

XIII Congreso Mexicano del Asfalto. 20, 21y 22 de agosto de 2025, Cancún, Quintana Roo, México



@AMAACmx

<http://www.amaac.org.mx>



# International Bitumen Emulsion Federation and the World Asphalt Emulsion Market: Paving the Way to Sustainability

Rosita Martínez/Gaylon  
Baumgardner

Technical Coordinator/President

**IBEF**



XIII Congreso Mexicano del Asfalto. 20, 21y 22 de agosto de 2025, Cancún, Quintana Roo, México

# CONTENIDOS



01

About IBEF

02

World Emulsion Market

03

Sustainability of emulsion. White Paper



# International Bitumen Emulsion Federation (IBEF)



## Missions

*"The IBEF, exchange forum"*

- Promote the use of bitumen emulsions worldwide
- Study the promotions in producing countries and disseminates them for the benefit of all
- Exchange technical information on bitumen emulsions, in particular on the manufacture and use of bituminous binders
- Exchange standardization information
- Exchange safety standards information
- Organize periodically global technical symposium on bitumen emulsions

 **Full members**

- National associations of bitumen emulsions producers.

 **Associated members**

- Producers and users of bitumen emulsions
- Producers of chemical products and equipment manufacturers
- Consulting engineers, laboratories
- Universities, Administrations, NGOs

