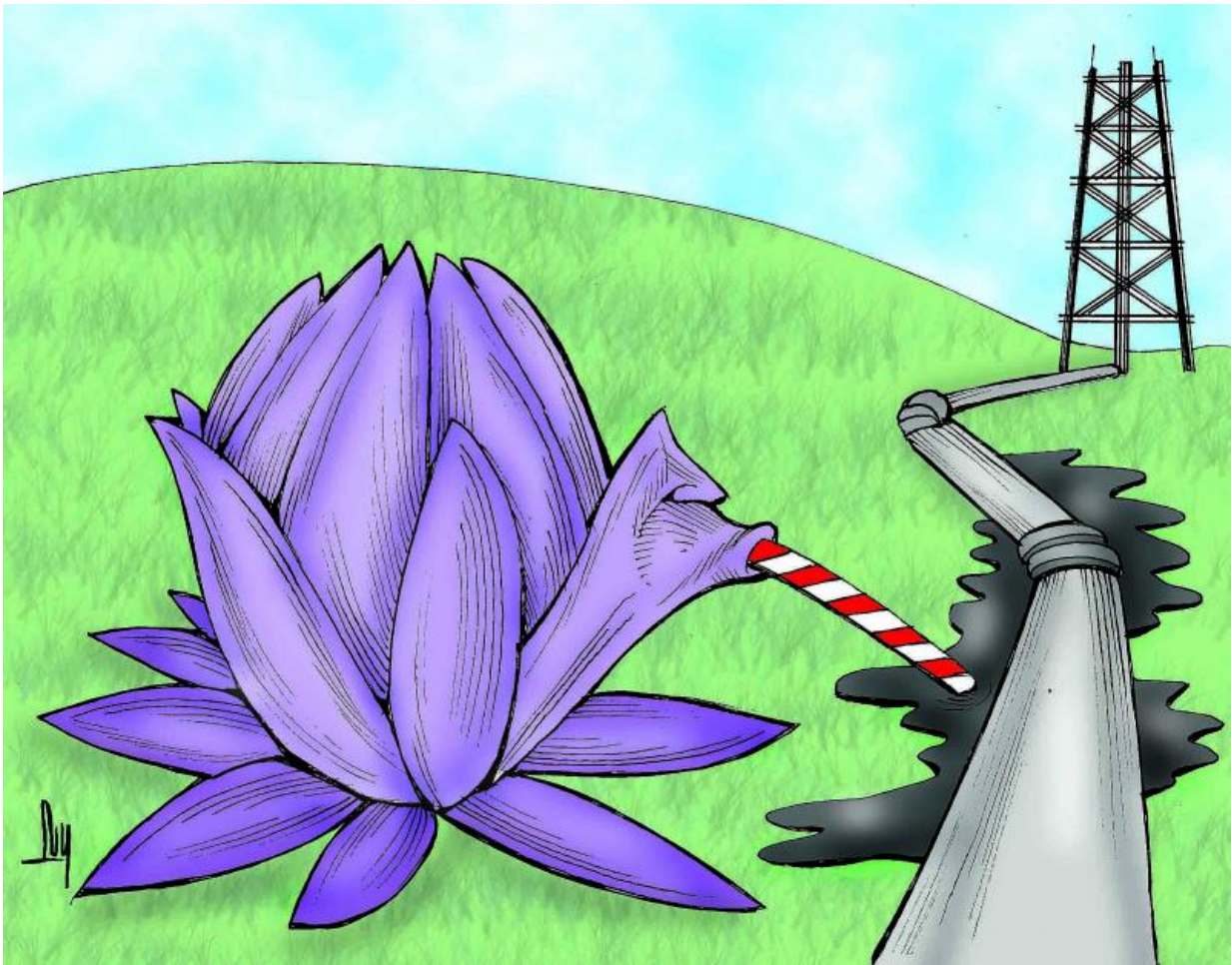


Biodegradable absorbent from water lily to attend oil spills

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The water lily transformed from a plague to the main ingredient of a biodegradable absorbent that resolves spills or leaks of hydrocarbons, oils and other industrial substances, both in solid surfaces such as concrete, asphalt, earth and rivers, says Jose Carlos Vargas Soto , CEO of the Mexican company TEMA.

The product is applicable to various industries, including automotive, energy, mining and food sectors. The absorbent is marketed at different levels: in bulk for soil remediation and dispersion of hydrocarbons, while pillows and barriers were designed to attend to spills that solve the problem in a more practical way.

According to laboratory tests, a kilo of the product can absorb up to four liters of hydrocarbons. When applied to other substances such as oils or inks, the product's capacity was 20 fold higher.

When the powdered form is applied on a [solid surface](#), it is integrated with hydrocarbons to form a conglomerate that allows easy handling. In the case of rivers or oceans, the absorbent is eliminated and replaced with a dispersant that breaks up pollution spots and facilitates remediation of the affected area, said the director of TEMA.

Ironically, even though the plant is a pest in rivers and disrupts production activities in the primary sector, its grinding or elimination by chemicals such as glyphosate cause decomposition of organic matter, reinstatement of contaminants, available oxygen depletion, changes in the environmental context and generation of greenhouse gases.

Therefore, the company has implemented purification of the water lily, which oxidizes organic matter via bacteria associated with the root of the plant. This action favors oxygen transport, which facilitates the plant's absorption of nitrogen.



Vargas Soto explains that to obtain the [absorbent](#), the moisture is removed, leaving only biomass. The next step is to withdraw foreign materials such as plastics, reducing the result to a very fine powder.



In Mexico, there is significant presence of the [water lily](#); it can be found in 28 states across approximately 70,000 hectares on the surfaces of lakes, ponds, reservoirs, rivers and canals. In an international context, it grows in 43 countries. Fighting it creates a pollution problem due to the use of herbicides.

TEMA currently seeks to industrial implementation of its product in seven cities across the country.

Provided by Investigación y Desarrollo

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