



OFFICIAL MEETING OF THE NATIONAL AND GOVERNMENTAL ADVISORY COMMITTEES (NAC/GAC)

SUMMARY

May 18, 2023

El Paso Border Office, Suite 145
U.S. Environmental Protection Agency Region 6
511 E. San Antonio Ave.
El Paso, TX 79901
and Via Zoom Virtual Platform

Note: The U.S. National and Governmental Advisory Committees are federal advisory committees chartered by Congress, operating under the Federal Advisory Committee Act, 5 U.S.C., App. 2. The committees provide advice to the Administrator of the U.S. Environmental Protection Agency (EPA) on the implementation of the Environmental Cooperation Agreement. The findings and/or recommendations of the committees do not represent the views of the Agency, and this document does not represent information approved or disseminated by EPA.

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Thursday, May 18, 2023

Call to Order and Introductions

Oscar Carrillo, National Advisory Committee (NAC) and Governmental Advisory Committee (GAC) Designated Federal Officer (DFO), Federal Advisory Committee Management Division (FACMD), Office of Resources and Business Operations (ORBO), Office of Mission Support (OMS), U.S. Environmental Protection Agency (EPA)

Mr. Oscar Carrillo, NAC/GAC DFO, FACMD, ORBO, OMS, EPA, invited Dr. Octaviana Trujillo, Chair, Joint Public Advisory Committee, to recite an invocation. Dr. Trujillo welcomed NAC and GAC members and other attendees to the meeting of the NAC and GAC committees and acknowledged the ancestors of the tribal nations living in the El Paso area. Mr. Carrillo called the meeting to order and thanked the NAC/GAC Chairs and Vice-Chairs for assisting in planning the meeting. He thanked Ms. Jane T. Nishida, Assistant Administrator, Office of International and Tribal Affairs (OITA), EPA; Mr. Rafael DeLeon, Principal Deputy Assistant Administrator, OITA, EPA; Mr. Mark Kasman, Director, Office of International Affairs (OIA), OITA, EPA; Ms. Monisha Harris, Deputy Director, OIA, OITA, EPA; Dr. Lesley D'Anglada, Senior Advisor, North America Program, OIA, OITA, EPA; and Dr. Veronica Aponte-Morales, Physical Scientist, EPA. Mr. Carrillo expressed appreciation to the entire FACMD team, including Ms. Robbie Young-Mackall, Director, FACMD, ORBO, OMS, EPA, for ensuring that the resources are made available to support the work of the committees.

Opening Remarks

Robbie Young-Mackall, Director, FACMD, ORBO, OMS, EPA
Carlos Rincon, Ph.D., Director, El Paso Border Office, Region 6, EPA

Ms. Young-Mackall welcomed the NAC and GAC members and other attendees. She noted that FACMD, located within OMS, manages the NAC and GAC and provides oversight to the other 21 EPA Federal Advisory Committees. Ms. Young-Mackall thanked the members for their intellectual investment in advising the EPA Administrator on issues related to the Commission for Environmental Cooperation (CEC). The NAC and GAC provide recommendations to the EPA Administrator on environmental issues, engage with the Agency's partners and stakeholders and play an important role in helping EPA achieve its mission to protect human health and the environment. Ms. Young-Mackall expressed appreciation to Mr. Carrillo and the NAC/GAC Chairs for their efforts in planning the meeting. She thanked Mr. Kasman, present on behalf of Ms. Nishida, for supporting these committees and Dr. Carlos Rincon, Director, El Paso Border Office, Region 6, EPA, and his staff for hosting the meeting.

Mr. Carrillo introduced Dr. Rincon, who supervises the El Paso Border Office staff charged with implementing the [U.S.–Mexico Border Environmental Program: Border 2025](#). Dr. Rincon noted that Ms. Nishida also serves as the U.S. National Coordinator of the U.S.–Mexico Border Environmental Program. Although the program is overseen and administered by EPA and the Mexican Secretaría del Medio Ambiente y Recursos Naturales (SEMARNAT, or Secretariat of Environment and Natural Resources), all program activities are selected and implemented by coordinating bodies with full consideration of relevant activities carried out by other institutions and advice provided by many other organizations. Representatives of these organizations participate actively in the work of the U.S.–Mexico Environmental Program coordinating bodies, and they provide valuable context for the program activities. Dr. Rincon pointed out that one such representative—Dr. Calixto Mateos Hanel, Managing Director, North American Development Bank (NADBank)—would be presenting during the meeting.

The U.S.–Mexico Border Program falls under the framework of the [La Paz Agreement](#) of 1983, which has evolved into successive border programs. Border 2025—which commenced on May 26, 2021, with the signing of an agreement by the EPA Administrator and the SEMARNAT Secretariat—is the fifth such

program. The agreement covers four geographic regions of the border: California–Baja California, Arizona–Sonora, New Mexico/Texas–Chihuahua, and Texas–Coahuila/Nuevo León/Tamaulipas. The goals of the program are to reduce air pollution, improve water quality and ensure access to clean and safe water; promote clean sites and sustainable materials and waste management; and improve joint preparedness for and responses to hazardous environmental emergencies. Dr. Rincon welcomed and expressed gratitude to his team members, Ms. Maria Sisneros, Environmental Engineer, El Paso Border Office, Region 6, EPA, and Dr. Carolina Valdes, Research Scientist, El Paso Border Office, Region 6, EPA.

Welcome and Overview of the Agenda

Marina M. Brock, Barnstable County (Massachusetts) Department of Health and Environment, Chair of the GAC

Andrew P. Carey, U.S.–Mexico Border Philanthropy Partnership, Chair of the NAC

Mr. Andrew P. Carey, U.S.–Mexico Border Philanthropy Partnership, Chair of the NAC, welcomed the meeting attendees. Mr. Carey thanked Ms. Ann Marie Chischilly, Esq. (Northern Arizona University), Vice-Chair of the NAC, for her assistance in planning the meeting and welcomed former NAC member Dr. Ivonne Santiago (University of Texas at El Paso) to the meeting.

Ms. Marina M. Brock, Barnstable County (Massachusetts) Department of Health and Environment, Chair of the GAC, greeted the attendees and reviewed the agenda for the meeting.

Update on U.S. Priorities and Guidance

Mark Kasman, Director, OIA, OITA, EPA

Mr. Kasman, on behalf of Ms. Nishida, thanked the NAC and GAC members for participating and dedicating their time and commitment to advising the Agency, which represents the U.S. government on the CEC Council. He acknowledged the participation of members from the CEC Secretariat and Joint Public Advisory Committee (JPAC), who represent Canada, Mexico and the United States. Mr. Kasman presented an update on U.S. and EPA priorities related to climate change and introduced the advice letter charge.

EPA is prioritizing environmental justice (EJ) in its commitment to climate change mitigation and adaptation. EPA is ensuring that climate adaptation and resilience strategies are inclusive and equitable and that communities have the necessary tools and resources to address climate adaptation. To move forward with climate adaptation efforts, EPA has created a Climate Adaptation Action Plan, which includes taking necessary actions to prepare for, adapt to and recover from the impacts of climate change. EPA has developed guidance and tools to address the climate resilience of tribal, state and local governments and communities across the nation. Through the CEC, Canada, Mexico and the United States have developed several trilateral projects to address climate-related effects, including initiatives to integrate Indigenous Traditional Ecological Knowledge (ITEK), to build resilience in adaptive management plans, to advance and strengthen the adaptive capacity to respond to extreme weather events, and to provide funding directly to vulnerable communities via grant programs to support efforts on preparedness for climate-related effects.

EPA is grateful for the advice provided by the NAC and GAC committees. The advice provided at the December 2022 meeting identified challenges that communities have experienced when attempting to implement solutions to reduce the effects of climate change. For example, the NAC and GAC recognized that communities' lack of trust (because of significant amounts of misinformation and active disinformation) diminishes community support engagement. The NAC and GAC recommended that EPA communicate with communities in a manner that would not add burden to these groups but rather

encourage their inclusion and participation. The NAC and GAC also provided advice on how to promote meaningful community engagement—especially the crucial inclusion of community leaders in educational activities, the facilitation of knowledge and expertise sharing, and the implementation of ITEK in support of climate adaptation efforts. EPA recognizes the importance of addressing these challenges and is requesting additional advice from the NAC and GAC on how best to empower communities with opportunities and tools to address climate challenges and implement adaptation strategies. EPA seeks advice from the NAC/GAC on (1) best practices, strategies, and tools that the CEC could develop to empower minority, low-income, tribal, and Indigenous communities to address climate adaptation challenges; (2) activities and best practices that community leaders have implemented to increase engagement and overcome the challenges of implementing climate adaptation efforts; and (3) how the United States can support the integration of ITEK policy into the CEC’s climate initiatives in a manner that will honor tribal sovereignty.

