

ENVIRONMENTAL STRUCTURAL VIOLENCE IN THE TIJUANA RIVER: PROPOSED ACTIONS



Picture of pollution on the Tijuana River, 2020

Study results show that:

- The Tijuana River shows indicators of **fecal contamination** similar to those of untreated sewage.
- The levels of E. Coli, total inorganic nitrogen and total organic carbon **exceeds the legal limits** for treated water quality.
- Growing pollution of the Tijuana River harms its **homeless and deported residents**, despite their efforts to minimize risk.
- **Police violence** is the most common factor that forces contact with contaminated water.
- Abscesses and skin infections are common and **access to sanitation and hygiene facilities is scarce**.

What is the situation and what are the causes?

The Tijuana River Basin is a binational watershed shared between the northwestern regions of Baja California, Mexico and southwestern California, United States (USA). It is made up of a set of border hydrographic basins and covers an area of 4,352 km², of which 2/3 is located in Mexico. On its way through Tijuana, the river receives effluents from treatment plants, rainwater runoff, industrial water discharges, and raw water discharges from domestic sources. The contaminants in the river exceed the standards of Mexico and the United States in indicators of fecal bacteria, organic matter, nitrogen and phosphorus.

In the last decade, the city's largest homeless population has formed settlements in the Tijuana River canal, which they refer to as *El Bordo*. As has been demonstrated in other cities around the world, these settlements are the result of a complex problem, in which mental health stands out, and to resolve it, it's necessary to consider multiple perspectives. For example, our study showed that more than half (61%) of the people interviewed in *El Bordo* had lived in the US, and most of them had been deported.

Because of the lack of social and family networks in Tijuana, and due to their substance use disorders, the channel is for these people the place where they feel safest, and where it is easiest for them to stay. This population, however, is perceived by many in the city as a group that puts the safety of others at risk. Although it is not proven that the incidence of crime or violence in the city is associated with the presence of this population, this negative view contributes to them not being taken into account as a vulnerable population in need of care.

Why is this problem important to the region?

Pollution of the Tijuana River represents a risk for the human, animal, and environmental health of those inhabiting the city. The extreme social marginalization that is suffered by the residents of the canal results in the worsening of their health problems. The effects of contaminated water are becoming evident in the Estuary of the Tijuana River in the USA, and the drainage of the canal flows into the beaches on both sides of the border.

Environmental and health damages will become increasingly complex and will deepen if the interconnected problems of pollution and population if the river remain unaddressed. The people who inhabit the river have the right to health protection contained in the Mexican Constitution. In addition, addressing their problems will contribute to a more positive perception of the Tijuana River.

The double condition of contamination and the presence of an unhouse population makes the Tijuana River to be perceived as a problem. In this project we are interested in promoting the vision of the river as an area of opportunity for the city, which with good management can constitute a public natural resource. For this, it is necessary to comprehensively address the environmental health of the river and the needs of the people who inhabit it.

What do we want to achieve?

The **general objective is to reduce the levels of pollution of the Tijuana River and promote social and economic integration of the population that inhabits it.** Through specific objectives and concrete actions, we seek to improve the conditions of dignity, wellbeing, physical and mental health of this population. At the same time, we seek to rehabilitate the Tijuana River Watershed and the coasts where it ends, promoting the protection of the native plants and endangered species, and the expansion of public access recreational areas of the city. In this way, we hope to have broader health effects on the people and environment of Tijuana, the ecosystem of the Tijuana River National Estuarine Research Reserve as the largest coastal wetland in Southern California's, the Imperial Beach and Coronado coasts in San Diego and Tijuana, as well as the health and well-being of people suffering social abandonment in the city.

What do we propose?

To achieve this objective, with the contribution of key stakeholders from Tijuana and San Diego, we developed a proposal for socio-environmental solutions to the problems of the Tijuana River, using participatory methodologies of *Theory of Change* and *Conversational Mapping*. Based on a solution tree developed by team of co-authors, in a binational participatory workshop [on 23 February 2023 at El COLEF] with key players from government, civil society, academia, and international agencies, we developed seven objectives, with their respective actions. The proposals are the product of the consensus of a group of experts in the areas migration, public health, human rights, security, policies public, water management and the environment.

The proposal built by the environmental working group can be summarized as nature-based solutions, and by promoting a transition from a centralized-gray infrastructure model, to a decentralized-green infrastructure systems for water treatment. . The proposal includes the application of **low-cost technologies** such as treatment based on **biofiltration**, which, compared to conventional treatment systems, represent spending less budget for the treatment.

