

MEMORY OF THE WORK DONE

September 27 and 28, 2022



CONTENT

PANEL 1. GOVERNMENTAL INITIATIVES TO IMPROVE AIR QUALITY IN MEXICALI, BAJA CALIFORNIA	1
Panelist 1. Raúl Tovar, Ministry of Environment and Natural Resources	1
Panelist 2. Leonardo Esparza, Director of Environmental Management of the Seretariat of Environment and Sustainable Development of Baja California	2
Panelist 3. Manuel Zamora, Director of Environmental Protection of the XXIV Mexicali City Council	3
Panelist 4. Diego Echeverría, Deputy of the XXIV Legislature of the State of Baja California and Chairman of the Legislative Commission on the Environment	4
<i>Q&A session</i>	4
PANEL 2. LEGAL FRAMEWORK FOR AGRICULTURAL BURNING AND FUTURE PERSPECTIVES	5
Panelist 1. Thomas Brinkerhoff	5
Panelist 2. Óscar Romo, Módulo de Riego No 19 A.C	5
<i>Q&A session</i>	6
PANEL 3. SUCCESSFUL AIR QUALITY PROJECTS: CERCA	6
Panelist 1. Jackeline Valenzuela, CERCA	6
<i>Q&A session</i>	8
PANEL 4. LOCAL INITIATIVES BY ORGANIZED CIVIL SOCIETY TO IMPROVE AIR QUALITY	8
Panelist 1. Astrid Calderas, Contaminación y Salud	8
Panelist 2. Luis Olmedo, Comité Cívico Valle Imperial	8
Panelist 3. Ramón González, Todos Somos Mexicali	9
Panelist 4. Alberto Mexia, Fundación para la Investigación de la Calidad del Aire A.C. (Redspira)	10
<i>Q&A session</i>	10
PANEL 5. BACKGROUND OF THE BINATIONAL ROUNDTABLE - AQTF	10
Panelist 1. Reyes Romero, Imperial County Air Pollution Control District	10
Panelist 2. Margarito Quintero, Universidad Politécnica de Baja California	11
<i>Q&A session</i>	12
PANEL 6. CURRENT AND FUTURE OUTLOOK OF THE NATIONAL WORKING TABLE - AQTF	12
Panelist 1. Belén León, Imperial County Air Pollution Control District	12
Panelist 2. Chanell Fletcher, California Air Resources Board	13

Panelist 3. Ben Machol, U.S. Environmental Protection Agency	14
Panelist 4. Leonardo Esparza, Ministry of Environment and Sustainable Development of Baja California	14
Panelist 5. Tarcisio Navarrete Montes de Oca, Ministry of Foreign Affairs	15
<i>Q&A session</i>	15
PANEL 7. ISSUES RELATED TO AIR QUALITY	16
Panelist 1. Myriam Serra, Fundación Hélice A.C.	16
Panelist 2. Juan Francisco Garza, Director of Public Services of the XXIV Municipality of Mexicali	17
Panelist 3. Denahí Valdez, Laboratorio de Invención para la Ciudad A.C (LABICI)	17
Panelist 4. Fernando Flores, ObserBC	18
<i>Q&A session</i>	18
PANEL 8. THE AIR QUALITY PROBLEM FROM A COMMUNICATION PERSPECTIVE	18
Panelist 1. Armando Lemus, La Crónica	18
Panelist 2. Erika Gallego, Canal 66	19
Panelist 3. Yerson Martínez, La Frontera	19
Panelist 4. Jorge Heras, Canal 4 Televisa	19
<i>Q&A session</i>	20
PANEL 9. RESEARCH ON AIR QUALITY AND HEALTH	20
Panelist 1. Astrid Schillman, INSP	20
Panelist 2. Elena Parra, INSP	21
Panelist 4. Óscar Efrén, member of the Ministry of Health of the State of Baja California	21
<i>Q&A session</i>	22
PANEL 10. ACTIONS BY INDUSTRY TO IMPROVE AIR QUALITY	22
Panelist 1. Pablo Chee, Mexican Employers' Confederation (COPARMEX) Mexicali	22
Panelist 2. León Felipe, Index Mexicali	23
Panelist 3. Alberto Sánchez Torres, CANACINTRA Mexicali	23
<i>Q&A session</i>	23
CLOSURE	23

PANEL 1. GOVERNMENTAL INITIATIVES TO IMPROVE AIR QUALITY IN MEXICALI, BAJA CALIFORNIA

Participants: *Isadora Clark (moderator), Universidad de Baja California; Raúl Tovar, Ministry of Environment and Natural Resources, Leonardo Esparza, Director of Environmental Management of the Ministry of Environment and Sustainable Development of Baja California, Manuel Zamora, Director of Environmental Protection of the XXIV Mexicali City Council, and Diego Echeverría, Deputy of the XXIV Legislature of the State of Baja California and Chairman of the Legislative Commission on the Environment.*

Panelist 1. Raúl Tovar, Ministry of Environment and Natural Resources

Air pollution is the greatest environmental risk to human health and is responsible for 7 million premature deaths worldwide. In this sense, the transboundary nature of air pollution underscores the need to assume responsibility for effective action by the government of Baja California, Mexico, and the Imperial Valley of California, United States, so there is a shared responsibility to act jointly on governmental initiatives to improve air quality in Mexicali, Baja California.

In view of this situation, the Ministry of Environment and Natural Resources (*SEMARNAT*) has for several years been a government agency dedicated to the regulation and supervision of companies' compliance with the environmental impact and land use frameworks in federal zones for different activities, as well as monitoring companies that generate, transport and store hazardous waste and emissions by companies under federal jurisdiction, such as the paper, glass, mining and metals industries. The application from the federal level is basically to review compliance with regulations that, although all human activity generates pollution, there would not be goods and services.

The most serious problem in the Imperial Valley and Mexicali region is the quality of the air and you can see it basically in the fact that the inhabitants live in a place where the environmental conditions do not help and there is a large amount of dust. Likewise, there are companies that generate particles and, as such, they are regulated in that sense, but the basin is shared with the Imperial Valley and the region is not immune to what is generated in Mexican territory and vice versa: the fence does not limit this type of pollution. What actions does *SEMARNAT* take as an institution to attend to the problem? For example, companies must give their evaluations regarding the generation of pollutants, either by emissions or solids, and comply with them. If they do not do so, it is up to the Federal Attorney's Office for Environmental Protection (*PROFEPA*) to apply the sanctions that may be warranted.

During the current administration and in recent years, several standards have been updated and standards that did not exist have been created for the monitoring and measurement of air quality, which helps to standardize the parameters at a national level. This represents an achievement, because before, there were different ways of monitoring and there was no way to compare them, then a standard for specific air quality monitoring was created and recently the standard for reporting the data generated in the air quality stations was created. In addition, all the other standards are being reviewed, the last ones that were published had to do with criteria pollutants and are the standards that establish the limits for ozone, particles, carbon dioxide and nitrogen dioxide.

These standards have been updated and we are looking to the future with more complex goals to be met and to restrict industries that generate emissions. One example is that there is a very interesting project, an agreement signed between *SEMARNAT* and the Ministry of Public Education, which establishes a series of events for elementary school students to generate an awareness in which both schools and students are invited to collaborate, starting with the return to school with a tree and motivating them to plant a tree and take care of it throughout their stay, and involving them in the holidays related to the environment.

Panelist 2. Leonardo Esparza, Director of Environmental Management of the Secretariat of Environment and Sustainable Development of Baja California

The most important policy to improve air quality in the state is the creation of the Ministry of Environment and Sustainable Development, which previously did not exist at the first level of management and was a sub-ministry within the Ministry of Economy, and environmental action was very much limited to a policy of economic development and limited the perspective of what was the priority with respect to the environment and economic development. Reversing this was the first step in the right direction. As of January 1, 2022, the effort and scrutiny of environmental issues began. This is how the current administration realized which part of the industry generates emissions and which part corresponds to the state.

