



## **Plastic waste, Refuse derived fuels (RDF), and cement kilns.**

### EXECUTIVE SUMMARY

March, 2023

This document describes findings of an ongoing investigation that aims to reveal some key aspects to understand the scale and scope of the use of plastic waste as fuel in industrial processes in Mexico, the so-called refuse-derived fuel (RDF).

The results of this first stage of the investigation are as follows.

1. Regarding the magnitude of waste imports in Mexico, there are records that in two of the key tariff fractions to track international trade flows to produce non-conventional fuels derived from waste, there was a significant increase mainly from the United States. Based on information from UN Comtrade, the increase in exports to Mexico of tariff fraction 3915, between 2019, 2020, and 2021, was 65.91% and 37.76%, respectively. In the case of tariff fraction 3606, there was a real increase between 2019 and 2021 of 89%. Regarding tariff fraction 3825, a decrease of 87.4% was observed in the same three-year period (See Annexes 1, 2, and 3)

The Mexican government's data published on the Internet-based Tariff Information (Siavi), show an even greater increase in imports of tariff item 3915 by 124% between 2019 and 2021. This tariff code is the one that the highest volume of waste entering Mexico, followed by imports tariff item 3825 with a 15% increase. Finally, fraction 3606 has the lowest import volume, with a 25 percent reduction between 2019 and 2021.

During the analysis, a re-export indicator was detected which stands out in the United States in the three tariff fractions. No information is available in more detail about these re-exports, and whether the waste was subjected to some transformation process for re-export.

If it is considered that during the observed years the analyzed fractions were free of tariff, a possible hypothesis that must be followed up is that the imported waste is transformed in that country as fuel for incineration in cement plants or mineral processing plants in Mexico. One factor that coincides with this hypothesis is that the value of re-exported products is much higher than normal exports (See tables in Annexes 1, 2, and 3).

2. From the consultations carried out through the transparency system and the interviews with officials it can be concluded (at this stage of the investigation) that cement companies are not directly importing plastic waste or CDR. However, it was possible to find out that there have been requests to import CDRs by Grupo Cementero de Chihuahua (GCC), and the environmental authority did not yet authorize it. An alarming fact is that currently, the SEMARNAT receives from 8,000 to 10,000 authorization requests per year for the import and export of waste.

3. According to public information provided by the environmental authority, the only company importing CDR that has an import permit is Samex Recycling Technologies S.A. de C.V. located in Tijuana (see Annex 4), but it does not appear with that name in the foreign trade databases analyzed. It is therefore necessary to review the databases of waste importing companies and associate them the existence of permits or authorizations for waste management and treatment.

4. In the search process through requests for public information on authorizations from the environmental authority for the preparation of CDRs, only two permits issued by the Chihuahua state authority could be accessed.<sup>1</sup> Most of the state governments denied the information arguing that it is federal competence when it comes to hazardous waste. The federal authority responded that since it is special handling waste, it is the responsibility of the states. As a result of the foregoing, it can be stated that companies that use and/or manufacture RDF in Mexico may be operating under a legal loophole. As CDR is a mixture of special handling waste (household and hazardous wastes), it is not clearly defined by law.

5. Using the Basic Information Package of the INEGI Geostatistical Framework 2020, 33 sites and/or facilities located in 19 states of the Mexican Republic that operate energy co-processing and "recycling" processes were mapped. The maps show the proximity to the urban and rural settlements that are being impacted. (See Annex 5). This gives us an approximate idea of the population exposed to contamination generated by facilities that co-process waste in the form of chlorine, dioxins, sulfur, heavy metals, among others.

In Mexico, the most powerful cement companies are grouped in the National Cement Chamber (CANACEM), which is made up of Holcim Apasco, Grupo Cementos de Chihuahua (GCC), CEMEX, Cementos Moctezuma, and Cementos Fortaleza. Each of them deploys a different strategy for the positioning of waste-based fuel and with different names such as Inorganic Fraction of Urban Solid Waste (FIRSU), Organic Residual Fraction of Energy Efficiency (FROEE) and Climafuel. All of them link their use with energy efficiency, and with climatic and environmental actions.

## **RECOMMENDATIONS**

Based on the findings of this first stage of the research, the recommendations are as follows.

1. Due to legal provisions, the tariff information system via the Internet, SIAVI, will no longer be updated as of February 2022. To follow up on the problem of plastic waste imports, it is necessary to strengthen transparency and public information systems. It is also important to deepen the analysis of re-exports and to rule out the possibility that we are in the presence of processes for the manufacture of refuse-derived fuels (RDF).

2. It is important to address the disconnections that exist between the registers of waste importing companies and the permits issued by the environmental authority for their management. The lack of certainty in the treatment and destination puts at risk the populations and ecosystems to which these wastes reach.

---

<sup>1</sup> <http://sduetransparencia.chihuahua.gob.mx/23/rpt/ec/empresascomb23000029.pdf>

3. It is urgent to correct the legal loophole in which companies could be operating to produce and process RDF without environmental authorization. And to clearly define its regulation and competencies with environmental and public health criteria.
4. It is necessary to carry out health evaluations and diagnostics in the populations near cement facilities that are co-processing refuse-derived fuels (RDF).
5. It is important to link refuse-derived fuels (RDF) with their content of hazardous substances, their contribution to climate change and pollutant emissions, and to dismantle the narrative of cement companies to position their use in relation to energy efficiency, climate and sustainability actions.

Contact information: [accionecologicamex@gmail.com](mailto:accionecologicamex@gmail.com)