CEC Updates on Operational Plan and EJ4 Climate Change Grants

Jorge Daniel Taillant, Executive Director, CEC

Mr. Jorge Daniel Taillant, Executive Director, CEC, thanked the meeting organizers. He pointed out that only a day earlier, the World Meteorological Organization (WMO) predicted that global temperatures have a 65 percent chance of exceeding the key climate threshold in the next 5 years. Humanity is running out of time, and irreversible tipping points are approaching. Each tenth of a degree matters and contributes to increased suffering, which disproportionately affects vulnerable communities. Mr. Taillant listed current and emerging global strategies and priorities for mitigating climate change, which include targeting super pollutants (e.g., methane, black carbon, hydrofluorocarbons) for faster results; implementing nature-based solutions to induce cooling and increase resilience; infusing efforts with ITEK to reestablish our relationship with nature; identifying and reducing fossil fuel use, leaks and dependency; reducing waste; increasing conservation of biodiversity; using land more sustainably; promoting EJ; balancing mitigation and adaptation agendas; and implementing more aggressive and ambitious programs.

Mr. Taillant provided a status update on CEC cooperative work program developments. Concept notes related to a circular economy and climate adaptation initiatives are being developed. Concept notes related to an environmental education initiative currently are under review by the three parties. The project description of a TEK Expert Group (TEKEG)–led initiative (Resilience of Indigenous People’s Food Systems) currently is under development, and the project description for a JPAC-led initiative (Advancing Responsible Purchasing of Wood Products) is under party review. Mr. Taillant described the CEC’s work related to food loss and waste, hazardous waste transport, pollinator conservation, marine protected areas, nature-based solutions to address flooding, and air quality improvement for EJ. The [EJ4Climate Grant Program](#) provides funding to community-based organizations (CBOs) to address environmental and human health vulnerabilities and comprises \$4 million awarded to 29 projects to date. The [North American Partnership for Environmental Community Action](#) (or NAPECA), which seeks to improve environmental conditions at the community, Indigenous, local and regional levels, has funded a 10th cycle of projects supporting sustainable recovery from the COVID-19 pandemic. Mr. Taillant described CEC [Submission on Enforcement Matters](#) (SEM) efforts to enforce environmental laws in Canada, Mexico and the United States. Among the three countries, the CEC submitted a total of 110 SEMs, 24 of which resulted in Factual Records. Mr. Taillant pointed out that the process of enforcing environmental laws still requires improvement.

Mr. Taillant announced that the 30th CEC Council Session and JPAC Public Forum is scheduled for June 28–29, 2023, in Victoria, Canada. The session will focus on Indigenous and urban approaches to climate adaptation. Mr. Taillant expressed his wishes that the CEC support more local and Indigenous efforts related to climate change and EJ.

Question and Answer Period

In response to a question about how to engage with the many communities that are unable to prioritize climate adaptation because of their lack of resources, Mr. Taillant commented that one solution is to engage communities in the early stages of design. He described his experience with California's Assembly Bill 617, which requires emissions reporting, monitoring, reduction plans and measures to reduce air pollution exposure in disadvantaged communities. Strategies for managing air quality in this bill were developed with the engagement of local partners through a series of consultations that enabled information to be shared and solutions to be fostered to address immediate community concerns.

Ms. Simone Sagovac (Southwest Detroit Community Benefits Coalition [CBC]), NAC member, asked about EJ and the increased need to access emergency resources. As an example, she described Michigan's air-quality monitoring system, which reports data at the county level. Within a county, communities might experience large variations in air quality, but these variations cannot be detected by the county-level monitoring system. Without the ability to monitor local effects, resources cannot be directed to the places where they are needed most. Mr. Taillant noted that community-owned networks of low-cost air monitors are being developed across the country. The [Comite Civico del Valle](#) manages and supports the [Identifying Violations Affecting Neighborhoods \(IVAN\) air-monitoring network](#), which has air-quality monitoring stations at approximately 70 sites in the Imperial and Eastern Coachella valleys in California. The [Waverley Street Foundation](#)—a philanthropic organization that has announced plans to grant more than \$3 billion to communities addressing climate change by 2035—has supported local air-quality monitoring initiatives in Palo Alto, California.

Ms. Sagovac asked about efforts to reduce the costs of tree planting. Mr. Taillant answered that one challenge associated with tree planting is the upkeep, which is assigned to local Departments of Parks and Recreation, which may lack the necessary resources. Mr. Taillant noted that this short-sighted view of trees ignores the wider benefits that they provide. Cities must approach tree planting—and the associated shading and cooling effects and health benefits—with a more holistic point of view.

Dr. David T. Dyjack (National Environmental Health Association), NAC member, commented that his organization is well positioned to initiate efforts related to mitigating food loss and waste. He asked for advice on current strategies being implemented in this area. Mr. Kasman asserted that his office supports international efforts related to food loss and waste and is learning about best practices from other countries. He offered to deliver related material to Dr. Dyjack via Mr. Carrillo and the OIA lead on the project, Ms. Elle Chang, International Program Advisor, OIA, OITA, EPA.

Ms. Chischilly noted that the White House Office of Science and Technology Policy (OSTP) and the White House Council on Environmental Quality (CEQ) issued a [memorandum](#) in 2021 to recognize ITEK as one of the many important bodies of knowledge that contributes to the scientific, technical, social, and economic advancements of the United States. In December 2022, the OSTP and CEQ jointly released new governmentwide [guidance](#) on including ITEK in federal research and policy. All federal agencies were required to report on progress with [implementation of the guidance](#) by the end of May 2023.

Ms. Chischilly is involved with a working group of external experts established by the U.S. Department of the Interior related to these efforts. She asked about EPA efforts related to this guidance. Mr. Kasman responded that these efforts are being performed by the OITA's American Indian Environmental Office and are the reason for the charge question regarding the integration of ITEK policy into the CEC's climate initiatives. He stated that he would contact Ms. Chischilly with more information. Ms. Chischilly recommended that EPA develop a working group comprising outside experts to review their efforts.

Dr. Rincon and Mr. Taillant requested that Ms. Chischilly contact them for further engagement related to the CEC's and EPA's ITEK-related activities. Dr. Rincon described the bottom-up approach used by the U.S.–Mexico Border Environmental Program, which engages with local community-led task forces.

Mr. James Marston (Marston Sustainability Consulting), NAC member, commented that House Bill 33—which would ban the enforcement of some federal regulations on oil and gas production in the state—has been passed by the Texas House of Representatives. Similar laws will limit the ability of cities to implement innovative EJ and climate adaptation initiatives. He requested that the NAC and GAC committees share recommendations for counteracting such legislation.

Dr. Aminata P. Kilungo (The University of Arizona), NAC member, requested that the discussion be included in the meeting report because it is related to the charge questions.

Ms. Julia S. Moore (Vermont Agency of Natural Resources), GAC member, shared information about Vermont's [Urban and Community Forestry Program](#), which has evaluated urban tree canopies in the state. The program received American Rescue Plan Act (ARPA) funding to continue helping communities address challenges associated with tree planting and maintenance. Ms. Sagovac discussed strategies for sustainable tree planting (e.g., reverting grassy parkland at the edges of forests to allow trees to grow their own offspring). Ms. Moore shared information on [municipal tree inventory tools](#) used by Vermont's Urban and Community Forestry Program to help staff and volunteers to identify, prioritize and take action on tree management needs found through "boots on the ground" surveys. Dr. Kilungo described a [rebate program](#) in Tucson, Arizona, supporting the installation of rainwater harvesting systems. Additionally, the [Tucson Million Trees initiative](#), led by Mayor Regina Romero, will plant 1 million trees by 2030 to increase the city's tree canopy and help mitigate the effects of climate change. Dr. Donna L. Lybecker (Idaho State University), NAC member, spoke on a tree planting program in southern Idaho that takes into consideration which trees thrive in the local climate and how the fallen leaves affect the local water system. Mr. Kasman mentioned that Australia and Singapore are implementing major initiatives related to tree canopies in urban areas to address urban heat islands and are considered international leaders in this area.

Mr. Taillant noted that the [Smart Surfaces Coalition](#) comprises national and international organizations working to help incorporate surfaces that sustainably manage sun and rain into municipal urban planning.

Dr. Marla del Pilar Perez-Lugo (University of Texas Rio Grande Valley), NAC member, commented that many communities do not have sufficient resources to address climate change. She asked about EPA efforts to address the source of the problem: the leadership of companies responsible for pollution and carbon emissions. Mr. Kasman responded that the Agency is developing regulations related to air, water and chemical pollution to address these challenges aggressively at the source. Additionally, the Agency is ensuring that these regulations are implemented in the year before a possible transition to a new administration, ensuring that they will be difficult to reverse.