Another problem that was detected after the creation of the Ministry is that there is an excess of environmental regulation. Therefore, one of the actions is a regulatory improvement program to improve the administrative part in such a way that it allows industry to comply with environmental regulations, which does not mean facilitating compliance with environmental norms, but facilitating the paperwork because non-compliance is due to the difficulty of the bureaucratic process. On the one hand, the law establishes an annual operating certificate and a single environmental license, both of which should be the two basic instruments to guide the regulation of emissions. So, the intention is to create a single license for the generators of emissions and an endorsement that will be the annual operation certificate. This will undoubtedly help to quantify and typify the emissions generated by industry, which is not the whole universe of emissions, but it is an important part.

In addition, when the administration started, 14 monitoring stations were delivered, but in reality only two stations were in operation, which is disappointing because strengthening the monitoring network has its origin in the beginnings of the national and transboundary effort to improve air quality. As of the date of the event, as an initiative and in accordance with the law, the government has dedicated itself to reviving the stations. Of the five stations that are generating information, two are in Mexicali and three in the city of Tijuana. This effort seeks to go further and not only to recover the monitoring network, but also to extend it to the rest of the institutions that collaborate in improving air quality.

It is important to mention that, at the time the Ministry was created, there was already a guide for air quality policies, which is *Proaire*. Then, one of the tasks was to establish the core committee of *Proaire*, which is the element with which the work on air quality began and many projects were initiated, such as strengthening the atmospheric monitoring network, as well as the mandatory vehicle verification. It is necessary to analyze this issue and submit it for consideration and obtain the necessary authorizations to be able to consider it. It is also necessary to address the issue of agricultural burning and create a new emissions inventory within the framework of the 2025

Binational Border Effort. Although the current inventory remains in effect until 2027, it is necessary to create a new one to evaluate public policies and make adjustments if necessary.

Panelist 3. Manuel Zamora, Director of Environmental Protection of the XXIV Mexicali City Council

Imperial Valley and Mexicali share the same atmospheric basin and the same water basin, in this sense, the basin is of two states, two states, but at the end of the day it is a single region that has a limit, but neither the air nor the water is interested in this, so we have to think together and that is why this type of conversation is of interest. In this complexity, it turns out that public policies are different but the problems are the same and the air comes from North to South and from East to West. And Mexicali burns garbage, but on the other side there is activity that also emits pollutants. As a municipal authority, the municipality of Mexicali is the first responsible before the citizens and also the instance that pressures the citizens to comply with the norms. The municipality regulates commerce and industry from an economic standpoint. *SEMARNAT* deals with high risk industry, the state with low risk, and we talk to low impact commerce, which is the largest sector: a total of 35,000 businesses and services ranging from a small business that sells tacos to a large restaurant and chains such as hotels.

Regulating this number of businesses has not been easy because of the cultural issue: a sector of Mexicali residents comply with the rules and regulations when they are on the U.S. side, but when they are in Mexico they do not like to comply, they do not like to obtain permits for anything and they do not like taxes, which is why the regulatory improvement that has been undertaken has been important because the number of businesses that comply has increased at the same time that the bureaucratic requirements have been lowered. In this sense, we have wanted to help the citizens to do things right and this has increased the number of licenses and, for example, people are installing ovens in their businesses and in restaurants they are installing filters. However, there are areas and guilds that are very difficult, such as in the cotton sector, where dentists do not comply with the sanitary waste management regulations and people burn garbage and do not dispose of it. Despite this, there are very important actions such as paving a street, which eliminates dust; better transportation eliminates carbon and a transfer center reduces waste. Speaking of waste, in this joint effort, Mexicali has been preparing for the coming months; November, December and January are critical months and last year there were 96 alerts of bad air quality, four of these alerts were extremely serious and the problem is always latent.

To address the situation, Mexicali has a monitoring station and its annual maintenance costs about 800 thousand. At the same time, there is a network of atmospheric sensors, joining efforts with the association Redspira. An important point is that the topic of measurement must be unified as a basic instrument for the basin. On the other hand, all the agencies have met once a week to see all the actions and ensure that they are aimed at mitigating emissions. One of these actions is that, on the subject of events, the state did not fire rockets during the celebration of September 15.

Panelist 4. Diego Echeverría, Deputy of the XXIV Legislature of the State of Baja California and Chairman of the Legislative Commission on the Environment

In legislative matters, the Baja California Congress presented the initiative of the Environmental Responsibility Law of the State of Baja California, which addresses the problem of the lack of a law to sanction those who pollute. Up to this moment, the sanctions are based on the Waste Law and other laws. On the subject of transfer centers, a law was proposed for the state to build special handling transfer centers, which is related to air quality because there are vacant lots and abandoned houses that are being used as clandestine dumps and there are couches, mattresses and refrigerators that are not taken away by the truck, and in most cases are burned or contaminate the soil.

We are also working with the Ministry of the Environment and Sustainable Development to establish certified workshops to measure vehicle emissions and the proceeds will be used to reactivate the monitoring stations that are in operation. The creation of the Environmental Protection Attorney's Office has also been promoted. Finally, on the subject of agricultural burning, there is an initiative that has already been presented and has the favorable opinion of the Legal Counsel of the Congress and the state government and will soon be discussed in committee for a vote in the plenary.

This issue is very important because Mexicali shares the Mexicali Valley and the Imperial Valley, and last year there were 170 fires in that region, of which 83 were in Mexicali and 89 in the Imperial Valley. Therefore, agricultural burning must be regulated and before reaching the issue of prohibition, the current issue of agricultural burning must be reviewed, because any farmer can carry out this activity in his/her field without checking the air quality and can light several plots of land at the same time. Therefore, a regulation is being proposed, where the municipal authority issues the permits, notifies the fire department, the neighbors and there must be someone checking from the moment the fire is lit until the last flame.

Q&A session

During the questions and answers session, the management of stone material was discussed and it was reported that there is a permanent task performed by the state, that is to visit all those sites susceptible to the generation of intensive emissions.

Also, the issue of the possibility of a verification program was discussed and it was asked if there is a date for its entry into operation. In response, the authorities informed that it is in a legal process and the new scheme is being designed.

The speakers were also questioned about actions to eradicate agricultural and garbage burning, to which they responded that irregular garbage dumps have been cleaned up and that more transfer centers for special handling waste will be built.

There were also questions about a plan to reactivate the stations that are currently out of operation and how possible is the direct download of the data generated as is done in Valle Imperial. In response, it was said that the certification of technological equipment is a complex and costly process. It was also informed that work is being done on open data to make it available to the public.

PANEL 2. LEGAL FRAMEWORK FOR AGRICULTURAL BURNING AND FUTURE PERSPECTIVES

Participants: Óscar Romo (moderator); Arturo Jiménez Trejo, Módulo de Riego No 19 A.C.; and Thomas Brinkerhoff, Imperial County Air Pollution Control District

Panelist 1. Thomas Brinkerhoff

For farmers who carry out burns in Imperial County, the first step is to become familiar with the rule on agricultural burning in Imperial County –rule 701– that governs all the requirements for a business or individual who conducts agricultural burning. Then, apply to agricultural burning permits, once the county reviews the application, then they issue that permit. After that point, the farmer or agriculture business calls the county to explain about the situation of the fields they have and want to burn, the county registers these fields in a list of preapproved fields. The inspector on call evaluates every day the conditions to burn and the county determines if it is a burning day or not; the information is posted on the county’s website. The county contacts farmers and businesses from the list, and coordinates the burnings of the fields, reminding them of the safety protocols and procedures. There are enhanced requirements for fields that are closed to sensitive areas such as schools and hospitals, and these are classified as special agricultural burns for which the county performs test burns with an inspector in charge, to identify the dispersion and lower the impacts.

The county works with clients to educate them on rule 701 for agricultural burning.

For emergency situations, one of the things that individuals should do is contact 911 services so that the county can get to that fire, contain it and address it to limit the impact and the danger. And the county has also developed a complaint system to investigate illegal burns and determine the procedure to follow.

