
Rafael DeLeon, Deputy Assistant Administrator, OITA, EPA
Robbie Young-Mackall, Director, Federal Advisory Committee Management Division, EPA
Matthew Tejada, Director, Office of Environmental Justice & External Civil Rights, EPA
Martin Kenneth, Director, American Indian Environmental Office, EPA
Surabhi Shah, Office of the Administrator, EPA
Mark Kasman, Director, Office of Regional & Bilateral Affairs, OITA, EPA
Monisha Harris, Deputy Director, Office of Regional & Bilateral Affairs, OITA, EPA
Lesley D'Anglada, General Standing Committee (OITA), EPA
Oscar Carrillo, Designated Federal Officer, EPA
Octaviana Trujillo, Chair, Joint Public Advisory Committee
Jorge Daniel Taillant, Executive Director, CEC
Members of the U.S. National and Governmental Advisory Committees

National Advisory Committee
(NAC) to the U.S. Representative to the
Commission for Environmental Cooperation (CEC)

Advice 2023-2 (June 23, 2023)
Question #1 – Best practices, strategies, and tools the CEC could develop to address climate adaptation challenges.

The May 18, 2023, Charge Questions to the National Advisory Committee (NAC) was to identify ways to empower communities to address climate adaptation challenges. Specifically, the Environmental Protection Agency sought advice on:

1) *Best practices, strategies, and tools the CEC could develop to empower minority, low-income, tribal, and indigenous communities to address climate adaptation challenges;*
2) *Examples of activities and best practices community leaders have implemented to increase engagement and overcome the challenges of implementing climate adaptation efforts; and*
3) *How can the U.S. support the implementation of the Indigenous Traditional Ecological Knowledge (ITEK) Policy into CEC's climate initiatives that will honor Tribal sovereignty?*

To empower minority, low-income, tribal, and indigenous communities to address climate adaptation challenges, it will require a multifaceted approach that involves community engagement, capacity building, and the use of appropriate tools and strategies. Best practices, strategies, and tools that could be developed to empower these communities include:

1. Community engagement: Encouraging community participation and involvement in climate adaptation efforts is essential for success. Community members should be involved in decision-making processes, and their knowledge and experience should be leveraged to identify climate adaptation strategies that are most relevant and effective for their communities.
2. Capacity building: Providing training and education opportunities to members of these communities is critical. This can include providing workshops on climate science, building skills in data collection and analysis, and training on sustainable farming practices.
3. Collaborative partnerships: Building partnerships with organizations and agencies that specialize in climate adaptation and sustainability can help communities access expertise, funding, and other resources needed for successful climate adaptation efforts.
4. Use of technology: Leveraging technology, such as remote sensing, machine learning, and mobile applications, can help communities monitor and respond to climate-related changes. This can help them make informed decisions and act more quickly.
5. Ecosystem-based adaptation: Supporting the protection and restoration of ecosystems can help build community resilience to climate change. For example, reforestation and regenerative agriculture can help mitigate the impacts of climate change by increasing biodiversity and reducing carbon emissions.
6. Access to funding: Providing funding and grants to support community-led climate adaptation projects can help overcome financial barriers to implementation.
7. Inclusive planning: Ensuring that climate adaptation plans are developed with input from diverse stakeholders can help ensure that the needs of all members of the community are considered.

In summary, empowering minority, low-income, tribal, and indigenous communities to address climate adaptation challenges requires a comprehensive approach that engages the community, builds capacity, fosters partnerships, leverages technology, supports ecosystem-based adaptation, provides access to funding, and ensures inclusive planning. Below are examples of the best practices, strategies, and tools listed above.