Dr. Santiago asked how the CEC is providing incentives to address failures to enforce environmental laws that lead to Factual Records. Mr. Taillant explained that the SEM framework is neither a legal nor an arbitration system but a space for independent observation of environmental conditions. The question of how to move forward—in cases where environmental laws are not being enforced—still remains. Mr. Taillant encouraged the NAC and GAC to provide recommendations related to this challenge.

Mr. Taillant addressed Dr. Perez-Lugo's comment, noting that the CEC has implemented a strategy for engaging with the private sector. The U.S. Securities and Exchange Commission, which regulates exchange-listed public companies, is interested in increasing transparency related to environmental and climate-related impacts. Private efforts are being spearheaded by the insurance and risk-analysis sectors, but these risks must be addressed by other industries and communicated to the public.

JPAC Report Out

Octaviana Trujillo, Ph.D., Chair, JPAC, CEC

Dr. Trujillo thanked the meeting organizers and provided an overview of recent JPAC activities. The JPAC has identified three main areas of focus for 2023: (1) climate crisis, (2) water and (3) trade and the environment, all of which will be addressed with activities that integrate Indigenous perspectives. The proposed calendar of [2023 JPAC activities](#) includes the JPAC Public Forum in Victoria, Canada, on June 28, 2023; the trinational Indigenous forum on [Indigenous approaches to freshwater management in North America](#) in fall 2023—being organized in Mexico as part of the joint JPAC/TEKEG efforts; the second JPAC Public Forum in Mexico in fall 2023; and a virtual roundtable on trade and the environment toward the end of the year.

Joint JPAC/TEKEG Meeting Report

Dr. Trujillo reported on the joint JPAC/TEKEG meeting that was held in Montreal, Canada, in March 2023. On March 6, Dr. Trujillo observed a private meeting during which the TEKEG discussed its role with the CEC, including increased collaboration with the JPAC, the project units and the CEC Secretariat to infuse Indigenous knowledge into work carried out around the world by the organization. The TEKEG discussed the status of its project on Indigenous approaches to freshwater management in North America. The Secretariat reported that progress has been made with the Mayan case study, and TEKEG members discussed the two U.S. case studies and the possibility of engaging with the Kanien'kehá:ka (or Mohawk) people for the Mi'kmaq case study in Canada. The Secretariat provided an update on recruitment efforts for the TEK and Indigenous Affairs Officer position. Ms. María del Pilar García Hernández—a TEKEG member who is leading the development of a new project on the resilience of Indigenous people's food systems—provided an overview of the draft project description and received feedback from the meeting participants. The Secretariat has circulated a revised draft to the TEKEG members, which will be shared with the three parties shortly. The group discussed the fall 2023 TEKEG-led trinational Indigenous forum and decided that this event would take place in Oaxaca, Mexico, and be combined with the final JPAC Public Forum of the year. Dates for this event will be shared as soon as they are confirmed.

On March 7, a meeting with the Kanien'kehá:ka nation was convened at the Longhouse at Kahnawà:ke and attended by JPAC and TEKEG members and the majority of the Secretariat members. Indigenous leaders spoke about traditional food practices and environmental initiatives. The event was followed by a joint visiting session at the Secretariat headquarters, with the goal of reflecting on lessons from the Kanien'kehá:ka community. The participants agreed that more expertise and engagement with Indigenous cultures and are necessary and pledged to develop an engagement strategy and protocol for such activities.

On March 8, further updates on current CEC projects were provided, with a focus on those with Indigenous components. The JPAC met with CEC outreach communication units to discuss how to help the CEC engage with Indigenous networks and key representatives in the three countries. Opportunities for increasing Indigenous participation in the upcoming Council Session also were discussed. The groups agreed to be proactive about disseminating CEC opportunities among all their networks. The JPAC-led initiative Advancing Responsible Consumption of Forest Products was discussed. This initiative seeks to increase public awareness in this area through campaigns tailored to the three countries. The JPAC and the Secretariat further developed the draft project description based on feedback from members and government leads from the three countries. The updated draft has been shared with the three parties. Comments have been received from Canada, and comments from Mexico and the United States are pending.

Other Updates

The most recent version of the preliminary program for the June 2023 Council Session and JPAC Public Forum on Indigenous Approaches to Climate Change has been circulated by Mr. Carrillo. Joint meetings with the TEKEG are scheduled, including working sessions and field trips to visit the Malahat First Nation community of WSÁNEĆ people (Saanich People) and the SeaChange Marine Conservation Society. Dr. Trujillo discussed the itinerary for the June event. The JPAC Public Forum on Wednesday, June 28, will comprise opening remarks and two sessions: (1) Climate Adaptation in North America: Learning From Indigenous Communities and (2) Integrating TEK and Indigenous Perspectives Into Climate Adaptation Policy and Planning. The session on TEK will include a report from NAC and GAC chairs. Other public activities during the June meeting will include a visit to the CEC exhibition and networking spaces at the Fairmont Empress hotel, a traditional ceremony at the Wawadit'la Longhouse (the Mungo Martin House), and a welcoming reception and opening of the Council Session at the Royal B.C. Museum.

Dr. Trujillo reported on the meeting of CEC Alternative Representative held in May 2023 in Montreal, Canada, where she provided updates on JPAC activities. Dr. Trujillo was pleased to hear about efforts by Canada and the Secretariat to ensure that the June 2023 Council Session and JPAC Public Forum are successful.

Dr. Trujillo acknowledged receipt of the CEC appreciation letter sent on Tuesday, May 16, 2023, thanking the JPAC for advice the group developed based on consultations related to an initiative on supply chain transparency in North America, the network of communities for EJ and the air quality for EJ project. The JPAC was pleased to learn that the recommendations were well received and helped advance the final design of these projects.

On May 17, Dr. Trujillo was informed by the Secretariat staff that the TEK and Indigenous Affairs Officer position had been filled. The new Officer likely will join the 30th CEC Council Session and JPAC Public Forum.

Update on Regional Sustainability and Climate Adaptation Challenges

Adrian Vazquez, Ph.D., Director, Centro de Ciencias Atmosféricas y Tecnologías Verdes (CECATEV), Universidad Autónoma de Ciudad Juárez (University of Juárez), Ciudad Juárez, Chihuahua, Mexico

Dr. Adrian Vazquez, Director, CECATEV, University of Juárez, Ciudad Juárez, Chihuahua, Mexico, discussed his experience with binational cooperation at the U.S.–Mexico border. CECATEV was created in 2017 as the scientific branch of the air quality program at the University of Juárez. Dr. Vazquez noted that wind and pollution do not recognize international borders or walls. He invoked the 1983 La Paz Agreement, which defined the border region as the 62 miles (100 kilometers) to the north and south of the border—inclusive of the El Paso Paso del Norte (PDN) Port of Entry border region located between El Paso and Ciudad Juárez.

Dr. Vazquez provided the example of the [Binational Air Quality Fund](#) (AQF), a project sponsored by EPA and the Texas Commission on Environmental Quality (TCEQ) in which U.S. federal funds support studies based in Mexico that are relevant to both countries. Dr. Vazquez noted that migrant populations located at the Mexican side of the border are exposed to dangerous environmental pollution, which can result in health effects that can persist for generations. To gather information about possible exposures, AQF supports the collection of data (e.g., fine particulate matter 2.5 [PM_{2.5}]) from sensors deployed in multiple stations located in the El Paso PDN Port of Entry region. Dr. Vazquez shared average PM_{2.5} readings from March 2022 through February 2023, plotted as a heat map, with the highest readings (>9.9 micrograms per cubic meter) located directly south of Ciudad Juárez.

The [Educación al Poniente de Ciudad Juárez](#) (Education West of Ciudad Juárez) project is sponsored by NADBank and aims to increase awareness of the public health effects associated with exposure to high levels of ozone and PM_{2.5} in the El Paso PDN Port of Entry region. Low-cost sensors will be used to assess PM_{2.5} and ozone concentrations at a school located in the western part of Ciudad Juárez. The project team will educate residents about the public health impact of poor air quality and alternative activities or precautions to apply when air quality standards are exceeded. Displays will be installed in the community center to display real-time data collected by sensors and provide information on air quality.

Question and Answer Period

Mr. Robert Janecka (TCEQ), GAC member, commented on his hope that the AQF project can be replicated in other environmental media (e.g., water, soil). He shared his surprise at the negative reaction from a local community that was elicited by donations from private industry to environmental projects in the El Paso PDN Port of Entry region. Mr. Janecka requested suggestions about how to facilitate private–public partnerships in a way that is supported by and inclusive of local communities.