The main obstacle for Imperial County when it comes to burning is the lack of education or not having the right information in front of farmers and businesses; specially about rules and regulations for agricultural and residential burning. There is more of a desire in the agricultural industry to know the proper procedures to stay in compliance, and there is more awareness about air emissions as a result of burning, and how it impacts surrounding communities.

We have really pushed the educational factor at Imperial County, hosting workshops on different topics to reach a wide portion of the public and the industry, and sharing to the public the county’s rules, protocols and policies.

Panelist 2. Óscar Romo, Módulo de Riego No 19 A.C

The authorities and society have to work hard to achieve regularization of agricultural burning. In the previous presentation, some important concepts for its regulation were given and it is also necessary that the authorities have this interrelation to achieve an effective regulation of agricultural burning. This regulation must be carried out by the fire department, which must be given the authority to regulate this activity in due course. Regulation is very important because the hectares of wheat in the last agricultural cycles have been reduced from 85 thousand to 41 thousand and the percentage of contamination has also been reduced.

Therefore, a difficult situation prevails and institutional coordination is required so that the farmer can regularize his/her situation.

Q&A session

The attendees of the event and the moderator started a dynamic of questions, in which they asked how agricultural burning can be restricted and what type of pollutants are emitted as a result.

The speakers explained that multiple pollutants are emitted in agricultural burning, making it impossible to think that the residues can be controlled, especially fine particles smaller than 10 micrometers (PM 10), which are sources of allergies and carcinogens. Hence the importance of implementing the regulation for this activity. It is necessary to follow rules that can cushion the effects of these emissions, for example, there are agricultural burns that have to take place because they prevent pests and eventually high concentrations of weeds.

It was suggested that the most important issue is how to regulate the time in which the burns have to be carried out, as well as the conditions: winds of no more than 15 kilometers per hour and daytime hours to control this activity. It is necessary to build a protective fence so that the burning does not get out of control and to consider that the burning is going to have an effect, so we must try to minimize it as much as possible.

About the prohibition of agricultural burning, the panelist explained that some measures have been taken in Imperial County to further reduce the amount of burning that can happen every day in the agricultural industry, looking at the existing policies to tighten what is allowed each and every day. The county is currently reviewing these policies to modernize them. He emphasized the importance of educating the public about the regulation and the negative impacts of burning, as well as the complaint system to motivate compliance.

On the scheduling or allowance of agricultural burning hours in Imperial County, from 10 to 3, and the exposure of children/students in between these hours, the panelist explained that to lower the risks and impacts, the current policy specifies procedures for special burns in order to understand the dispersion on those sites and determine the proper schedule for the burnings.

Other measures taken to mitigate the impact to the public in Imperial County is the staggered scheduling of the burnings and in case of not getting the proper elevation (pressure and weather), the county cancels the burning for that day: establishing a no burn day.

PANEL 3. SUCCESSFUL AIR QUALITY PROJECTS: CERCA

Participants: *Carlos Bustamante (moderator), Fundación para la Investigación de la Calidad del Aire A.C. (Redspira); and Jackeline Valenzuela, Centro de Energía Renovable y Calidad Ambiental (CERCA)*

Panelist 1. Jackeline Valenzuela, CERCA

CERCA is an organization that has decided to undertake a great challenge, that of monitoring air quality. It is located in La Paz, Baja California, and has a regional impact. The project is based on an air quality monitoring system with citizen incidence in La Paz, which is a city of 300,000 inhabitants, has no industry, but in its sky there was a grayish stain. Five citizens began to ask what that stain was and what consequences it could have on the city and its health. Then, they began to invite citizens and others, and this is how CERCA was created in 2016 with the legal status of a civil society. The organization has three particular interests: the promotion and use of renewable energy; to influence

the improvement of air quality; and above all, to understand the relationship between health problems and air pollution.

CERCA is a non-profit organization, but very peculiarly it is a citizen environmental science center that generates data and implements technical projects. That is a characteristic that not all organizations have, it works through donations from citizens and also from the government. Its form of governance is a citizen council, which has been growing and is made up of academics, philanthropists and people affected by pollution.

The mission and vision is the energy transition towards sustainable sources in a context of increasing motorization that is linked to mobility and in which 43 percent of the pollutants in La Paz are produced by electricity generation, which is made with a very dirty fuel oil that is not used in other parts of the world. That is why CERCA's mission includes transforming the energy matrix and influencing the transformation of mobility, which requires inter-institutional collaboration.

The organization also performs data analysis as it is the first citizen network with a monitoring system. It also carries out community work and seeks to take this information to all sectors of the city. These projects are carried out both with the government and with international agencies. And other environmental parameters such as soil and water are also monitored, dissemination actions are carried out and environmental issues are promoted in the public agenda. Its relevance is national in scope: it belongs to the Citizen Air Quality Observatory and is the first organization to carry out an emissions inventory in collaboration with the University of Baja California. To carry out its mission and vision, there are three energy transition programs: Environmental Health, which is based on guaranteeing that the energy transition is carried out under public health parameters and hand in hand with society as a whole. The second program is the Impact on the 2030 Agenda, through its goals of ending poverty, health and well-being, climate action, undersea life, affordable and clean energy, sustainable cities and communities, and quality education and clean water. The last program is based on how to achieve change, for which we must first understand that not all pollutants are monitored, only criteria air pollutants that remain in the atmosphere at a respirable level.

The pollutants monitored are ozone, carbon dioxide, sulfur dioxide, mainly. To achieve this, a citizen science deployment was carried out: in 2018 this monitoring network was initiated with 16 sensors in La Paz and two in the municipality of Comundu. It seeks mainly to identify the days when concentrations exceed the allowable limits, and that is the way in which the information is presented to civil society. Non-compliance is also monitored in order to achieve incidence. On one hand, Pure Pure Air monitors have been used, which is a low-cost brain sensor monitoring station that monitors gases. After deploying this network, CERCA realized that it was also necessary to monitor sources, so it tracked the pollution generated from power plants through data from the Federal Electricity Commission. Consequently, it has been found that ozone has been increasing. After having this information, new methodologies were incorporated based on mobile monitoring, street-by-street and point-by-point spatial mapping of criteria air pollutants and greenhouse gases. With the help of the company Aclimate, since 2019, it has been possible to know the pollution and its concentrations point by point. This has helped to warn the community about risks and, based on this, to make decisions.

Q&A session

The attendees asked what barriers or lack of seriousness CERCA faced from decision makers when presenting themselves as citizen scientists. The speaker said that in technical issues there is always the prejudice that no one can do it, that only scientists in certain positions are capable, and there was no seriousness and it was not a priority for the authorities to address the problem.

Likewise, the speaker informed that it is important to create awareness in the population about the implications of poor air quality, for decision making. The speaker also said that CERCA's model can be replicated in other entities and regions such as the Valley of Mexico. She also mentioned that if CERCA had the necessary funds, the road to energy transition would begin.

PANEL 4. LOCAL INITIATIVES BY ORGANIZED CIVIL SOCIETY TO IMPROVE AIR QUALITY

Participants: *Andrés Rulas (moderator) Grupo Educativo 16 de Septiembre; Ramón González, Todos Somos Mexicali; Alberto Mexia, Fundación para la Investigación de la Calidad del Aire A.C. (Redspira); Luis Olmedo, Comité Cívico Valle Imperial; and Astrid Calderas, Contaminación y Salud*

Panelist 1. Astrid Calderas, Contaminación y Salud

Contaminación y Salud –Pollution and Health– started the first air quality monitoring network in Mexicali to efficiently measure environmental pollutants in real time. It is now known that there are excessive levels of particulate matter and samples of soil, food and children's teeth have been collected to see to what degree the pollutants reach the human body. A project was also undertaken so that, from an early age, children learn about the impact of pollution and how it impacts their loved ones and their health. One of the most important achievements of the organization, which was immediate, was to hear that after going to schools and sharing the platform to check the air quality in real time, people used it to protect themselves on days of higher concentrations, which also encouraged people's participation in the issue of air quality. In addition, it encouraged the creation and research of future environmental leaders, the environmental awareness of citizens, as well as the identification of the main sources and their impact on health.