The public health and social integration proposals are focused on changes that provide structural solutions to the most important health and well-being, from a human rights perspective. The current resources and services available to the city as well as challenges and areas of opportunity (e.g. simplification of administrative processes) were taken into account. An example is the **development of a policy for "housing first"** in which access to affordable housing is prioritized and affordable for low-income and socially abandoned populations. . Additionally, **access to hygiene products and public infrastructure to provide access to drinking fountains, showers, sinks and bathrooms, as well as mobile hygiene units**, will help prevent infectious diseases, and promote social integration, dignity and self-esteem of the people living in the canal. Another relevant issue is the **reduction of direct and structural violence against the population of inhabitants of El Bordo**, which includes communication strategy for social change that promotes a culture of peace and transforms narratives in favor of the humanization of socially neglected people. We also propose increased training for first responders and municipal police officers on issues relevant to these populations, for example, human rights, overdose prevention and risk satiation management.



Objective #1: Reduce housing insecurity and improve access to basic services for low-income and/or underserved populations

1.1 Strengthen social integration programs for socially neglected populations ●●●●●●

- Facilitate access to services for obtaining identification documents and other administrative procedures and services (*outreach*)
- Reduce barriers for obtaining identity documents for people who are unhoused
- Increase employment opportunities for deported and migrant populations
- Strengthen adult education programs, job training and labor integration

- Develop self-care programs for first responders and people who provide human rights defense services

1.2 Implement affordable and accessible housing policies (*housing first*) ●●●●●●

- Simplify administrative processes required to obtain housing and basic services
- Recover abandoned spaces and adapt them to provide housing and basic services
- Involve students, urban artists, civil society and target populations in housing rehabilitation and socio-environmental rehabilitation projects
- Implement policies to control the cost and currency of housing

1.3 Expand and strengthen temporary shelter programs for people without housing ●●●●●●

- Maintain and improve spaces that currently function as a safe space to provide shelter
- Implement temporary shelter programs sensitive to the specific needs of people with substance use disorder

1.4 Eliminate the "three-month rule" and extend access to public services for migrants ●●

1.5 Increase access to free public drinking water, toilets, showers, sinks and basic hygiene products ●●●●●●

- Develop a public mobile hygiene program

- Ensure the availability and functionality of public drinking fountains, showers, sinks, laundry facilities and public toilets

Objective #2: Reduce the incidence of violence and accidents experienced by the people who inhabit the Tijuana River and other populations

2.1 Run a diagnostic on the main sources of violence and accidents in this environment in order to design proposals for solutions that consider the structural factors ●●●●●●

2.2 Train municipal police in topics relevant to their activities in relation to the population of the Tijuana River (e.g. human rights, use of naloxone, risk management) ●●●●

2.3 Strengthen internal monitoring of the functions carried out by law-enforcement officers public security personnel ●●

2.4 Develop strategies aimed at eliminating violence against socially neglected populations ●●●●●●●●

- Train first responders and public officials on human rights issues with a gender perspective lens, harm reduction, and Trauma Informed Care
- Incorporate *El Bordo* residents or people with similar life experiences in the development of solutions and communication strategies
- Develop programs that promote art as a strategy of expression and narrative self-representation of underserved populations (e.g. muralism)

2.5 Develop actions to transform harmful narratives using communication strategies for social change ●●●●●●

- Promote a culture of peace and human rights
- Implement social change communication strategies to humanize underserved populations
- Question the narrative regarding the association between substance use and crime rates

2.6 Desarrollar una estrategia de seguridad vial y accesibilidad universal para la prevención de accidentes de tráfico en las vías rápidas (ej. prevención de atropellamientos) ●●●●●●

Objective #3: Increase access to quality free mental health services and substance use disorder treatment

3.1 Increase and diversify the options for treatment and rehabilitation ●●

3.2 Strengthen existing regional mental health programs and services ●●●●●●

- Educate and inform municipal

security officials about available resources for mental health and substance use disorder treatment

- Improve access and distribution of psychiatric drugs in the public healthcare system

- Disseminate information about existing services among the population of *El Bordo*

3.3 Strengthen harm reduction services and programs ●●●●●●

- Development of drug monitoring programs (e.g. fentanyl testing)
- Implement safe consumption sites

3.4 Increase opiate substitution therapy access in public hospitals ●●

Objective #4: Increase accessibility and treatment adherence support for chronic and infectious diseases as well as physical rehabilitation