Mr. Taillant commented that Dr. Vazquez shared important examples related to the links between air quality, EJ and right-to-know laws. Providing actionable information is critical in the case of many contaminants that are not detectable by local communities.

In response to a question from Ms. Brock about monitoring the public health impacts of elevated PM_{2.5} levels, Dr. Vazquez answered that published studies conducted in Mexico show a direct correlation between traffic emissions, PM_{2.5} levels and the incidences of acute and chronic respiratory conditions in children. Ms. Brock commented that EPA has known for years about the connection between health effects associated with elevated PM_{2.5} levels and diesel gas, in particular. She added that she would share a relevant study with the meeting participants via Mr. Carrillo.

In response to a question from Ms. Brock, Dr. Vazquez explained that the AQF monitoring system is being designed on a web platform that will be connected to Ciudad Juárez’s municipal website and amenable to the development of a mobile alert network.

In response to a question from Dr. Santiago about the existence of a tool (similar to EPA’s [EJScreen](#)) that combines and maps EJ data from Mexico, Dr. Vazquez answered that he was not aware of such a tool and added that this critical information should be collected and disseminated.

NADBank Overview and Lessons Learned

Calixto Mateos-Hanel, Ph.D., Managing Director, NADBank

Dr. Mateos-Hanel provided an overview of the U.S.–Mexico border region, which is inhabited by more than 26 million people, approximately 60 percent of whom belong to Hispanic populations. Despite lucrative trade between the two countries (up from \$173 billion in 1994 to \$664 billion in 2020), many border residents live in poverty and lack basic infrastructure. Dr. Mateos-Hanel explained that the NADBank—a bilateral financial institution established in 1994 and funded by the governments of Mexico and the United States—supports the development and implementation of projects that protect or enhance the environment in both countries along the border (as defined in the La Paz Agreement). The NADBank is overseen by a board of directors consisting of five members from the United States (the EPA Administrator, U.S. Secretary of State, U.S. Secretary of Treasury, and two U.S. border state representatives) and five from Mexico (Secretaria de Medio Ambiente y Recursos Naturales [Secretary of the Environment and Natural Resources], Secretario de Hacienda y Crédito Público [Secretary of Finance and Public Credit], Secretario de Relaciones Exteriores [Secretary of Foreign Relations], and two Mexican border state representatives).

Dr. Mateos-Hanel outlined the NADBank’s developmental strategy, which covers projects related to air quality, solid waste, sustainable cities, sustainable energy, sustainable production and water. The NADBank supports these efforts via loans, grants (e.g., EPA-funded Border Environment Infrastructure Fund [BEIF], NADBank-funded Community Assistance Program, Border 2025 Program administration), and technical assistance. Dr. Mateos-Hanel described the 137 BEIF grants (122 completed and 15 in progress) that have been administered by the NADBank. The grants have been equally distributed between Mexico and the United States. These funds have supported projects benefiting 9 million people, including first-time sewer service for approximately 900,000 households and first-time clean drinking water service for more than 70,000 households.

Since 1994, 294 projects have been supported by a total investment of \$10.8 billion, \$3.6 billion of which was contracted through NADBank (\$2.8 billion in loans and \$0.8 billion in grants). Historically, water and air quality have been the organization’s highest priorities, and the majority of funds have supported projects in these sectors. Since 2012, the NADBank has increased its focus on clean energy and funded 40 projects in this sector. Overall, the NADBank is estimated to have improved the lives of more than 12 million people benefiting from water projects in 118 communities; more than 10 million people benefiting from air quality projects in 48 communities; and more than 3 million people benefiting from solid waste management projects in 40 communities.

Dr. Mateos-Hanel emphasized that, despite accounting for a fraction of the organization’s costs, technical assistance—which fortifies the sustainability of projects; builds the institutional capacity of border communities; and helps form strong, collaborative relationships among multiple key partners—has been foundational for successful development and implementation of infrastructure projects at the border and a critical component of the NADBank’s success.

Question and Answer Period

Mr. Erich A. Morales (El Paso County Attorney’s Office), GAC member, commented that he has observed how fundamental the provision of NADBank-funded water services has been to the improvement of the health and quality of life of underserved communities along the border.

Mr. Taillant noted that the importance of financial support for environmental and climate-related projects was emphasized at the Sharm el-Sheikh Climate Change Conference (or COP 27) in November 2022. Mr. Janecka agreed and thanked Dr. Mateos-Hanel and the NADBank for supporting the AQF and similar projects. Such an organization—with meaningful ties to nongovernmental organizations (NGOs), government agencies and local communities in both countries—was able to nurture creative and sustainable environmental solutions while neutralizing possible tensions among various partners and collaborators.

Dr. Kilungo commented that she recently completed a study showing that water delivered by pipas (trucks) to people living in colonias lacking water infrastructure does not meet quality standards required to protect human health.

Mr. Luis E. Ramirez Thomas (Ramirez Advisors Inter-National, LLC), NAC member, mentioned that a proposal for a technical assistance grant for the deployment of electric trucks at the border currently is being evaluated by the NADBank. He explained that the project will monitor the costs and savings associated with the operation, maintenance, and fueling of the electric vehicles (EVs), with the hope of educating industry partners on the benefits of clean energy (i.e., a significant upfront investment in EVs might result in long-term cost savings). Private companies have indicated that they are willing to participate in this pilot program. Dr. Mateos-Hanel agreed that the private sector will adopt new

technologies only when they are profitable. Mr. Ramirez Thomas described unique challenges associated with EV trucks at the border. Dr. Santiago commented that she has been involved in a project to test dynamic wireless EV-charging technology at the Utah Inland Port in Salt Lake City, Utah, that is being coordinated by the [Advancing Sustainability through Powered Infrastructure for Roadway Electrification \(or ASPIRE\) National Science Foundation Generation 4 Engineering Research Center](#).

Ms. Brock commented that EV fire trucks—first deployed by the Los Angeles Fire Department in 2022—are associated with similar challenges to those faced by EV trucks at border crossings (e.g., requirements for idling). She noted that some EV firetruck models are equipped with a backup diesel motor for use in emergencies.

Lessons Learned From EPA’s Work With Communities

Surabhi Shah, Senior Policy Advisor, Office of the Administrator, EPA

Ms. Surabhi Shah thanked the meeting organizers and presented on the charge of identifying ways to empower communities to address climate adaptation challenges. In addition to its research and regulatory activities, EPA has a 50-year history of community work from which to glean lessons and best practices. EPA’s work with communities is a result of partnerships with all levels of government and all sectors and is a core function of the Agency’s mission to protect human health and the environment. Ms. Shah listed three principles of community work and shared examples related to each:

- **Community-Driven.** *Community work must respect and support the community’s voice, priorities, leadership and knowledge; build capacity; and ensure meaningful opportunities for the inclusion of all community voices, particularly vulnerable and underserved populations.*

Respecting and supporting the community’s voice might involve paying organizations to represent their communities at EPA meetings and events. Ms. Shah described efforts by her former office, the Office of Community Revitalization in EPA’s Office of Policy, to ensure that half the ARPA funds that it received were distributed to CBOs.

- **Coordinated and Collaborative.** *Community work must be coordinated across EPA to accomplish the Agency’s mission and involve collaborations with all relevant federal, tribal, state, local, territorial, insular area and NGO partners.*

Coordinated and collaborative community work involves responding to advice from the community. In response to criticism from the National Environmental Justice Advisory Council—which labeled EPA’s practice of requiring certain community organizations to continuously provide feedback “extractive”—EPA improved coordination with the Agency to enable briefings on prior work that spare communities the inconvenience of arduous and repetitive rounds of meetings. Additionally, coordination ensures that all relevant partners are enthusiastic about achieving common goals, increasing the likelihood of success and benefits for all. For example, the Urban Waters Federal Partnership—which was founded by Ms. Shah and an interagency team led by EPA and other federal departments—reconnects urban communities with their waterways by improving coordination among federal agencies and collaborating with community-led revitalization efforts to improve water systems across the country. Since being launched by EPA in 2011, this partnership program has lasted through three presidential administrations and grown to include 15 federal agencies and more than 28 NGO partners in 20 partnership locations.

- **Community of Practice.** *Community work must develop or enhance effective systems and structures to evaluate and learn from successes, communicate best practices to all relevant partners and expand EPA's capacity for achieving environmental and public health goals.*

When recommendations ultimately are gathered, they should be shared formally and informally with all partners to develop a community of practice. For example, EPA has prioritized the sharing of proposals and recommendations with groups that were interviewed regarding their development.