1) **Community-led strategies can be effective in combating climate adaptation by engaging residents in identifying and implementing solutions that address their unique needs and vulnerabilities. Examples of community-led strategies include:**

- Community-Based Climate Adaptation Planning: Communities can develop climate adaptation plans that identify their vulnerabilities and prioritize actions to address them. Community members can be engaged in the planning process through public meetings, surveys, and focus groups.
- Green Infrastructure: Communities can use green infrastructure, such as rain gardens, green roofs, and permeable pavement, to manage stormwater and reduce the risk of flooding. This approach can provide multiple benefits, including improved air and water quality, increased biodiversity, and enhanced community aesthetics.
- Energy Efficiency and Renewable Energy: Communities can promote energy efficiency and renewable energy through programs that provide financial incentives for residents to upgrade their homes and businesses. This can help reduce greenhouse gas emissions and lower energy costs for residents.
- Sustainable Agriculture: Communities can promote sustainable agriculture practices, such as crop rotation, conservation tillage, and cover cropping, to improve soil health, reduce water use, and increase food security.
- Community Education and Outreach: Communities can educate residents about the impacts of climate change and the actions they can take to reduce their carbon footprint and prepare for extreme weather events. This can include workshops, educational materials, and community events.

These are just a few examples of community-led strategies that can be effective in combating climate adaptation. By engaging residents in the planning and implementation process, communities can develop solutions that are tailored to their unique needs and build resilience to the impacts of climate change.

2) **Community-led capacity building strategies can be effective in combating climate adaptation by empowering residents with the knowledge, skills, and resources they need to identify and implement solutions to address the impacts of climate change. Examples of community-led capacity building strategies include:**

- Climate Adaptation Training and Workshops: Communities can provide training and workshops to help residents understand the impacts of climate change and develop the skills they need to identify and implement adaptation solutions. These workshops can cover topics such as green infrastructure, energy efficiency, and sustainable agriculture.
- Community-Based Participatory Research (CBPR): CBPR involves engaging community members in the research process to identify community needs and priorities related to climate

adaptation. This approach can help build community capacity by involving residents in the development of research questions, data collection, and analysis.

- Peer-to-Peer Learning Networks: Communities can establish peer-to-peer learning networks that enable residents to share knowledge and best practices related to climate adaptation. These networks can be facilitated through workshops, online forums, and community events.
- Capacity Building Grants: Communities can provide capacity building grants to local organizations and individuals to support the development of skills and resources needed to implement climate adaptation solutions. These grants can support training, technical assistance, and other capacity building activities.
- Community-Based Environmental Monitoring: Communities can engage residents in environmental monitoring programs that provide data on local weather patterns, water quality, and other environmental factors. This can help build community capacity by providing residents with the tools and information they need to make informed decisions about climate adaptation.

These are just a few examples of community-led capacity building strategies that can be effective in combating climate adaptation. By empowering residents with the knowledge, skills, and resources they need to address the impacts of climate change, communities can build resilience and adapt to a changing climate.

3) **Building partnerships with organizations and agencies that specialize in climate adaptation can be an effective way for communities to access expertise, funding, and other resources needed for successful climate adaptation efforts. Examples of community-led strategies for building partnerships with these organizations and agencies include:**

- Identify Relevant Organizations and Agencies: Communities can identify relevant organizations and agencies that specialize in climate adaptation by conducting research and consulting with local experts. This can include government agencies, non-profit organizations, academic institutions, healthcare sector organizations, and private sector entities.
- Participate in Relevant Networks and Forums: Communities can participate in relevant networks and forums that focus on climate adaptation. These networks and forums can provide opportunities to connect with other communities, share knowledge and best practices, and access funding and other resources.
- Engage in Collaborative Planning and Implementation: Communities can engage in collaborative planning and implementation with partner organizations and agencies. This can involve developing joint funding proposals, sharing staff and resources, and collaborating on research and monitoring activities.
- Leverage Existing Partnerships: Communities can leverage existing partnerships with organizations and agencies that engage in related activities, such as conservation, disaster response, and public health. These partnerships can provide opportunities to integrate climate adaptation into existing programs and activities.
- Advocate for Funding and Policy Support: Communities can advocate for funding and policy support for climate adaptation at the local, state, and national levels. This can involve engaging with elected officials, participating in public comment periods, and partnering with advocacy organizations.

These are just a few examples of community-led strategies for building partnerships with organizations and agencies that specialize in climate adaptation. By collaborating with partners, communities can access expertise, funding, and other resources needed for successful climate adaptation efforts.