4.1 Adapt specialized services that take into account specific needs of diverse populations ●●●●●●●●

- Ensure the supply and availability of opioid substitute therapy in public hospitals
- Routinely provide public health services through mobile health units and comprehensive accessible health centers
- Strengthen and provide public and accessible physical rehabilitation services for adults

- Amend the internal police regulations to ensure the provision of opioid substitution treatment during imprisonment of people with opioid use disorder

- Subrogate social work services and case management to organizations specialized in the care of underserved populations

4.2 Simplify administrative processes needed to access health services ●●●●●●

- Creation of modules and use of biometric identification to access health services

4.3 Reduce direct and structural violence against underserved populations ●●●●●●●●

- Provide training to first responders on human rights issues and harm reduction services

- Develop a communication strategy for social change that humanizes socially neglected populations

Objective #5: Reduce sewage pollution and dragging of raw sewage in the Tijuana River

- 5.1** Plan, maintain, monitor and conserve sanitary sewer, water treatment and water reuse systems and pipelines ●●●
- Identify financing opportunities for the repair and maintenance of the sewerage network
- 5.2** Promote the decentralization of the wastewater management infrastructure of the city of Tijuana ●●●
- 5.3** Favor rainwater infiltration by reopening some areas of the canal and transforming it into a River-Park ●●
- 5.4** Promote the use of green infrastructure in ravines and raw water discharge areas ●●●

5.5 Treat and reuse wastewater for irrigation of green areas ●●

5.6 Promote participation and citizen advocacy for integral water management ●●●●

Objective #6: Decrease industrial pollution in the Tijuana River

6.1 Monitor industrial waste in the river ●

6.2 Increase surveillance of current regulations regarding companies' wastewater discharges ●●●

6.3 Improve communication channels and coordination between water competent authorities ●●●●

Objective #7: Reduce solid waste contamination of the Tijuana River

7.1 Maintain sand traps and natural channels to prevent sediment drag and clogging ●●

7.2 Develop waste management training programs focused on community capacity building ●●●●

7.3 Encourage the collection of waste within difficult-to-access informal urban settlements ●●●●

7.4 Reuse construction materials under a circular economy approach ●●●●

7.5 Generate a citizen surveillance program and social communication campaign to prevent clandestine dumpsites ●●●●

Proposed actions by sector:

- Social development [1.1, 1.2, 1.3, 1.5, 2.1, 2.4, 2.5, 4.1, 4.3]
- Migration [1.1, 1.3, 1.4, 2.4, 4.1, 4.2, 4.3]
- Infrastructure and urban development [1.2, 1.5, 2.6, 3.3, 5.1, 5.2, 5.3, 5.4, 5.5, 7.1, 7.4]
- Human rights [1.1, 1.2, 1.3, 1.4, 1.5, 2.1, 2.2, 2.3, 2.4, 2.5, 3.3, 4.1, 4.2, 4.3]
- Public safety [2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 4.3]
- Citizen participation [1.1, 1.2, 1.5, 2.4, 2.5, 3.2, 3.3, 4.1, 4.3, 5.4, 5.6, 6.2, 6.3, 7.2, 7.3, 7.4, 7.5]
- Water management [1.5, 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 6.1, 6.2, 6.3, 7.1, 7.2, 7.3, 7.4, 7.5]
- Health and wellness services [1.5, 2.1, 2.6, 3.1, 3.2, 3.3, 3.4, 4.1, 4.2]
- Jobs and economy [1.1, 1.2, 5.1, 5.2, 6.2, 6.3, 7.4]
- Mental health and substance use disorders [1.1, 2.1, 2.2, 2.4, 3.1, 3.2, 3.3, 3.4, 4.1, 4.2]
- Social communication [2.4, 2.5, 2.6, 3.2, 4.3, 5.6, 6.3, 7.2, 7.3, 7.5]

References

Calderón-Villarreal, A., Terry, B., Friedman, J., González-Olachea, S. A., Chavez, A., Díaz López, M., Pacheco Bufanda, L., Martínez, C., Medina Ponce, S. E., Cázares-Adame, R., Rochin Bochm, P. F., Kayser, G., Strathdee, S. A., Muñoz Meléndez, G., Holmes, S. M., Bojorquez, I., Los Huertos, M., & Bourgois, P. (2022). Deported, homeless, and into the canal: Environmental structural violence in the binational Tijuana River. *Social science & medicine* (1982), 305, 115044. <https://doi.org/10.1016/j.socscimed.2022.115044>

Contact information
riotijuana@colef.mx
proyectobordo@gmail.com
Proyecto Socioambiental Río Tijuana