Ms. Shah recommended that these principles be translated into three questions:

1. Whose voice is not present, despite needing to be heard?
2. What are the community's priorities?
3. How can we start the necessary work given the community priorities and prior efforts in this area?

Question and Answer Period

Dr. Perez-Lugo thanked Ms. Shah for her candor about historical mistakes and oversights and asked how these issues are being addressed by EPA. Ms. Shah listed several efforts in this area, including the implementation of systems and structures for EPA rulemaking. She provided the example of the Community Work Network, which meets monthly to exchange knowledge about challenges and lessons learned. Additionally, the principles of community work have been integrated into EPA's current [Strategic Plan](#), codifying them as part of the expectations of the Agency.

Dr. Lybecker commented that different populations perceive time differently and that groups should be engaged within their own timelines. Ms. Shah responded that cultural perception of time is an underexamined issue. Academic literature on the subject is available but, as a practical matter, the issue amounts to a question of building trustworthy relationships. Regardless of culture, putting time and effort into building relationships increases the likelihood that engagement will be met with a positive response.

Ms. Shah asked the meeting participants to describe how they apply the principles of community work in their efforts:

- Dr. Kilungo commented that all her efforts involve community work and are infused with the three principles. For example, her group is able to compensate community members within typical grant structures by hiring community health workers. Ms. Shah recalled conversations with EJ community partners in Atlanta about their not receiving compensation from EPA in exchange for their significant efforts. These discussions resulted in changes to EPA grant evaluations to incentivize the inclusion of community work.
- Dr. Vincent R. Nathan (Center for Houston's Future), NAC member, emphasized that community groups must be included early in the development of projects. He encouraged others to involve community members in technical aspects of EPA programs and empower them as active meeting participants.
- Ms. Sally Ann Gonzales (Arizona State Senate), GAC member, expressed a message of caution based on her experience with a Comprehensive Environmental Response, Compensation, and Liability Act (or Superfund) site in her district that has existed for 20 years. Ms. Gonzales noted that local community members have not been involved in the process of remediating the site. Ms. Shah agreed that this is an issue and pointed out that different groups of local community partners often will have varying priorities (e.g., unhoused people, homeowners, mobile homeowners and renters all have different perspectives).

- Dr. Antonio A. Rene (Texas A&M University School of Public Health), NAC member, described community engagement efforts from an academic perspective. In his experience, local community members have valuable insights and should be included even if they are not involved in CBOs. He added that contact must be maintained with communities throughout the lifetime of a project.

Mr. Leonard Drago (Arizona Department of Environmental Quality), GAC member, commented that the new director of his agency is interested in increasing engagement with local communities. He thanked Ms. Shah for the helpful information and expressed interest in having her speak to his organization.

In response to a question about her definition of “community groups,” Dr. Shah explained that this question had been carefully considered when developing previous funding opportunity announcements, and she would be happy to forward EPA’s definition of CBOs to the group.

Public Comment Period

Dr. Santiago described her professional experience in the area of equity and access to safe drinking water. She provided recommendations for community engagement, including applying interdisciplinary approaches, using “peace engineers” to mitigate conflict, emphasizing mutual benefits (particularly those related to education and information sharing) and helping communities in their efforts to organize. She added that community engagement efforts operate at the speed of trust.

Committees Meet Separately to Discuss Charge Questions/Hot Topics Discussion

Mr. Carillo explained that the NAC and GAC would meet separately to deliberate on the EPA charge questions.

GAC Separate Meeting

Ms. Brock and the GAC members discussed contacting Mr. Carillo about sharing the presentations by Ms. Shah and Dr. Vazquez.

Charge Questions Discussion

Ms. Brock reminded the GAC members of Charge Question #1 and opened the discussion. The CEC requested the GAC’s advice regarding best practices, strategies, and tools that the CEC could develop to empower minority, low-income, tribal and Indigenous communities to address climate adaptation challenges. Ms. Brock pointed out that local government entities should become more involved in these efforts.

Ms. Gonzales commented that EPA should speak more directly to Indigenous communities because communities often get excluded when information is not delivered to the right people. She cannot recall EPA’s inviting the Pascua Yaqui Tribe or the Tohono O’odham Nation to participate in community engagement projects in and around Tucson, Arizona. Ms. Gonzales added that community members had the opportunity to select representatives to be involved in remedial activities related to the Tucson Superfund site; however, only two people have served as representatives over a period of approximately 20 years, despite evolving priorities in the local community. Ms. Brock asked Ms. Gonzales for her thoughts on compensating CBOs and community members for their efforts. Ms. Gonzales agreed that such compensation would signify the value placed on communities’ time. In her experience, invitations often are extended to Indigenous groups at the last minute, making their participation seem like an afterthought.

Mr. Morales noted that both government agencies and the public require education for improved community engagement. The public needs to learn about the processes and procedures associated with public meetings and hearings; agencies must learn to actively listen to and clearly communicate with the public. For example, public notices are written in legalistic and formulaic language, which is not easily understood by the public.

Ms. Brock remarked on the message that low-income, tribal and Indigenous communities lack the capacity—because of the lack of ability or resources—to sustain programs after periods of grant support have ended. She asked for feedback from the group about how the CEC could help communities develop such abilities in a sustainable manner. Ms. Gonzales noted that tribes have increased their capacity to be engaged in environmental issues. She expressed frustration with the lack of awareness of the dangers of climate change and the lack of conservation efforts in her state. Ms. Brock recalled conversations with Mr. Austin Nunez (Tohono O’odham Nation) and Mr. Kelly C. Wright (Shoshone-Bannock Tribes), both GAC members, about the challenges tribal communities encountered when attempting to interpret analyses and updates related the Tucson Superfund site.

In response to a prompt from Ms. Brock, Mr. Janecka reminded the GAC members about how an investment from a petroleum company in an environmental project resulted in unanticipated opposition from community members in Texas. Mr. Janecka commented that Agency programs often are dismissed as efforts to “check boxes”—fulfilling minimal requirements rather than effecting true change—and recognized that he should consult with the opposing community members about their priorities as part of efforts to build trust.

Ms. Moore observed that engaging with community members about their priorities can be a major challenge. Narrowing the array of possible places, projects and priorities into a single actionable program can be daunting. Ms. Moore wondered whether the CEC could be a potential source of help for this challenge.

Ms. Brock reflected on her experience as a Public Information Officer (PIO) for a Superfund site, which brought her insight into public perceptions of government efforts and the famous quote by President Ronald Reagan: “The nine most terrifying words in the English language are: I’m from the Government, and I’m here to help.” She added that jargon used by federal and state agents was disagreeable to the public and that successful communication involved being honest and straightforward.

Mr. Janecka discussed recent emergency response incidents involving EPA and his agency. He has noticed increased expectations from EPA reflecting a strong interest in addressing community concerns in a timely fashion. He expressed a need for additional expertise and staff members at EPA and TCEQ to successfully translate government jargon into plain English and additional languages—especially during emergencies, when staff members are most depleted. Ms. Brock noted that Incident Command Systems used by public agencies to manage emergencies recommend designating a PIO to relay accessible information during emergency situations.

Mr. Drago stated that tribal liaisons are similarly overwhelmed and lack the capacity to engage with tribes as frequently as they should. Current efforts are focused on highest priority projects, but effective engagement will involve additional resources dedicated to listening and cultivating sustainable outcomes and relationships. Notably, his agency plans to hire another tribal liaison to build capacity for community engagement efforts. Ms. Brock suggested using roundtable discussions to ensure that all participants—tribal and governmental—have an equal opportunity to provide their perspective and ideas, as well as hiring people with contributory qualities for liaison positions.

Mr. Morales highlighted an outlook found across the political spectrum: that the government is no longer listening to the general public. He requested insight on addressing this sentiment.

Ms. Moore pointed out that listening sessions often identify public concerns that are beyond the scope of the participating organization and that few mechanisms exist to relay these concerns to agencies capable of addressing them.

Mr. Wright asserted that the biggest challenge facing government entities is the ability to understand the audiences being addressed and tailor their communications accordingly. Lack of tribal community support for EPA cleanup efforts is not surprising when those efforts historically have involved capping waste rather than removing it. He echoed comments from Ms. Gonzales regarding Superfund community coordinators, which have not been present in his region for the past decade.

Dr. June Weintraub (San Francisco Department of Public Health), GAC member, described efforts in San Francisco to provide staff members with training on trauma-informed care systems and approaches, which has led to improved communication and more positive interactions.

Ms. Brock cited sociological data linking excessive heat to increased violence and altered mental acuity and offered to share these studies with the group.