From a previous study, the organization has found 17 toxic elements in the air. And other studies with preliminary results indicate that there are more than 40 toxic and radioactive elements. In addition, binational disease maps are being made; maps of chemical elements and toxic substances are being made; and this information is being collected for publication. However, the organization has also faced obstacles such as not being taken seriously by the authorities.

Panelist 2. Luis Olmedo, Comité Cívico Valle Imperial

Comité Cívico de Valle Imperial is an organization that began as an initiative of farm workers to help the people. In this sense, industries have contributed to polluting the air and water, so the committee has taken on the task of helping to remedy the environmental problems. The organization has had many achievements and many battles. For example, it has been able to obtain 2 million dollars from the National Institute of Health, which has been useful to access resources and to form a team with the knowledge that is needed. It has been able to create the IVANAIR.OR network. This network in the Imperial Valley and Mexicali area has 700 sensors for PM 2.5 and PM 10. In addition, this network

has been extended throughout the state of California. Institutional recognition has also been achieved since the government did not respect community science in the past. The organization has also worked with Assemblyman Eduardo Garcia to write legislation, AB1187, that attempted to ensure the institutionalization of community science within the government. Also, the governor of California issued AB617, that institutionalizes community monitoring and about \$100 million has been dedicated to this program, developing plans and monitoring to reduce toxic concentrations.

Among the challenges, the county of El Imperial did not participate in making a plan to reduce pollution. So, a demand was made for the government to do its part. In this situation, the most important obstacle is the government and the bureaucracy: the government thinks it knows everything and when it does not, it does not admit it. In this context, community scientists are important, and it is also important to work to place environmental leaders and environmental justice lawyers in decision-making positions.

Panelist 3. Ramón González, Todos Somos Mexicali

Todos Somos Mexicali was born 14 years ago as an umbrella to cover all activities to improve the life of the municipality. What motivated the community was to promote citizen participation and particular interaction on the border with the United States: the inhabitants of Mexicali who go to work in California respect the rules in the United States but when they return, they forget and begin to pollute the soil. So, the organization embarked on the path to find a way for citizens to collaborate. This has been difficult because there were more than five administrations in 14 years and in 2018 we managed to find the mayor in turn to reform the regulations and find a way for citizens to respect the rules, mainly those related to waste. Through motivating participation, the organization managed to get more than 40 thousand people to clean the city simultaneously. However, without the supervision of the authorities to monitor compliance with the rules, the road has been tiring because every three years, when a new government starts, it starts from scratch and you have to knock on the door of public officials to tell them what has been achieved in regulations. One of the modifications promoted by the organization is that all elements of the police corporation can fine those who pollute in flagrante and impose fines of up to 14 thousand pesos.

The greatest achievement of the organization has been to fulfill 14 years with the same principles, because the reforms are always against citizen participation. Despite this, the reform of the regulations was achieved, but currently the battle is to continue promoting the application of regulations because the authorities have not had the intention to do so because all parties are the same and have not supported the projects of the citizenry just because they belong to the citizenry.

For example, the organization is developing a green area of 3.5 hectares that used to be a garbage dump, and although it has not requested a single peso from the government, the government does not support the project and even hinders it. This project has also represented one of the great achievements that we are going to culminate and it is called "Your park", which will be an effort that will transcend administrations and is promoted by responsible citizens.

Another problem is that politicians pretend that the associations work out of pure love and unfortunately, we live in an eternal electoral process, so the citizens have to see that they are the promoters of change and that the government is not going to solve anything if the population does not push.

Panelist 4. Alberto Mexia, Fundación para la Investigación de la Calidad del Aire A.C. (Redspira)

The foundation emerged in 2018 in the face of a deficit of information available to citizens on air quality, so the organization has focused on the development of technologies and information systems. In this sense, it was given the task of creating a low-cost citizen sensor to execute one of the strategies, which was to generate a network in a collaborative manner. From the beginning, *Redspira* was able to establish collaboration to integrate the information from the regulatory stations to our platform and although we believe that it is little, it is very important to have this information to validate or to have a reference point against the low-cost sensors. So, a platform has been generated with an idea of solving an issue of accessibility or socialization of data based on our knowledge of the technology. When *Redspira* went public, the organization discovered that there were several areas of opportunity or important issues which are: boosting citizen participation through public reporting on the platform and one of our missions is that these citizen networks can be taken more seriously. *Redspira* has managed to establish contamination projects such as the one it is carrying out with the National Institute of Public Health. Also, thanks to the U.S. Environmental Protection Agency (EPA) supporting us in 2019, we managed to implement the air quality flag program in 90 schools and institutions, to inform people on air quality and raise a flag about the current situation.

The road for *Redspira* has been difficult because every day is a battle and sometimes officials represent a problem, so it is important to keep in mind the medium and long term goals to work based on them and not only on short-term goals and successes. In this sense, the organization seeks that Mexicali stops having the stigma of being the most polluted city. To this end, it has gone beyond borders and *Redspira* attended the creation of the first Latin American air quality network, through which it exchanged experiences with cities in Brazil, Chile and Peru. In October 2022, the organization also participated in an Environmental Defense Fund (EDF) event and, together with the UN, is planning a monitoring network for society in Latin America.

Redspira stands out in Latin America for being a citizen-based monitoring network and an example for the region.

Q&A session

The speakers agreed that a common struggle is for environmental justice, for which we have to work and have it within the objectives of the organizations. They also agreed that this idea is the backbone of all organizations, and that the authorities are the main obstacle on many occasions.

PANEL 5. BACKGROUND OF THE BINATIONAL ROUNDTABLE - AQTF

Participants: *Rene Acuña (moderator), Centro de Desarrollo Económico de Mexicali; Margarito Quintero, Universidad Politécnica de Baja California; and Reyes Romero, Imperial County Air Pollution Control District*

Panelist 1. Reyes Romero, Imperial County Air Pollution Control District

In the late 1990's, the district was formed by a group of young academics from San Diego State and through the efforts of members of the community of Mexicali. It was necessary to attract more members, so we began to invite people from the three governmental levels, and projects have been accomplished thanks to EPA funding. The main reason we decided to join this group is that the

Imperial Valley is a nonattainment region for PM10, PM2.5 and Ozone. In order to come into compliance, various projects have been put in place and it has been found that there is a strong impact of transportation on PM 2.5 pollutants in the Imperial Valley. There is not going to be a real solution if we do not work with Mexicali and the Imperial Valley.

The interest to work with Mexicali already existed, the big problem was PM10 pollution, they indicated a very large impact of PM10 coming from transportation, and both entities have sought to attack the problems of Ozone and PM10 at the binational table with projects such as the Street Paving Project (*PIPICA*), and in 2005 a large project and a scheme of work was made with the government, which was easy to implement because in Mexico there was already an air quality monitoring policy. Once this policy was in place, there was no need to knock on doors for participation and *Proaire* was a policy of environmental protection and human health. *Proaire* is an encyclopedia containing information on pollution and it was not very difficult to convince people and invite them to do something about air quality policies as what had been done in Mexico City.

The table has been around for about 25 years and it has been a complex period because it is not easy to convince or find funding. One of the ways we have found funding is with EPA and the state of California. There are several projects where EPA has provided funding, but also gives us guidelines, tells us what to do and how to measure results. Thanks to the funding, the Imperial Valley developed a web page with real time information and got the state to extend the community group to monitor the air in Mexicali with the placement of 50 low-cost monitors. A media campaign has also been undertaken to educate the Mexicali community on the impact of burning tires and other fuels.

Panelist 2. Margarito Quintero, Universidad Politécnica de Baja California

It was surprising that Mexicali was known as *polvópolis* –dust-city–, it is typical of the city to have dust storms and a Mexican magazine ranked Mexicali as the most polluted city in Mexico. There are myths that it is more polluted than Tehran, because it is a very polluted area full of thermoelectric power plants and dumps. But, basically, this qualification was incorrect because it was measuring an emission focus, and that is where the nickname of the most polluted city in the world comes from. This is very relevant because a program is being carried out to mitigate these effects.