4) **Strategies for leveraging technology, such as remote sensing, machine learning, and mobile applications, can help monitor and respond to climate adaptation. Here are some examples:**

- Remote Sensing: Remote sensing technologies, such as satellite imagery and aerial drones, can be used to monitor changes in climate and the environment. This can help identify areas that are vulnerable to climate change and inform decision-making around adaptation strategies. For example, satellite imagery can be used to track changes in sea level or the extent of glaciers, while drones can be used to map changes in land use or vegetation cover.
- Machine Learning: Machine learning algorithms can be used to analyze large amounts of data and identify patterns and trends related to climate change. This can help identify areas that are at risk of flooding, drought, or other climate-related hazards. For example, machine learning algorithms can be used to identify areas that are prone to flooding based on historical flood data and other environmental factors.
- Mobile Applications: Mobile applications can provide real-time information about climate and weather conditions, as well as tips and resources for responding to climate-related hazards. These applications can be used by community members, emergency responders, and other stakeholders. For example, mobile applications can provide information about air quality or wildfire risk, as well as guidance on how to prepare for and respond to these hazards.
- Citizen Science: Citizen science projects can involve community members in collecting data on climate and environmental conditions. This can include using mobile applications to collect data, as well as providing training and resources to community members to support data collection efforts. For example, community members can use mobile applications to report observations of wildlife or changes in land use.
- Virtual Reality and Gaming: Virtual reality and gaming technologies can be used to help residents visualize the potential impacts of climate change and test adaptation strategies. This can help build awareness and support for climate adaptation efforts. For example, virtual reality simulations can be used to show how sea level rise could affect coastal communities, while gaming applications can be used to test the effectiveness of different adaptation strategies.

These are just a few examples of strategies for leveraging technology to monitor and respond to climate adaptation. By using these tools and approaches, communities can improve their understanding of climate-related hazards and develop effective adaptation strategies.

5) **There are several ecosystem-based climate adaptation methods that can help protect and restore ecosystems while building community resilience to climate change. Examples include:**

- Green infrastructure: This involves designing and building infrastructure that mimics natural systems, such as wetlands, forests, and floodplains, to provide multiple benefits, including flood protection, air and water purification, and carbon sequestration. Green infrastructure can help protect communities from climate change impacts such as floods, storms, and heatwaves.

- Ecological restoration: This involves restoring degraded ecosystems to their natural state, which can help increase their resilience to climate change. Ecological restoration projects can involve planting native vegetation, removing invasive species, and reintroducing native wildlife.
- Sustainable agriculture: This involves using agricultural practices that maintain or improve soil health, conserve water, and reduce greenhouse gas emissions. Sustainable agriculture can help increase the resilience of farming communities to climate change by improving soil quality, reducing erosion, and increasing crop yields.
- Coastal zone management: This involves managing coastal areas to protect them from the impacts of sea-level rise, storm surges, and erosion. Coastal zone management can include measures such as beach nourishment, dune restoration, and the creation of salt marshes and other coastal wetlands.
- Community-based natural resource management: This involves engaging local communities in the management of natural resources such as forests, rivers, and fisheries. Community-based natural resource management can help build resilience to climate change by ensuring that natural resources are used sustainably and that communities have access to the resources they need to adapt to changing environmental conditions.

Overall, ecosystem-based climate adaptation methods can be an effective way to protect and restore ecosystems while building community resilience to climate change. These methods can help ensure that ecosystems continue to provide the vital services that communities rely on, such as clean air and water, food, and protection from natural hazards.