Ms. Brock noted that Charge Question #2—which solicits input on activities and best practices community leaders have implemented to increase engagement and overcome the challenges of implementing climate adaptation efforts—overlaps with the GAC’s discussion related to Charge Question #1.

Ms. Brock introduced Charge Question #3, which solicits input on how the United States can support the integration of ITEK policy into the CEC’s climate initiatives in a manner that will honor tribal sovereignty.

Ms. Gonzales expressed appreciation to the CEC for incorporating ITEK more prominently into its structure but added that the TEKEG alone could not provide the CEC with sufficient guidance. Three TEKEG members from each country cannot represent the breadth and depth of ITEK from Canada, Mexico and the United States; additional expertise will be necessary. Mr. Wright agreed with Ms. Gonzales. In response to a question from Ms. Brock about how these efforts could honor tribal sovereignty, Ms. Gonzales affirmed that government agencies and other entities would have to engage with tribes and be educated on ITEK and tribal priorities. She added that tribal sovereignty ensures that tribes are not bound by state laws unless they so choose. Involving tribes as equal partners increases the likelihood that these efforts will be codified by the tribes.

Mr. Nunez agreed with Ms. Gonzales and Mr. Wright. He suggested that EPA implement requirements to engage with local tribes if they will be affected by a project.

The GAC agreed that in-person GAC meetings were preferable to hybrid options. The group reviewed a summary of their discussion and proposed next steps. Ms. Brock thanked the members for their support.

NAC Separate Meeting

Mr. Carey opened the NAC discussion. He noted that this time has been set aside to better understand environmental topics of interest relevant to members’ geographical regions or industries. He invited NAC members to present their hot topics, which could be considered in formulating recommendations for the advice letter.

Hot Topics Discussion

Climate Change: Extreme Heat, Texas, Gulf Coast. Dr. Rene highlighted that the WMO released its [Global Annual to Decadal Climate Update](#). The WMO reported that the next 5 years (2023 to 2027) are forecast to be the hottest on record for the planet. For Texas and the Gulf Coast, this translates to increased and worse storms, such as hurricanes. The water in the Gulf of Mexico and the Atlantic Ocean is already warm. If it continues to warm up, the storms will be worse. The probability of having an El Niño is 90 percent, but there is only a 50 percent chance of its having winds strong enough to quiet the storms predicted, including the hurricanes. Additionally, in the next 5 years, Texas could experience increased drought. Dr. Rene recounted a severe drought in College Station, Texas, in summer 2022, which likely will repeat in the next 5 years. This climate change will have an impact on agriculture, crops, and farmers, as well as water resources. He expressed concern that this 5-year hot streak will further affect both the rural areas and the inner cities (e.g., high-concrete-content temperatures). The issue is that the information is disseminated to the public late, reducing the time to provide populations the knowledge they will need to adapt to a short-term emergency. Last, the increased melting of glaciers will result in a rise in sea levels.

Climate Change: Water Quality, Houston, Texas. Dr. Nathan explained that the realities of climate change combined with rapid population growth and an increased resource demand pose complex challenges for communities, ecosystems and economic stability. Citing statistics from the University of Texas at Austin, Dr. Nathan noted that Texas' current growth rate is more than double that of the United States. It is expected that by 2050, the state's population will reach about 40 million, mostly clustered in urban areas, including Dallas, Fort Worth, Houston, San Antonio, and Austin. Limited resources, such as water and energy, will be in greater demand, and the critical infrastructure and diverse ecosystem will sustain additional stress. At the same time, the communities will face compounding threats from extreme heat, inland and coastal flooding, wildfires, drought, infectious disease and other hazards. Dr. Nathan emphasized that with the increase in the population, including the influx of people from other states, the Texas infrastructure sectors, particularly in Houston, are becoming critical, especially regarding water.

Dr. Nathan called attention to a 2012 study that concluded that water resources in Texas were adequate through 2040. The extraction of groundwater is outpacing the recharging of groundwater aquifers, however, resulting in massive flooding after weather events. In addition, the lakes, streams and reservoirs are becoming unbalanced. Although the water quality and resources are projected to be sufficient until 2040, future years are uncertain. The heat combined with drought conditions in this part of Texas is causing stress on communities, especially those that are underserved and economically disadvantaged. Both mental and physical health are affected. Dr. Nathan noted that Texas has much to address in the next few years.

Waste, Recycling and Circular Economy. Ms. Susan Robinson (Waste Management, Inc.), NAC member, noted new legislation in four states that reaches the local level and affects a change in recycling. This change removes the financial burden from local governments and diverts it to the producers. For example, in the public-private sector, this change will shift the funding for recycling programs to the private-sector producers, which then will allow increased recycling with reduced burden on the use of virgin resources. The laws passed include provisions for responsible recycling (the labor) and equitable recycling (the laws and recycling services). Ms. Robinson commented that this new legislation over the last 2 years has been impactful in the local communities and aligns with the environmental topics previously discussed in today's meeting.

Transportation and Trade Impacts, Southwest Detroit. Ms. Sagovac reminded the members that since the North American Free Trade Agreement passed, no planning process has been in place for transportation movements through communities. The recent rail catastrophe in East Palestine, Ohio, is

relevant to this discussion because Michigan blocked that shipment of hazardous waste from coming into the state. Within a short period of time of the Ohio incident, a derailment occurred in Michigan. Sources reported that of 133 train accidents in 2022, 14 were derailments in Michigan. The CBC and Michigan have been calling for, and grassroots organizations have been working to establish, emergency preparedness and planning for responding to transportation movement and facilitating dialogue with industries. Ms. Sagovac recalled the climate-related polar vortex incident at the Marathon Petroleum Corporation's Detroit refinery that left the plant scrambling to recover and residents uninformed and alarmed. These incidents highlight the need to seek help in convening industries into an emergency planning and preparedness process to develop a regional transportation plan. Who the responsible party will be remains an unanswered question. Activists, who are Michigan residents, have fought for and won local policies, such as the anti-idling, fugitive dust and noise ordinances. However, none of these laws are being enforced. The realization is that EJ effects are occurring that could be prevented with enforcement of the existing laws. An idea being discussed in Michigan is to convene local, state and federal entities in an EJ review roundtable to assess policies to better deliver EJ results.

Reduction of Greenhouse Gas Emissions: Electrification of Vehicles. Ms. Erica Ocampo (The Metals Company), NAC member, reported that the Inflation Reduction Act of 2022 is investing in the United States' electrification of vehicles to reduce greenhouse gas emissions. The monopoly of the supply chain of critical metals to manufacture these vehicles remains in China. Investment in the facilities to produce batteries for these vehicles in the United States is not sufficient. In addition, no known investments in the upstream value chain exist to supply the materials to U.S.-based plants. Ms. Ocampo underscored that vehicle electrification benefits climate mitigation and adaptation plans and that the Americas are in a precarious position for implementing such plans.

Decarbonizing the Electric Grid. Dr. Perez-Lugo explained that although interest has increased in decarbonization of the electric grid and the adoption of renewables, these renewables have been adding to the amount of electricity consumed rather than replacing fossil fuels. Dr. Perez-Lugo noted the need to address and identify the fossil fuels being used to generate electricity and replace them with renewable-energy technologies.

Environmental Public Health at the Borders. Dr. Dyjack called attention to the migration of individuals from Central and South America, Cuba and other places that is impacting the border areas. These deleterious effects are observed in sanitation, hygiene, ecological degradation, human safety (e.g., drownings) and increased use of temporary shelters. These complex conditions are dynamic and have been ongoing but are extreme. Other areas with high levels of migrations (e.g., Argentina) also experience increased interest rates to control inflation. Dr. Dyjack noted that similar trends are being observed in Texas and Florida that have impacts on environmental public health.

Clean Drinking Water. Dr. Lybecker reported that water levels in the western half of the United States, including the Great Salt Lake, have been drastically reduced, which presents both air quality and water availability issues. The large influx of snow is mitigating some of these effects but not in all areas. The greater concern for EPA is the Colorado River, for which there soon could be an agreement among the bordering states regarding the future directions for addressing these issues. Mr. Carey noted similar issues affecting the Rio Grande and its bordering states.

Mr. Thomas explained that discussions on the possibility of desalinization of the Sea of Cortez in the Arizona–Sonora (Mexico) border region have been ongoing. Desalinated water meets the needs of both Sonora and Arizona, but questions about water treaties and the transfer of new water sources across the border remain. Mr. Thomas noted the need for clarity on how this will work in terms of the water augmentation projects, which are not a division of existing water resources. Binational discussions on policy to clarify the framework also are needed. Mr. Carey commented that the International Boundary

and Water Commission (IBWC, United States and Mexico) is addressing this issue. The IBWC U.S. Section and IBWC Mexico Section Directors are working collaboratively on this issue, as well. He will follow up with the directors to obtain any insight or input they might have on the water issue to contribute to the NAC's report to EPA.