It is important to mention that the disadvantage of Mexicali being the city with the highest recorded temperature implies that the city is somehow unprepared for climate change. Both the pollution factor and the geographical condition of Mexicali are reasons why meetings of this type of associations were promoted. Later, with support from EPA and *SEMARNAT* it was possible to establish measures and actions. For example, before, there was no *Proaire* and in some way it helped to bring these policies into existence. This is important because the first *Proaire* was made by *SEMARNAT* without the participation of the people of Mexicali, so the working group has been very important because it serves the benefit of the community in general.

To form the group, meetings with environmentalists from Mexicali and Imperial Valley have been very important, because they have discussed issues such as how to carry out joint actions between both communities. Because Mexicali and Imperial Valley share an atmospheric basin and the air does not need a passport or visa. Therefore, if they want to solve problems, it is necessary to do it together.

Another very important topic, and one on which minimal information has been generated, is agricultural burning, which is of great relevance for Mexicali and is a topic that has been followed in

the conversations, as well as verification or smokecheck, because it is a topic that is under study and there will be the possibility of renewing it. It is important to take care of this part of the atmospheric contamination that represents a very relevant damage to health and although there is already a plan, there has not been a trial.

One of the pending issues is the Santón Valley, because it is drying up and when it no longer has water, it will cause toxic dust for Mexicali, Riverside and Yuma. However, action on the matter has been taken and a project is being carried out to mitigate the damage to the lake. But in any case, we have to be vigilant to ensure that the problem does not grow.

Q&A session

During the round of questions it was insisted that the regulation of agricultural burning is one of the most important projects for Mexicali because it is something that is impacting very seriously and should not exist. Therefore, it is very important to comply with the Proaire. In addition, it was mentioned that the government of Baja California must commit to make a list to mitigate and regulate the burning in the Mexicali Valley.

In addition, it is important to create a core committee to follow up on the points mentioned and to have the necessary resources for each section, because it usually happens that the Proaire are wonderful documents but the amounts to execute them are difficult to get, so it is a matter of carrying out the strategies but it requires part of the work of the people of the Ministry of Environmental Protection and Sustainable Development, so that something virtuous becomes something concrete. It is also necessary to update the inventory of emissions and that they are made using the same method to harmonize it and each one will have different values, but with the same methodology. It is also necessary to promote the regulation of chocolate cars; they are really very polluting. And if we want to have good air quality, it is important to start at the root and implement air quality monitoring stations.

PANEL 6. CURRENT AND FUTURE OUTLOOK OF THE NATIONAL WORKING TABLE - AQTF

Participants: René Acuña (moderator), Centro de Desarrollo Económico de Mexicali; Belén León, Imperial County Air Pollution Control District; Chanell Fletcher, California Air Resources Board; Leonardo Esparza, Ministry of Environment and Sustainable Development of Baja California; Ben Machol, U.S. Environmental Protection Agency; and Tarcisio Navarrete Montes de Oca, Ministry of Foreign Affairs

Panelist 1. Belén León, Imperial County Air Pollution Control District

The district is an open group and the presidents are from governmental entities. There are several important projects such as the campaign of not burning toys, not burning tires and not burning garbage. Likewise, from November to February a campaign is started on channel 66 or channel 3, where it is most listened to, to avoid bonfires because it is a tradition that is very difficult to end and it is important to end it because it causes pollution that generates allergies. For this reason, programs have been implemented such as the Air Quality Index, which is a program to determine the quality of the air, as well as campaigns against burning, and other projects are being carried out with *Redspira*.

One of them is the camera system in Mexicali that monitors the burning on the Mexican side of the border and sends the information to the United States.

More than medium plans for the task force, I would like to call them short-term plans to accomplish that manage a long-term plan as well –more of a continuous project–, to continue advocating binational projects with both U.S. and Mexican governments. One of the main issues to confront is the change of government in Mexico, every three or every six years is like having to start all over again with the projects. And this is why one of our major plans is continuity and communication.

Having an alliance would be very important, something that we have to keep discussing and working with our counterparts in Mexico; some type of alliance that will continue with the next government. Maybe under the binational task force we can bring that alliance in, with the Mexican and U.S. counterparts who are there and have something in writing to follow each time a government changes.

We already have the Ambientalízate mission, which is the purpose of this summit, against burning. Sanctions are already being given and we have to break the tradition of burning, but what could we do about tire burning, trash burning, so our mission is to continue working with the Mexico government, with EPA and CARB to find solutions. Ambientalízate is not going to go away but what is our next step? This is the mission that we need to continue within our task force.

Panelist 2. Chanell Fletcher, California Air Resources Board

The Environmental Justice movement has been very important and critical in California and in the United States, as well as in CARB, in order to push and advocate in the communities to highlight concerns that are environmental justice and border concerns. CARB is working on air quality in the level of the communities and the people, looking at the justice aspect of that, and we would like to share and leverage it: this is what is happening on the Mexicali side as well.

When we are talking about CARB we have a mission to protect and promote public health by reducing air pollution, at the three levels of government, and we are also doing a lot of work in the front of climate change as well.

In terms of the projects that are happening and the help CARB needs, we are very grateful for U.S. EPA and the resources the agency has given to CARB to develop projects throughout the California and Mexico border region, specifically in Mexicali, like the air quality and ozone air alert mobile app and website and the revision of on road and motor vehicle emissions in Baja California, that is an emission/fleet inventory project in Mexicali. There is also a new project that is going to be improving biomass burning estimates in Mexico.

CARB is focusing on making all the data accessible to the public, and on this matter the collaborations and partnerships are critical.

CARB is very committed to the AQTF and to preparing the state implementation plan which attains and maintains the national air quality standard required by the U.S. Federal Clean Air Act. Talking about the AQTF, CARB is concerned about how the previous goals can be updated, and how they can continue to implement collaborative projects that have a positive outcome in air quality in Mexicali and Imperial Valley, like the low cost sensors delivered to Mexicali.

Everyone coming to the table, showing commitment, having clarity of purpose and something in writing reinforces the work of the task force to move forward the mission. Going back to the importance of Environmental Justice, one of the big pieces is going to be community driven planning where the communities have a role and are critical to accomplish the mission.

Also state to state integration brings a big opportunity for planning in partnership around air pollution and climate.

Panelist 3. Ben Machol, U.S. Environmental Protection Agency

The task force has become that gathering place for people to share ideas about needs and opportunities. EPA has a long history of working with SEMARNAT through the U.S.–Mexico border program, which started with the La Paz agreement in 1983. What is happening in Mexicali and the Imperial is one of the most organized binational groups and EPA is always looking for ideas. We have some funding that EPA can provide to CARB and to Imperial County to whatever needs the group comes up with.

EPA’s funding has been towards accomplishing better understanding and sharing information on air quality, like emissions inventories and really understanding where emissions are coming from. EPA is looking forward to helping in the solutions once we know where emissions are coming, by funding in addition to other technical assistance: it is not only about funding, is about regulation and communication.

With the Inflation Reduction Act, EPA has some resources and some of the funding will go to our traditional partners, like the state of California and Imperial County, but we also now will have an Environmental Justice program, which is more flexible, different from anything EPA has had before and open to more recipients; and we are excited to see how to complement the work on Imperial County AB617. Because the air quality is so challenging in Imperial County, compared to the rest of the country, that opens the door for another fairly flexible pot called targeted Air Shared Grant Program.

Agricultural burning is such a long-term issue that certainly stretches administrations on both sides of the border, so I support the idea of an agreement to determine our long-term plan. When we talk about climate change, it is a march towards zero emission and one of our challenges is how to use the resources to address issues and find the innovation to jump to zero emission along with all of the other things that have to be done to address existing emissions. Agricultural burning is an example – in reverse–: how to reduce emissions by proper regulation and all the things that need to be done – like what is being done in Imperial County–, but there are other parts in California that are looking at agricultural burning prohibitions and other zero emission opportunities, such as alternatives to agricultural burning.