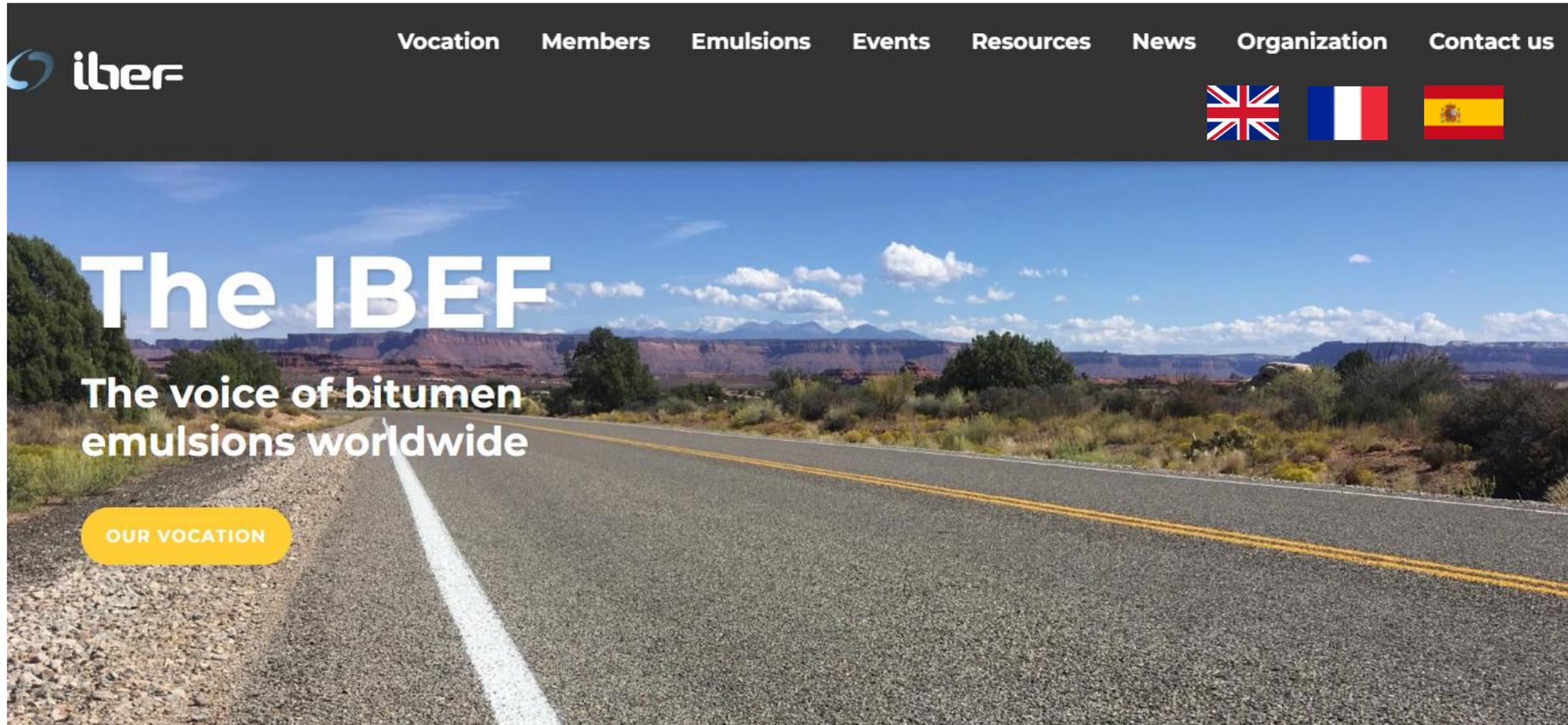


**Members review : 11 +27 members**





# Website



<https://www.ibef.net>

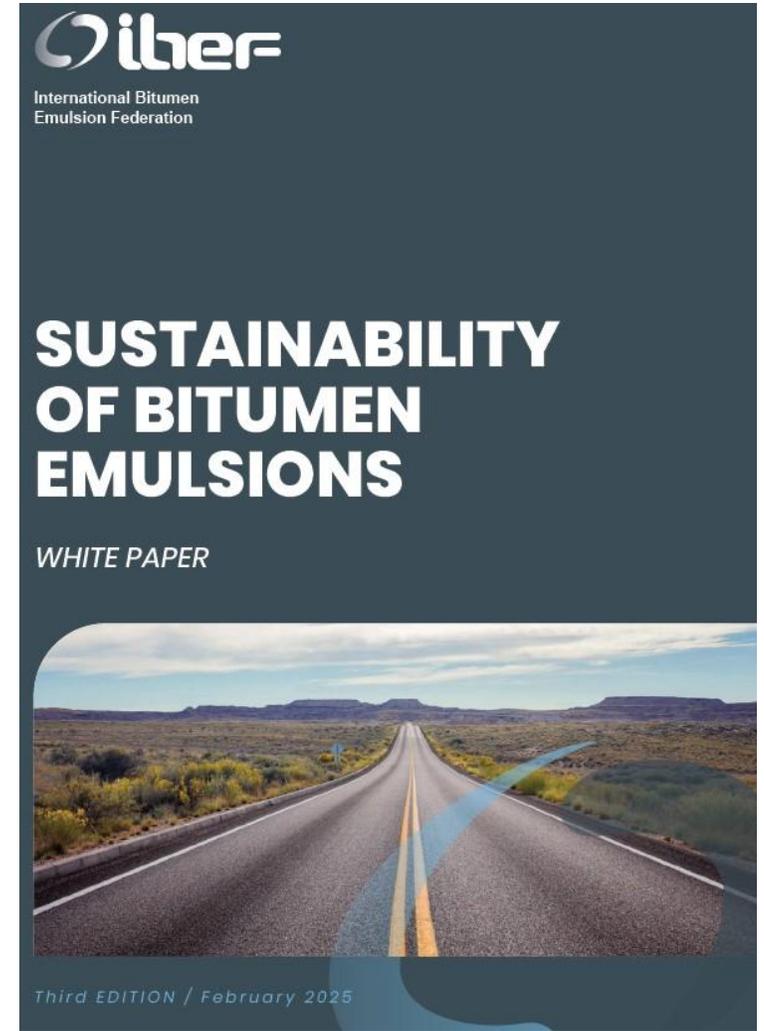


@AMAACmx

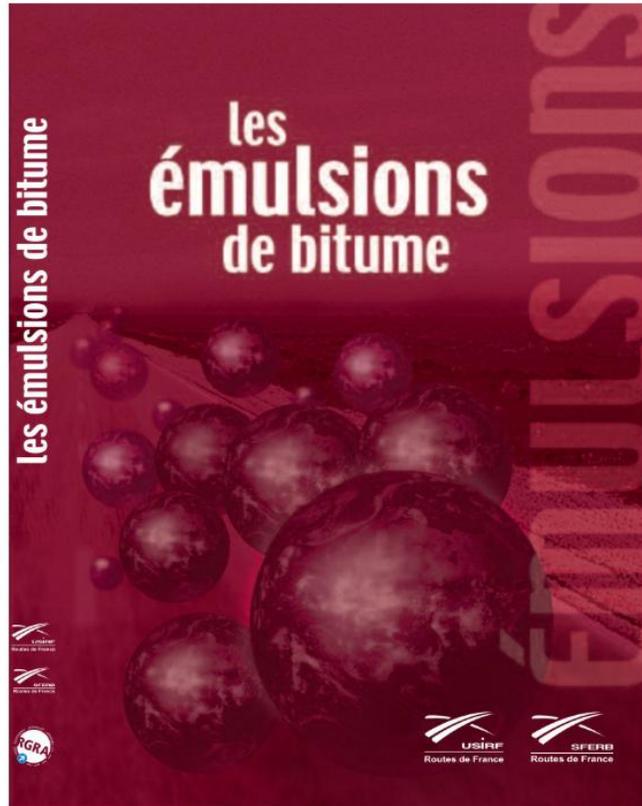
<http://www.amaac.org.mx>



# Publications



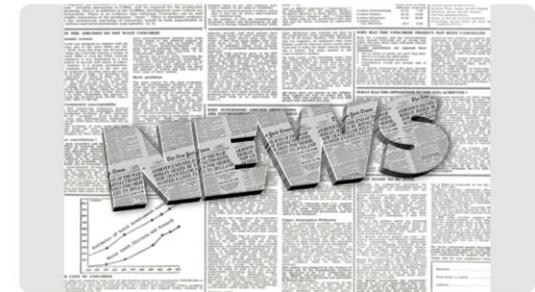
# Publications



Libros y guías de referencia



Actas del congreso



Artículos de prensa

# Webinars



[IBEF](#) > [Resources](#) > [IBEF Reports and Seminars](#) > [IBEF seminar](#)



## IBEF Winter Webinar 2024

IBEF Winter Webinar 2024 was another successful event with



## Sabita's Health & Safety Webinar

Sabita's Health & Safety Webinar 20th September 2024 at



## IBEF held its spring webinar in

IBEF held its spring webinar in Budapest on the 18th June 2024.

# Congress 2025



**NTRO**  
**THE TRANSPORT REVOLUTION**  
 Solutions led by Innovation

International Technical Conference

7 - 9 May 2025  
 Port Melbourne

**2025 AEMA-ARRA-ISSA Annual Meeting**

The Westin Rancho Mirage Golf Resort & Spa  
 Mar 3 - 7, 2025

**11TH EATA CONFERENCE**  
 EUROPEAN ASPHALT TECHNOLOGY ASSOCIATION

**MOLE VANVITELLIANA ANCONA, ITALY 10/12 JUNE**

**XIII CONGRESO MEXICANO DEL ASFALTO**

"Reciclado de Pavimentos Asfálticos: Un proceso natural hacia una infraestructura vial verde"

Miércoles 20 Agosto de 2025	08:00 - 12:00 horas 13:00 - 18:00 horas
Jueves 21 Agosto de 2025	08:00 - 12:00 horas 13:00 - 18:00 horas
Viernes 22 Agosto de 2025	08:00 - 12:00 horas 13:00 - 18:00 horas

**Programa general**

[amaac.org.mx/xiiicma-programa](http://amaac.org.mx/xiiicma-programa)

Programa sujeto a cambios sin previo aviso.

Asociación Mexicana del Asfalto, A.C.

Cancún, Quintana Roo.