Discussion. Ms. Sagovac asked whether any guidance has been provided on which alternative fuels to focus attention and for what purposes, as well as which are the greenest and how they relate to the transition to EVs. Mr. Thomas noted that the issue of alternative fuels remains an active discussion in the field. The challenge is that although some environmental opportunities exist, the distribution and access to available alternative fuels (e.g., hydrogen) are limited. Mr. Thomas and his collaborators are piloting a program to use EV trucks at the U.S.–Mexico border, providing access to fast-charging stations. Although discussions with hydrogen and electric truck manufacturers are in progress, he noted that the trend is toward EVs. Ms. Ocampo added that no market winner in terms of technologies has been declared, and no master plan has been developed. The use of hydrogen is being examined as an application for high-capacity trucks and the aviation industry. Vehicle electrification for regular automobiles involves different chemistries (e.g., Fischer–Tropsch Synthesis), and automobile manufacturers are still deciding their preferences.

Charge Questions Discussion

Mr. Carey noted the charge to identify ways to empower communities to address climate adaptation challenges. He opened the NAC discussion to Charge Question #1.

When asked whether the advice to the charge questions should focus on climate mitigation or adaptation, Dr. D'Anglada clarified that the charge questions include both climate adaptation/resilience and mitigation. She further explained that the first question addresses the need to assist communities in becoming more self-sustainable and increasing their capacity building. The main focus is on developing tools and resources (within the CEC structure) that would assist communities in these efforts.

Ms. Ocampo noted the need to scale any solutions that would be implemented across the three countries (Canada, Mexico and the United States) of diverse stakeholders. She highlighted the European Union's [Green Deal Going Local](#) on climate mitigation and/or adaptation methods as a model centralized research approach, connecting diverse communities to the resources.

Aligning with his previous comments, Dr. Nathan called attention to the University of Texas [Planet Texas 2050](#) program, which encompasses an interdisciplinary team to implement an 8-eight year plan to design solutions for enabling resilient communities to be better prepared for current and future climate challenges. The applications extend beyond the Texas region, and findings will be publicly shared. Further details can be accessed on the program's website.

Dr. Perez-Lugo expressed concern about the use of resilience and climate adaptation because they generally are concepts that refer to increasing the adaptive capacity of the community while reducing efforts at the state level. She encouraged not allowing the state to relegate its responsibility in creating the conditions for these communities that are having to adapt to climate change. She underscored that this should not be an excuse to not take other measures, such as investing and making reparations, to compensate for the fact that the decision-making processes are creating vulnerabilities that communities are being asked to overcome by themselves.

Dr. Rene commented that, from his perspective, what the general public, including community members, knows about climate adaptation, climate change and climate terminology is limited. Developing a method for educating members of the community about climate adaptation would be critical. Activities could include educational and/or training programs, all with the aim of fostering buy-in and community

participation in developing climate adaptation plans in a respective region. Dr. Rene submitted written detailed recommendations on Question #1 and will incorporate the major themes in the draft advice letter; Mr. Carey will share the recommendations with the NAC.

Ms. Sagovac noted community engagement efforts on emergency preparedness issues in her region with the Marathon Petroleum Corporation and grassroots organizations and suggested leveraging existing methods and structures, such as social media, door-to-door flyers, and public and educational service announcements.

Dr. Dyjack highlighted that the most trusted segment in any local community is the health care sector, including doctors and nurses. Two-thirds of American hospitals are nonprofit, highlighting their need to provide a community benefit within their routine operations. EPA could recommend that nonprofit hospitals become resources for local communities by using their community benefit investments to assist with climate adaptation. Other resources to consider include Federally Qualified Health Centers, the Supplemental Nutrition Assistance Program and local health departments.

Mr. Carey opened the NAC discussion of Charge Question #2.

Dr. Nathan described [SA \(San Antonio\) Climate Ready](#), 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. Dr. Nathan submitted written detailed recommendations on Question #2, which Mr. Carey will share with the NAC, and will incorporate the major themes in the draft advice letter.

Dr. Kilungo 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. Dr. Kilungo will provide website links to these various initiatives, which also are addressing EJ.

Dr. Perez-Lugo 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. Mr. Carey suggested creating a database of best practices.

Dr. Rene called attention to [weADAPT](#), composed of 80 organizations working on climate adaptation issues. This collaborative platform allows practitioners, researchers and policymakers to access high-quality information and share their experiences and lessons learned. In his report to the NAC, Dr. Rene highlighted examples of best practices, including devolving decision-making to the lowest appropriate level and addressing structural inequalities faced by women, youth, children, disabled people, displaced Indigenous peoples, and marginalized ethnic groups.

Dr. Lybecker 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. Dr. Nathan highlighted the importance of youth engagement in environmental issues.

Mr. Carey opened the NAC discussion of Charge Question #3. He expressed appreciation to Ms. Chischilly for advocating and providing the rationale that this question be included in the charge, and he acknowledged her leadership among the tribal communities.

Dr. D'Anglada explained that the intent of this question is to identify support the CEC would need from EPA to successfully implement the ITEK in federal policy in a way that builds trust with Indigenous communities and achieves mutually beneficial outcomes. EPA is in the process of implementing the principles of this policy across the Agency's programs and is working with the OSTP to establish an interagency working group to further execute this policy.

Dr. Rene identified consultation with Indigenous tribes as one way to implement this policy, which is the same as consulting with the community. He also noted other approaches, including integrating artificial intelligence into climate initiatives and ensuring tribal input regarding climate adaptation strategies and policies.

Other Topics

Mr. Carey moved the discussion to general comments. Dr. Rene recommended that the CEC and EPA, in their funding of university-led climate adaptation projects, encourage joint efforts among majority-based colleges and historically Black colleges or universities, predominantly Hispanic-serving institutions, predominantly Indigenous-serving institutions and universities with a significant percentage of minority and low-income students. The goal is to provide training for potential future climate change and climate adaptation professionals from these populations in an effort to increase their knowledge and awareness of these topics. Activities can include participation in forums, sponsored courses, seminars, and research, as well as training in cross-university initiatives, partnerships and collaborations with at-risk populations. Additionally, one or more CBOs and state or local agencies should play a significant role in university-led projects.

Mr. Carey informed the members that the Chairs, Vice-Chairs and Mr. Carrillo are working to enable convening the NAC/GAC at EPA headquarters for its first in-person meeting since the COVID-19 pandemic. He thanked the members for their support.

Summary and Next Steps

The Chairs thanked everyone for their hard work and requested that the NAC/GAC members complete the meeting evaluation.

The Chairs, with assistance from the Vice Chairs, will provide a summary of the accomplishments of this meeting to Mr. Carrillo within 2 to 3 weeks. The NAC and GAC will compile advice letters for EPA Administrator Regan, which are due by June 18, 2023. EPA staff will provide opening statements for the advice letters. Members were requested to send any additional comments to the Chairs for formulating the draft soon after the meeting.

Adjournment

Mr. Carrillo thanked the members for attending and for supporting EPA. The meeting was adjourned at 2:45 p.m. MDT.

Action Items

- ❖ Mr. Carillo will forward the meeting's presentation slides to the GAC and NAC members.
- ❖ Mr. Kasman will deliver materials on international efforts related to food loss and waste to Dr. Dyjack via Mr. Carrillo and Ms. Elle Chang.
- ❖ Mr. Kasman will contact Ms. Chischilly with more information about EPA efforts related to the joint OSTP/CEQ guidance on including ITEK in federal research and policy.
- ❖ Ms. Chischilly will contact Dr. Rincon and Mr. Taillant regarding further engagement related to the CEC's and EPA's ITEK-related activities.
- ❖ Ms. Brock will share studies on health effects associated with elevated PM_{2.5} levels with the meeting participants via Mr. Carrillo.
- ❖ Mr. Drago will contact Ms. Shah and invite her to speak to the Arizona Department of Environmental Quality.
- ❖ Ms. Shah will forward EPA's definition of CBOs to the meeting participants.
- ❖ Ms. Brock will share sociological data linking excessive heat to increased violence and altered mental acuity with the GAC.
- ❖ Ms. Brock will share her draft advice letter on ways to empower communities to address climate adaptation challenges with the GAC members for their comments.
- ❖ Mr. Carey will contact the IBWC U.S. Section and IBWC Section Directors for any updates on water issues affecting the Colorado River and the Rio Grande.
- ❖ Mr. Carey will share the written recommendations on the charge questions from Drs. Nathan and Rene with the NAC members.
- ❖ Mr. Carey will share his draft advice letter on ways to empower communities to address climate adaptation challenges with the NAC members for their comments.