Panelist 4. Leonardo Esparza, Ministry of Environment and Sustainable Development of Baja California

The Ministry's participation in the binational roundtable is to demonstrate its willingness to participate in the creation of policies to combat poor air quality. It did not exist as such, it had been relegated within the state cabinet and we are looking for greater leadership since the very start. We are also seeking to build this environmental fund for the conversations of this working group. However, the

Ministry seeks to consolidate the participation of the state government in this collaborative space and seeks to institutionalize a culture of collaboration. Because as noted in previous panels, officials come and go, and this will is lost and does not result in compliance with the actions, so we must resume participation and add the will, as well as consolidate the commitment that was made with the citizens to generate results.

Panelist 5. Tarcisio Navarrete Montes de Oca, Ministry of Foreign Affairs

The main concern of the modern world should not be national security but the survival of humanity. This statement is emphasized when talking about the environment, air quality and climate change, and it also becomes true that the challenge is global and belongs to everyone. However, at the present time, clumsiness, ineptitude or negligence have won, a collective failure that we are trying to cover up. Faced with this situation, the Mexican Consulate is not only dedicated to the issuance of documents, but also performs the very important task of promoting better conditions in terms of tourism and the environment. Therefore, the Consulate has been promoting and acting as a bridge between the different institutions so that in this effort of the federal, state and municipal governments, the challenge that has overtaken society can be faced. Likewise, we have managed awareness actions and more resources to have a better air quality in Mexicali and other places.

The laws must be reviewed because they have been left behind. Also in terms of citizen participation, for example, in Mexico City we started with the program to voluntarily leave the car one day and nobody paid attention, so we have to modify the regulations. And invest more resources for scientific research because the country that does not allocate money to scientific research will be left behind in many important issues.

Regarding the involvement of the chancellery to work on agricultural burns, there has been constant communication so that forums such as *Ambientalizate* can be held and a deadline was proposed to carry out a first project and have the tools to adequately monitor the air. There are also many pending issues regarding the use of gasoline, so it was proposed to establish a dialogue with agencies, experts, civil society and authorities to solve the problem. Poor air quality is a serious problem with a high impact, because more people have died from it than from the COVID-19 pandemic.

Q&A session

Answering a question about energy deficiency in Mexico, the panelist responded that with 2025 coming and California taking action to move toward 100% electric vehicle sales and old cars coming to Mexico, they are hopeful work is being done on both side of the border to have infrastructure to have zero emission on both sides of the border, infrastructure that encompasses light vehicles as well. This should be included in the longer-term plans of the task force as well: how to develop a plan for a massive influx of zero emission vehicles on one side of the border and make room for that on both sides of the border?

Chanell pointed out that, at CARB, they have also wondered about the transition to 100% zero emission sales in California by 2025, and what will happen to all of the old cars: and they have figured out that it is important to have this conversation among champions and leaderships, as well as with the community; also to work collaboratively, to share and coordinate state to state in a roundtable format conversation. And talking about the used car market, she pointed out that it is important to get

more durable zero emission vehicles in California in order to help with the transition on the other side of the border.

The panelists also explained that although there is a date of 2035 for 100% electric vehicles, there is already a fair number of electric vehicles and it is just going to be up proportionally between now and 2035, and once the penetration of electric vehicles gets so high there are going to be less opportunities for fueling fossil fuel vehicles and the demand for fueling station will get lower.

About the question around what is going to happen with fuel vehicles that are already circulating, the panelists answered that as California has a quest to get to zero emission and has resources for it, it cannot get there without considering the vehicles crossing the border and this opens the opportunity to build infrastructure on both sides of the border to accommodate the flow.

They also reminded that there are a lot of resources going in the Inflation Reduction Act to reach zero emission and greenhouse reductions.

One thing that the State in California needs to do better is to promote and help the coordination of binational efforts, making sure that while ramping up the infrastructure to meet the demand for electric mobility, there is a better job of coordination not only agency to agency, but also integration community partners.

Talking about electrification, another piece that was considered in this conversation is the topic of renewable energy and the need to clean up the grid by investing in renewable energy resources and being committed to this as well, as a way of acknowledging where we are with climate change.

PANEL 7. ISSUES RELATED TO AIR QUALITY

***Participants:** Pablo Chee (moderator), Comité Cívico Ambiental; Denahí Valdez, Laboratorio de Invencción para la Ciudad A.C; Myriam Serra; Fundación Hélice A.C.; Fernando Flores, ObserBC; and Juan Francisco Garza, Director of Public Services of the XXIV Municipality of Mexicali*

Panelist 1. Myriam Serra, Fundación Hélice A.C.

The foundation was created in 2009 when talking about recycling was very different from today's conversation and the topic of sustainable development was very difficult to understand. Today we talk about circular economy and we work for changes in habits to make the best use of waste. Proper waste management is important because the inhabitants of Mexicali are more than one million and the generation of waste per inhabitant is one kilo per day, so the organization has focused on generating an educational ideology to generate campaigns and programs at the three levels of government and in the education sector. We have also been able to work with EPA. However, this change in consumption habits would not be possible without citizen participation and openness.

Baja California is the third state to pass the circular economy law (Law for Prevention, Integral Management and Circular Economy), which is important because, to date, there is a transition process towards the management of materials and public policies. So the problem is being understood. However, much investment, political will, citizen participation, collaboration with industry and improved communication with society are needed.

Panelist 2. Juan Francisco Garza, Director of Public Services of the XXIV Municipality of Mexicali

Unfortunately, there is no culture of efficient waste management and disposal by society in Mexicali. However, there are analyses to be able to continue and do something different. In terms of actions, the agency collects waste at least twice a week from 577 neighborhoods and 3,000 homes, which adds to the preservation of the environment and the efficient collection of garbage allows a recycling of 3 or 4 percent of the 20,000 tons received daily. Likewise, the supervision and public cleanliness department goes to vacant lots and houses to collect mattresses, furniture and tires on public roads. Likewise, temporary spaces are being created so that citizens only have to clean their backyard and the street is not a source of infection. It is a permanent task and, obviously, all these actions, from picking up dead animals to donating plants, contribute to achieve a cleaner, more illuminated and pollution-free Mexicali.

Likewise, the municipality has its municipal nursery gardens and from January to October 15 thousand plants have been donated from our nurseries. We plan to expand this program from 15,000 to 30,000 trees. We are cleaning the city, pruning green areas, fixing the 56 thousand street lights, and the authority has become a promoter of citizen reporting: citizens are invited to continue helping and reporting unlit lights. A sample of the efficiency in public services is that, out of 15 thousand reports by different means, of which 6 thousand were from an application, there is an efficiency of 90 percent.

Transfer centers for bulky waste that operate from 7:00 a.m. to 5:00 p.m. and receive all non-hazardous waste have been created in Mexicali. Plans are underway to create three more transfer centers and to include recyclers working in the region in these activities. In addition, a permanent supervision model has been designed, as well as a management model to be implemented by the service concessionaire. The municipality is concerned about the management of resources and there are talks about the construction of transfer centers, but the issue must be studied so as not to strangle the city's mobility. The importance of having transfer centers lies in the fact that the center that currently operates receives 755 tons of waste per day and has a 90 percent efficiency of utilization.

Panelist 3. Denahí Valdez, Laboratorio de Invención para la Ciudad A.C (LABICI)

LABICI works on the streets and in the neighborhood, experimenting with solutions for the city that can be replicated in other entities or cities. Although the organization was formed since 2017, it has been working in public space for more than a decade and one of the projects is the Washanami in Álvaro Obregón. This is a citizen project which, broadly speaking, consisted of a massive reforestation of Álvaro Obregón Avenue, which is more than 100 years old and has had an important transformation process that goes from the layout of the sidewalks. The project was born hand in hand with neighbors, academics and it was decided collectively what type of tree had to be planted in the area. The choice, more than an aesthetic issue, was an ecosystemic decision because the Palo Verde tree provides humidity, food for the fauna and improves the permeability of the soil. A call was made, and the community contributed with trees. The association is still in charge of doing all this negotiation so that the neighbors do not want to put their Yucatecan tree again.