6) **Access to funding for grants is crucial for community-led climate adaptation projects, as it can help overcome financial barriers to implementation. Opportunities for accessing funding for grants include:**

- Government Grants: Governments at the national, state, and local levels often provide grants for climate adaptation projects. These grants can be used for a variety of purposes, including ecosystem restoration, green infrastructure, and sustainable agriculture. You can check with your local government or relevant agencies to identify any available grants and their eligibility criteria.
- International Funding: International organizations such as the United Nations Environment Program (UNEP), the Global Environment Facility (GEF), and the Green Climate Fund (GCF) provide funding for climate adaptation projects in nearby developing countries. These organizations may have specific focus areas or eligibility criteria for their grants, but they can be valuable sources of funding for community-led climate adaptation projects.
- Private Foundations: Private foundations often provide grants for climate adaptation projects. These foundations may have specific focus areas such as conservation, sustainable agriculture, or community development. Researching and identifying foundations that align with your project's objectives can help you access funding opportunities.
- Corporate Social Responsibility Programs: Many companies have corporate social responsibility (CSR) programs that provide funding for community-led projects. These programs may focus on environmental sustainability, community development, or other areas related to climate adaptation. Identifying companies that align with your project's objectives can help you access funding opportunities.

Overall, there are several opportunities to access funding for grants to support community-led climate adaptation projects. Identifying and applying for these funding opportunities can help overcome financial barriers to implementation and ensure the success of your project.

National Advisory Committee
(NAC) to the U.S. Representative to the
Commission for Environmental Cooperation (CEC)

Advice 2023-3 (June 23, 2023)

Question #2 – Examples of activities and best practices community leaders have implemented to increase engagement and overcome the challenges of implementing climate adaptation efforts.

The NAC discussed the SA (San Antonio) Climate Ready program which is the city of San Antonio's program pathway for climate action and adaptation. The program is managed through the city's Office of Sustainability and consists of two parts: government (new initiatives focused on the municipal government) and community (initiatives for San Antonio). The program—designed to prioritize direction for these communities, as well as provide benefits that reduce burdens—requires that the climate adaptation and community actions be of equal value. In fact, equity is a central purpose of the program.

The NAC also highlighted low-cost, community-based programs that have been implemented by the city of Tucson. The Trees for Tucson program provides low-cost trees, particularly on the south side of the city, to improve this semidesert environment. Tucson coupled this program with rainwater harvesting and grey water programs to reduce surface temperatures and improve air quality and the aesthetics of the community, which encourages outside activities. The city also has been retrofitting roads to create rain gardens to direct floodwater to support the Trees for Tucson program. In addition, Tucson has been improving roads to include bicycle lanes to encourage people to use this alternative to driving.

NAC members also noted that one of the best practices to implement to increase engagement is building community partnerships and compensating these partners for their time and expertise.

It was also noted that Southeastern Idaho Public Health is working with schools in rural counties to create story maps where students and their parents physically observe climate events in their region. This dual educational component helps people observe and understand climate change, as well as the possibilities for how individuals can address it. The NAC highlighted the importance of youth engagement in environmental issues.

Finally, the NAC called attention to weADAPT. "weADAPT is an online 'open space' on climate adaptation issues (including the synergies between adaptation and mitigation) which allows practitioners, researchers, and policy makers to **access credible, high-quality information** and to **share experiences and lessons learnt** with the weADAPT community." As of July 2022, over 80 organizations internationally have endorsed these principles, committing to make changes, and strengthening existing efforts to meet climate adaptation agenda.

Activities and best practices community leaders have implemented to increase engagement and overcome the challenges of implementing climate adaptation efforts include:

1. **Devolving decision making to the lowest appropriate level:**
   Giving local institutions and communities more direct access to finance and decision-making power over how adaptation actions are defined, prioritized, designed, implemented; how progress is monitored; and how success is evaluated.

2. **Addressing structural inequalities faced by women, youth, children, disabled, displaced, Indigenous Peoples and marginalized ethnic groups:**
   Integrating gender-based, economic, and political inequalities that are root causes of vulnerability into the core of adaptation action and encouraging vulnerable and marginalized individuals to meaningfully participate in and lead adaptation decisions.

3. **Providing patient and predictable funding that can be accessed more easily:**
   Supporting long-term development of local governance processes, capacity, and institutions through simpler access modalities and longer term and more predictable funding horizons, to ensure that communities can effectively implement adaptation actions.

4. **Investing in local capabilities to leave an institutional legacy:**
   Improving the capabilities of local institutions to ensure they can understand climate risks and uncertainties, generate solutions, and facilitate and manage adaptation initiatives over the long term without being dependent on project-based donor funding.