Summary Certification


I, Marina M. Brock, Chair of the Governmental Advisory Committee, and I, Andrew P. Carey, Chair of the National Advisory Committee, certify that the meeting minutes for the date of May 18, 2023, as hereby detailed, contain a record of the persons present and give an accurate description of matters discussed and conclusions reached and copies of all reports received, issued or approved by the advisory committees. My signature date complies with the 90-day due date after each meeting required by the GSA Final Rule.



Marina M. Brock
Chair, GAC

7/24/2023

Date



Andrew P. Carey
Chair, NAC

7/21/2023

Date

Appendix A: Meeting Participants

NAC Members

Andrew P. Carey, Chair

Executive Director
U.S.–Mexico Border Philanthropy Partnership

Ann Marie Chischilly, Esq., Vice-Chair

Executive Director
Institute for Tribal Environmental Professionals
Northern Arizona University

David T. Dyjack, Dr.Ph., CIH

Executive Director and CEO
National Environmental Health Association

Aminata P. Kilungo, Ph.D.

Mel & Enid Zuckerman College of Public
Health
Department of the Health Promotion Sciences
The University of Arizona

Donna L. Lybecker, Ph.D.

Professor and Chair
Department of Political Science
Idaho State University

James Marston

Principal
Marston Sustainability Consulting

Vincent R. Nathan, Ph.D., M.P.H.

Consultant
Center for Houston’s Future

GAC Members

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Appendix B: Meeting Agenda



Official Meeting of the National and Governmental Advisory Committees to the U.S. Representative to the Commission for Environmental Cooperation **AGENDA**

Thursday, May 18, 2023

8:00 a.m. – 3:00 p.m. MDT (10 a.m. EDT, 9 a.m. CDT, 7 a.m. PDT)

511 E. San Antonio Ave.

El Paso, TX 79901

and Via Zoom Virtual Platform

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- 8:30 a.m. **Call to Order and Introductions**
Oscar Carrillo, Designated Federal Officer, EPA
- 8:35 a.m. **Opening Remarks**
Robbie Young-Mackall, Director, Federal Advisory Committee Management
Division, EPA
Carlos Rincon, Ph.D., Director, El Paso Border Office, Region 6, EPA
- 8:40 a.m. **Welcome and Overview of Agenda**
Andy Carey, Chair, National Advisory Committee
Marina Brock, Chair, Governmental Advisory Committee
- 8:50 a.m. **Update on U.S. Priorities and Guidance on the Charge**
Mark Kasman, Director, Office of International Affairs, Office of International and Tribal
Affairs, EPA
- 9:20 a.m. **CEC Updates on Operational Plan and EJ4 Climate Change Grants**
Jorge Daniel Taillant, Executive Director, CEC
- 9:50 a.m. **JPAC Report Out**
Octaviana Trujillo, Ph.D., Chair, JPAC
- 10:15 a.m. **Update on Regional Sustainability and Climate Adaptation Challenges**
Adrian Vazquez, Ph.D., Director, CECATEV, Universidad Autónoma de Ciudad Juárez
- 11:00 a.m. **NADBank Overview and Lessons Learned**
Calixto Mateos-Hanel, Ph.D., Managing Director, NADBank

- 11:00 a.m. **Lessons Learned From EPA’s Work With Communities**
Surabhi Shah, Senior Policy Advisor, Office of the Administrator, EPA
- 12:00 p.m. **Public Comment Period**
- 1:00 p.m. **Committees Meet Separately to Discuss Charge Questions/Hot Topics Discussion**
Andy Carey, Chair, National Advisory Committee
Marina Brock, Chair, Governmental Advisory Committee
- Question 1:** Identify best practices, strategies, and tools that the CEC could develop to empower minority, low-income, tribal, and Indigenous communities to address climate adaptation challenges.
- Question 2:** Provide examples of activities and best practices that community leaders have implemented to increase engagement and overcome the challenges of implementing climate adaptation efforts.; and
- Question 3:** Determine how the U.S. can support the implementation of the Indigenous Traditional Ecological Knowledge (ITEK) Policy into CEC’s climate initiatives in a way that will honor tribal sovereignty
- 2:30 p.m. **Summary and Next Steps**
Andy Carey, Chair, National Advisory Committee
Marina Brock, Chair, Governmental Advisory Committee
- 3:00 p.m. **Adjourn**

Appendix C: Charge Letter for May 18, 2023, NAC/GAC Meeting (April 28, 2023)

Advance Climate Adaptation

Charge: Identify Ways to Empower Communities to Address Climate Adaptation Challenges.

Background: In recent years, the CEC has developed several trilateral projects and initiatives to address climate-related impacts, including initiatives to:

1. Advance and strengthen the adaptive capacity to extreme weather events.
2. Integrate traditional ecological knowledge to build resilience in adaptive management plans.
3. Provide funding directly to vulnerable communities via grant programs to support efforts on preparedness for climate-related impacts.

At the 2022 Council Session in Merida, the CEC Council announced the development and implementation of a C\$1M Climate Adaptation Initiative informed by our previous CEC trilateral projects and initiatives.

On December 2022, EPA requested advice from the NAC and GAC on identifying the challenges and ways to engage with early warning systems for disaster preparedness and climate adaptation actions. As well as how to facilitate a broader, more inclusive, and more effective engagement of key sub-national actors in North America in shaping the CEC's climate adaptation initiative. When asked, among other things, on how to better understand the barriers and challenges of awareness of climate adaptation actions, the advisory members identified the communities' lack of trust due to significant misinformation and active disinformation campaigns that diminish community support and engagement. Among the recommendations provided by the advisory members to overcome this challenge is the crucial inclusion of community leaders in educational activities, focusing on the community's local needs, and identifying reliable communication channels to increase engagement. Another recommendation is bridging the cultural divide by facilitating expertise and knowledge sharing, as well as implementing Indigenous Traditional Ecological Knowledge (ITEK) initiatives in support of climate adaptation efforts.

As CEC continues working on climate adaptation initiatives, EPA recognizes the importance of addressing the challenges identified by the NAC and GAC that hinder meaningful community engagement needed to implement the solutions relevant to them and their communities to reduce the impact of climate change. Therefore, EPA seeks advice on effectively empowering the communities with opportunities and tools to address these challenges and enhance community adaptation to climate change.

Charge Questions: NAC/GAC Meeting

May 18th, 2023

Charge: Identify Ways to Empower Communities to Address Climate Adaptation Challenges

The U.S. seeks advice from the NAC/GAC on:

- 1. Identifying best practices, strategies, and tools the CEC could develop to empower minority, low-income, tribal, and indigenous communities to address climate adaptation challenges?*
- 2. Providing examples of activities and best practices community leaders have implemented to increase engagement and overcome the challenges of implementing climate adaptation efforts.*
- 3. How can the U.S. support the implementation of the Indigenous Traditional Ecological Knowledge (ITEK) Policy¹ into CEC's climate initiatives that will honor tribal sovereignty?*

Update on CEC Developments Since Last NAC/GAC Meeting on December 9, 2022

Climate adaptation continues to be a high priority for the three countries of North America. In November 2021, at the North American Leaders Summit (NALS), the CEC was given the mandate to develop a climate adaptation workplan for North America. In July 2022, the environment ministers of Canada, Mexico, and the United States met and reaffirmed the urgent need to tackle the devastating effects that climate change poses on the well-being of communities in North America. In 2023, the CEC will be launching an initiative to improve coordination of early warning systems for extreme events and ensure local authorities and communities can take appropriate actions based on their individual climate adaptation plans and processes.

Over the next two years, the CEC will continue supporting the sharing and understanding of climate adaptation, blue carbon and other critical habitat conservation and restoration solutions, including those informed by Indigenous and local knowledge.

In addition, the new CEC project Nature-based Solutions (NBS) to address Flooding in Coastal Cities will produce knowledge informed by multidisciplinary expertise to support the use of NBS by coastal communities vulnerable to flooding.

¹ [ITEK-Memo CEQ and OSTP](#).

Supplementary Information

CEC Resources

- [UNFCC COP27 Climate Adaptation Brochure](#)
- [CEC's 2022 Operational Plan and Budget](#)
- [EJ4 Climate Change 2023 Grants Recipients](#)

EPA Resources

- [EPA's Climate Adaptation Resources](#)
- [EPA's Climate Change Resources](#)
- [EPA's Environmental Justice Resources](#)

Other Tribal Resources

- [Guidelines for TEK and Climate Change](#)
- [The Status of Tribes & Climate Change Report, 2021 \(ITEP\)](#)