After the implementation of the project there was a kind of reconciliation and we saw how this project began to be replicated. Paseo Obregón flourished and everyone associated the tree activity with the theme of participation: it is a small analogy to see the tree grow, but also to see the city flourish.

Panelist 4. Fernando Flores, ObserBC

To address air quality, language is not an impediment and cooperation relationships are needed between civil society and the authorities, because the problem is such that there are many children being born with breathing problems and we are all united by the problem of the negative repercussions of air quality. Statistics for the Health sector tell us that some diseases such as lung cancer, asthma and COPD are related. The Mexican Institute of Competitiveness (IMCO), in 2018, and the California Secretary of Health point out that there are 715 premature deaths annually due to poor air quality and pollution has represented 463 million pesos lost in productivity. There are precedents of effort, for example, José Narro Robles, Secretary of Health, collaborated with *ObserBC* to establish the basis for cooperation and to generate a culture of protection, improvement and conservation of the environment. Six working groups were set up, each of which took five years to improve air quality, environmental monitoring, environmental health, vehicle verification, paving and storm drainage, emission control and public health surveillance.

In this way, the Observatory has contributed to establishing order so that the following generations will have a reference of the policies to be implemented.

Q&A session

Most of the speakers stated that one of the problems they face is bureaucracy and that sometimes the ministries and agencies are occupied by officials who do not know what their work is about.

Regarding Paseo Obregón, they questioned why a bicycle lane was not sought for this avenue. In response, it was said that the bicycle lane project began with Jaime Díaz in government and at that time a bicycle lane along the pedestrian lane was proposed, which was not positive because bicycles would be sent to the ridge, nor was a bicycle lane on an avenue with many intersections viable. Therefore, the government was inclined not to build it. Nevertheless, Obregón is always full of cyclists.

PANEL 8. THE AIR QUALITY PROBLEM FROM A COMMUNICATION PERSPECTIVE

Participants: Armando Nieblas (*moderator*), Agencia Informativa RadarBC; Erika Gallego, Canal 66; Jorge Heras, Canal 4 Televisa; Yerson Martínez, La Frontera; and Armando Lemus, La Crónica

Panelist 1. Armando Lemus, La Crónica

Journalism has a great ally in the form of civil organizations such as *Redspira*, which provides a daily balance of air pollution. This allows us to work on news about how Mexicali is doing minute by minute. Journalists have to work on air pollution and check the subject with various experts. However, there is a lack of work on the environment in journalism, there are many issues and not enough data. Undoubtedly, it helps a lot to go to the communities, to file complaints because the authorities go and attend, but more data is also needed. Currently, it is known that 45 thousand people a year are attended due to pollution in Baja California, and it is the third city with the highest expenditure due to pollution. However, there has been no new information for almost five years.

Panelist 2. Erika Gallego, Canal 66

With each change of administration not only new strategies are presented, but also new people are in charge of addressing the issue of air quality, but they arrive without having the profile despite the fact that from the academy there are people with a very good profile. Sometimes, for journalists, air quality and air pollution is a very technical subject that they have to process and learn. However, no administration has presented a tangible measure to mitigate the pollution problem. Journalists also have to deal with claims from the authorities who complain that the notes are only published when the air quality is in red.

An example of the problems caused by the changes of each administration is that on one occasion, a state administration agreed not to set off pyrotechnics or fireworks for celebrations, and the new government arrives with a show, this speaks of a total lack of knowledge on the subject. The authorities continually fail to provide explanations on tangible actions, because we are breathing bad quality air and this is reported thanks to civil organizations, but we do not know what the authorities are doing. There is not even a section in the institutional portals that accurately reports on the problem.

Panelist 3. Yerson Martínez, La Frontera

The most important thing about the air quality issue in Mexicali is that people are aware of the problem. In this sense, everyone is aware of what pollutes and what the concentrations of pollutants are; however, no one does anything to reduce it.

Everyone is involved in the pollution problem, both authorities and companies, and a fact that shows the need for this involvement is that only 5 percent of the companies have an environmental license. So there is a great lack of interest from the authorities to the citizens.

Panelist 4. Jorge Heras, Canal 4 Televisa

Journalists have been specializing in order to provide journalism with greater transcendence in air quality issues. Currently, it cannot be said that there is a real public policy regarding air quality, and all administrations, PAN, PRI and Morena, have fallen into the simulation of actions. This simulation began when those in power sold the idea that Mexicali was the most polluted city in the world, which could be true, but the authorities never provided concrete data on the matter. In this context, civil society has been a fundamental piece to actually dimension the problem.

Likewise, the authority's actions are limited because out of 14 monitoring stations that exist, only five work and do not measure all the pollutants, so the efforts are insufficient, laughable and the data is inaccurate. Another example of the problem is that the current head of the Ministry of Environment and Sustainable Development does not have any certification on the subject and despite the fact that she has very good advisors, nothing has been achieved because they have a limited margin of action. For this reason, it is highlighted that, thanks to organizations from the civil society, journalists have data on the problem. For example, there are officials like Manuel Zamora, who work tirelessly but there are no politicians who are interested in the issue.

In addition, officials claim that air quality monitoring is costly and complex. However, for the national holidays they spent 5.7 million pesos. So there is either interest or there is no interest, because the money is there.

Q&A session

In the questions and answers session, the speakers spoke about agricultural burning, suggesting that it should be done in a way that does not affect the environment and that crop reconversion should be prioritized. It was also emphasized that the current governor of the state, Marina del Pilar Ávila Olmeda, made a promise to eradicate agricultural burnings, and therefore, citizens and the media should not take their finger off the ball, but she has not mentioned what strategies have been implemented for this purpose.

It was also pointed out that the civil society monitoring stations do something commendable, mainly what Redspira does. However, it was mentioned that the authorities should reinforce the monitoring because it is an obligation of the state to attend it because it is a very important cause of mortality. It was also pointed out that the authorities are hiding information about the health effects of pollution. They also reiterated the call for agricultural burning not to be normalized.

On the other hand, it was emphasized that the authorities must coordinate in order to have accurate data, which will allow a clear reading of the problem and prevent the official data and those provided by a civil organization from being inconsistent with each other.

Finally, it was emphasized that collaboration between organizations and journalists is very important in order to make progress on this issue.

PANEL 9. RESEARCH ON AIR QUALITY AND HEALTH

Participants: Arturo Arévalo (moderator) State Commission for the Protection of Sanitary Risks (Comisión Estatal para la Protección de Riesgos Sanitarios); Astrid Schillman, researcher of the National Institute of Public Health (INSP); Elena Parra, INSP; Óscar Efrén, member of the Ministry of Health of the State of Baja California

Panelist 1. Astrid Schillman, INSP

As such, there is no cause of death due to air pollution. A whole series of epidemiological studies have been carried out and with these studies evidence has been estimated as to what the risk is and what can be attributed to a certain pollutant with a certain effect on health. These studies have been developed, not in the same way, there are actually more studies in Mexico City. With them, we can have an estimate of the risk to know what levels of contamination may be affecting us. So, with this evidence, stronger evidence has been developed and there are more studies that prove these results and all this tells us that air pollution is related to damage to all the organs of the body. There are recent studies that are indicating the risk of diabetes, kidney disease that is being associated with air quality, but if only one study says it is not a fact. We need several studies to confirm it and replicate it because the conditions of each place are different.

To mitigate the problem, it is important to revisit the Proaire and have an inventory of emissions, because if this is not known, it is not possible to know what the source of emissions is and to what extent they are contributing to atmospheric pollution. However, rather than having a specific data to attribute that source to an effect, it is more important to know to which emission sources to apply actions to mitigate emissions. It should be mentioned that research on how interventions have an impact is slower, because to know if an action helped to reduce the risk, it is necessary to move from

research to impact assessment. Another important issue is that air quality is closely linked to climate change.