5. **Building a robust understanding of climate risk and uncertainty:**
   Informing adaptation decisions through a combination of combination of local, traditional, Indigenous, generational, and scientific knowledge that can enable resilience under a range of future climate scenarios.

6. **Flexible programming and learning:**
   Enabling adaptive management to address the inherent uncertainty in adaptation, especially through robust monitoring and learning systems, flexible finance, and flexible programming.

7. **Ensuring transparency and accountability:**
   Making processes of financing, designing, and delivering programs more transparent and accountable downward to local stakeholders.

8. **Collaborative action and investment:**
   Collaboration across sectors, initiatives, and levels to ensure that different initiatives and different sources of funding (humanitarian assistance, development, disaster risk reduction, green recovery funds, etc.) support each other, and their activities avoid duplication, to enhance efficiencies and good practice.

National Advisory Committee
(NAC) to the U.S. Representative to the
Commission for Environmental Cooperation (CEC)

Advice 2023-4 (June 23, 2023)

Question #3: How can the U.S. support the implementation of the Indigenous Traditional Ecological Knowledge (ITEK) Policy into CEC's climate initiatives that will honor Tribal sovereignty?

The NAC believes the best way to implement Indigenous Traditional Ecological Knowledge (ITEK) Policy into climate initiatives that honor Tribal sovereignty are the following steps:

1. Consultation with Indigenous Peoples: The first step in implementing the ITEK Policy into climate initiatives is to consult with Indigenous Peoples who hold traditional ecological knowledge. This consultation should involve a respectful and collaborative process that recognizes Tribal sovereignty and the unique cultural and ecological perspectives of Indigenous Peoples.

2. Integration of ITEK into Climate Initiatives: Once consultation has occurred, the ITEK Policy should be integrated into climate initiatives. This could include incorporating ITEK into climate change mitigation and adaptation strategies, policies, and practices, as well as incorporating ITEK into environmental impact assessments.

3. Capacity Building: To effectively implement the ITEK Policy, capacity building may be necessary. This could include providing training and resources to Indigenous Peoples, organizations, and governments on how to incorporate ITEK into climate initiatives, as well as building partnerships between Indigenous Peoples and other stakeholders involved in climate initiatives.

4. Monitoring and Evaluation: The implementation of the ITEK Policy should be monitored and evaluated to ensure that it is effectively honoring Tribal sovereignty and achieving its intended goals. This could include regular reporting on progress and impact, as well as ongoing consultation with Indigenous Peoples to ensure that their perspectives and needs are being incorporated into the process.

5. Continuous Improvement: Finally, the implementation of the ITEK Policy should be an ongoing process of continuous improvement. This could involve regular review and revision of policies and practices to ensure that they remain effective and culturally appropriate over time.

Overall, the successful implementation of the ITEK Policy into climate initiatives requires a commitment to respectful consultation, collaboration, and partnership with Indigenous Peoples, as well as a recognition of the importance of Traditional Ecological Knowledge in addressing climate change.

And finally, the NAC makes the following recommendation - CEC and EPA funding of university-led climate adaptation project grants should require or strongly encourage joint efforts between majority-based colleges and one of the following: 1) a Historically Black College or University (HBCU); 2) a predominately Hispanic Serving Institution (HSI), 3) a predominately Indigenous Serving Institution

(ISI), or 4) universities with a significant percentage of minority and low income students. This would enable efforts to provide training to potential future climate change/climate adaptation professionals from these population groups. This would increase their knowledge and awareness through participation in forums through sponsored courses, seminars, and research as well as training in cross-university initiatives, partnerships, and collaborations with at risk populations. In addition, one or more community-based organizations and state or local agencies should play a significant role in the university-led project.

In conclusion, the members of the National Advisory Committee wish to thank you for this opportunity to serve you and your dedicated team at the Environmental Protection Agency. We are honored by the care, commitment, and collaboration of the entire Federal team in support of the environment. This meeting allowed some of us to come together in person, and others joined virtually. We do respectfully request your consideration and support to resume in-person meetings of the National Advisory Committee and Government Advisory Committee when possible.