The actions that can be taken to improve air quality have the co-benefit of reducing emissions of other pollutants, and health co-benefits have been identified for these actions that mitigate the set of pollutants that are being emitted. Therefore, it is necessary to work under these comprehensive approaches to observe that the effects of air pollution are reaching a point of no return and all stakeholders must participate in their attention and in disseminating the reasons to explain why measures are being taken.

Panelist 2. Elena Parra, INSP

It is important to clarify the types of exposure to contaminants, acute and prolonged. Then, it is necessary to emphasize precisely the type of exposure in order to ground public health care, because there are populations that are in higher risk conditions. What is being done is to ask those affected what they think is the cause of the pollution that affects them. This allows us to make a diagnosis. Currently, a project is being developed, Frontera 2025, to have hard data and have indicators on causes according to the exposure to particulate matter 2.5, and in this case what we are doing is to see how PM 2.5 concentrations affect Mexicali and Imperial Valley in order to have data from Calexico. We also want to implement a technological platform on health and air data to try to obtain information limited to the Mexicali-Imperial Valley region.

In the Mexicali region, much progress has been made in the area of air quality. There is an air quality management program, monitoring systems are in place, and more people are aware of the issue. As part of the impediments to effective management, there is the issue of budget, which is not always sufficient. It is also important to insist to the authorities on the issue of standard 072 and that it does not remain only on paper, to issue recommendations to the population and to standardize how the data is disclosed, an issue that has been a problem for many states and that is very complicated to address. It is also important to point out that one of the great challenges, which is very important, is to make a diagnosis of who the allies are, which is part of the communication of the monitored risks.

Panelist 4. Óscar Efrén, member of the Ministry of Health of the State of Baja California

The INSP sees fertile ground in Baja California, where public health policies can be advanced. The media reports that they are not aware of studies on air quality and its impact on people's health. However, for the last four years, for each death that is issued, there is a certificate and its cause is studied. Not only that, there are local and international studies. There have even been time studies where the weeks with the highest number of medical consultations have been measured. For example, in the case of COVID-19, it was found that Baja California was the state with the second highest incidence rate of the virus and in Mexicali people died more than in Tijuana. Also, Baja California is the number one state in deaths from tuberculosis and it is still unknown how air quality exacerbates this situation. So, there is still much to be done and there is much that is known and much that is not.

Among the problems that cause pollution in Mexicali is that it is a city of assembly plants whose measures to control their emissions are unknown. In addition, the public transportation system is not ideal and there is an overpopulation of vehicles: each family has one or two vehicles. Also, vehicle verification had been carried out, but it seemed to be more for tax collection and without impact on health. Likewise, the impact of informal commerce on pollution is unknown.

There is a binational goal for 2035: that all vehicles will be electric. However, Mexico is light years away from the measures being taken by the neighboring state, so it is very important that these binational groups can help emulate the actions. It is important to mention that different social sectors have been working to eradicate pollution. However, a challenge is to be on the same tune, to organize, coordinate and implement actions for this type of problems that reach the health sector, which is responsible for taking care of health policies.

It is important to carry out the necessary measures because Mexicali is already at a point of no return, that point has already passed. For example, many years ago there were no outbreaks of dengue because it did not live in the ecosystem, but due to climate change, the dengue mosquito is now endemic, and we have had very important outbreaks. So, there have already been points of no return and they are evidence of how humans have modified the environment.

Finally, it is important to mention that no one is thinking ahead because the consequences are still far off. However, messages to the population must be intensified so that they are aware of the immediate risk posed by pollution.

Q&A session

The speakers stated that there is never a zero risk factor and standards have been developed to have permissible limits and there are annual limits. There are also experts who have established these revisions, so that there are also relative risk measures. So, it is very important that we know the values of the exposures. With all these data, the models are fed with the frequency with which events occur and thus the deaths have been calculated. There is an exercise of this type for the estimation of deaths that can be caused and all the studies have a confidence interval.

The participants also talked about the importance of NOM-172, on the dissemination of the risk that is also used in the US, which has been updated over the years and needs to be updated again to standardize the levels of the index. However, the progress that exists in air quality management is very advantageous and it is very important that this standard has been issued so that all those who have monitoring and data can interpret them in a timely manner.

PANEL 10. ACTIONS BY INDUSTRY TO IMPROVE AIR QUALITY

***Participants:** Rosa León, (moderator), Imagen Radio; Pablo Chee, Mexican Employers' Confederation (COPARMEX) Mexicali; Alberto Sánchez Torres, National Chamber of the Transformation Industry (CANACINTRA) Mexicali; and León Felipe Ruiz, Index Mexicali*

Panelist 1. Pablo Chee, Mexican Employers' Confederation (COPARMEX) Mexicali

One of *COPARMEX*'s participations in the air quality issue has been from a business perspective. Many years ago, the issue of clean industry arose and we tried to comply with this requirement, which represented an opportunity for a company to promote the environment. *COPARMEX* Environmental Commission began to form alliances with various chambers and companies that work in isolation, to train them to comply with environmental measures. However, it was difficult to do so because there was resistance and *COPARMEX*, together with the Environmental Civic Committee, sought alliances, especially with the government and society to be able to demand actions and solutions to the problem.

One reality is that the government does not have the resources or the capacity accomplish change. However, a new chamber law is on its way, which is expected to be more inclusive and encourage participation. Another major pending issue is the inclusion of electric vehicles in the industry and to be able to generate an energetic change in the infrastructure of the companies.

Panelist 2. León Felipe, Index Mexicali

In the assembly industry, pollution prevention has been sought because it has been said that the assembly industry has great responsibility for air pollution. However, the assembly industry in Mexicali and at the national level, is one of the most controlled, it is even over-regulated and we are trying to eliminate regulations. In spite of this, all of these procedures are complied with and managed -such as ISO1000 and ISO45000 regulations. Part of the compliance with regulations is the use of technologies that come from the United States and Europe for pollution prevention, as well as improving high efficiency and vapor recovery cycles. Therefore, the assembly industry is going beyond compliance and is not only saying how to comply in the region, Index has joined other actions for the projects it has and is part of the committee working together to provide great support to ensure the good of all.

Panelist 3. Alberto Sánchez Torres, CANACINTRA Mexicali

CANACINTRA has trained its members in self-regulation, supervision and certification. Sixty percent of the resources provided are for companies that are being certified; there are many and they are constantly changing, and it is our responsibility to keep up to date and motivate them to comply with the laws. Likewise, the environment is one of the most important issues, but it involves many actors and the industrial sector's involvement covers many topics.

Q&A session

It was emphasized that the industry is looking for the implementation of electric vehicles, as well as the possibility and evaluation of the costs for this topic. It was also discussed that public transport managers should make their investment to help renew the operating fleet and reduce emissions.

CLOSURE

By Belén León

I have been looking for this summit for two years because of the pandemic, but we were finally able to meet in person and speak to each other and communicate.

All of the conversations and the dynamic dialogue between experts from both the U.S. and Mexico that took place made me think that there are still pending issues. This dynamic dialogue also made visible all of the action items that each of the participants have been doing annually:

One of the action items that the task force needs to do is to continue dialogue and work together binationally through the air quality task force to make it a front, in order to do all these good deeds. Ambientalízate can be a very good venue to continue these good deeds.

- I am going to continue pushing for alliances because it takes all of us.

- The table/panel on media provided good information because we usually do not hear positive things from the media, but air quality is something we all breathe, and communicating better with the media will allow us to communicate better our good deeds.
- We need to share information because we have a lot to learn and there is still a lot to work on.
- There is a lot of scientific work that is just sitting at somebody's table, let's bring it back, there is good information there. If it needs to be revised, we will do that,
- What else can we do? And how to move forward? Money is out there; we could help obtain those funds, but we need continuity and alliances.

Let's continue this type of dialogues and use the air quality task force: this is the first time we have actually gotten together, provided this information and become one. The pandemic brought us together, because we were able to reach people from the U.S. and Mexico who were not able to join us.