20TH AFPA INTERNATIONAL CONFERENCE

**FUTURE READY ROADS**

ADELAIDE 28-30 OCTOBER 2025

# Asphalt Emulsion Worldwide in 2022



155 countries



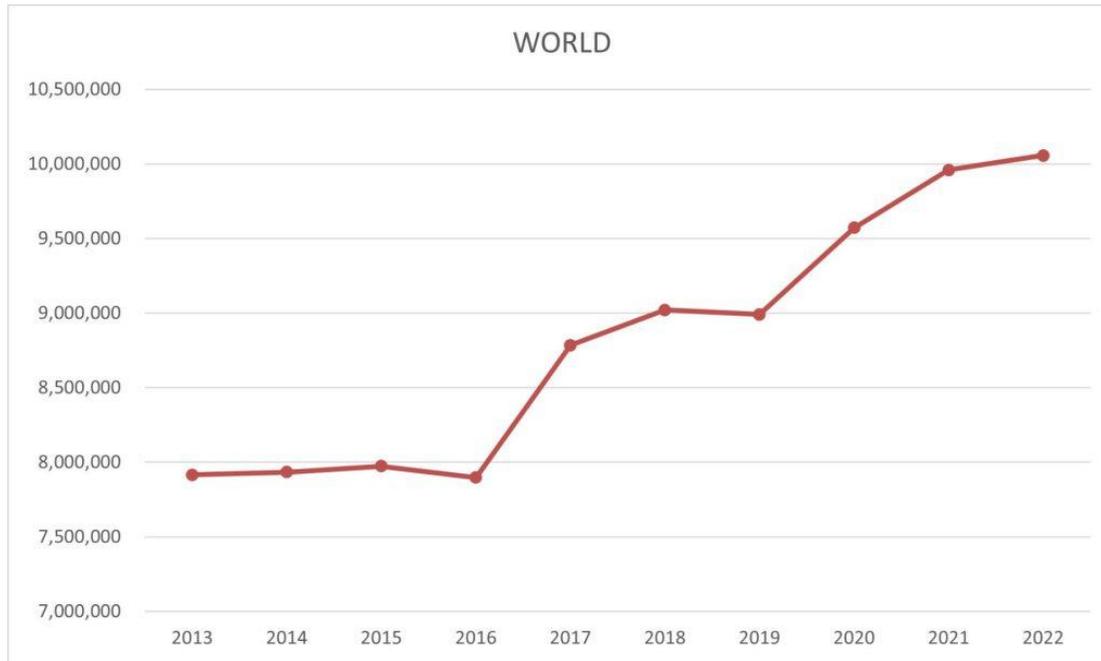
@AMAACmx

<http://www.amaac.org.mx>

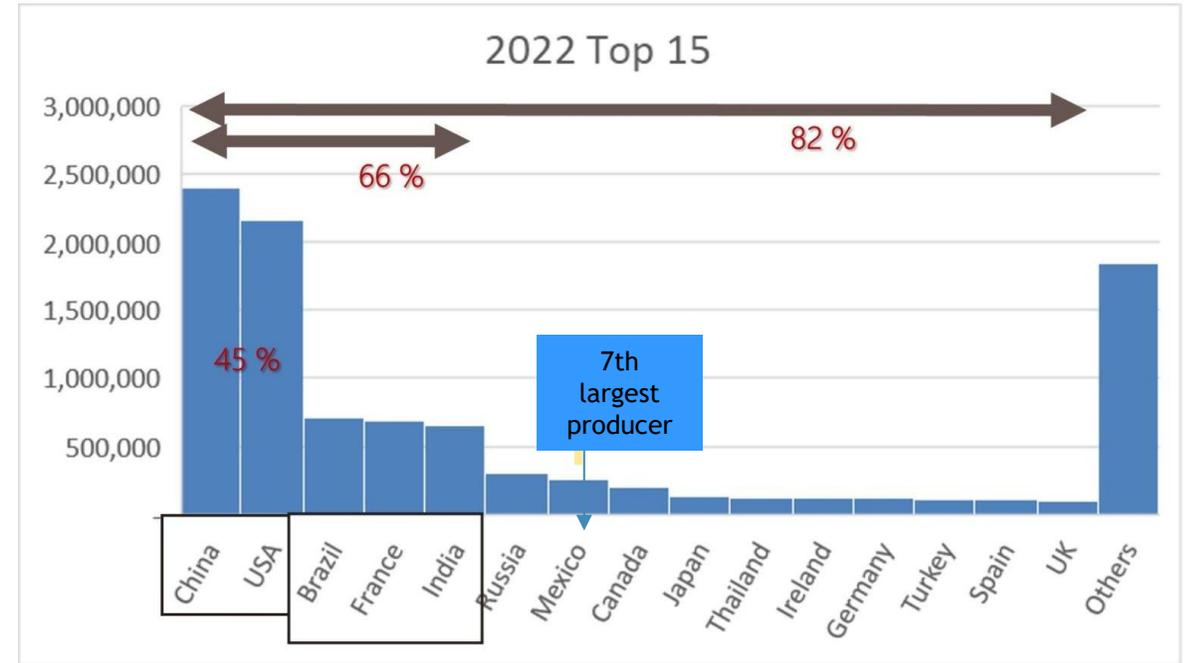


# • Asphalt Emulsion World Market

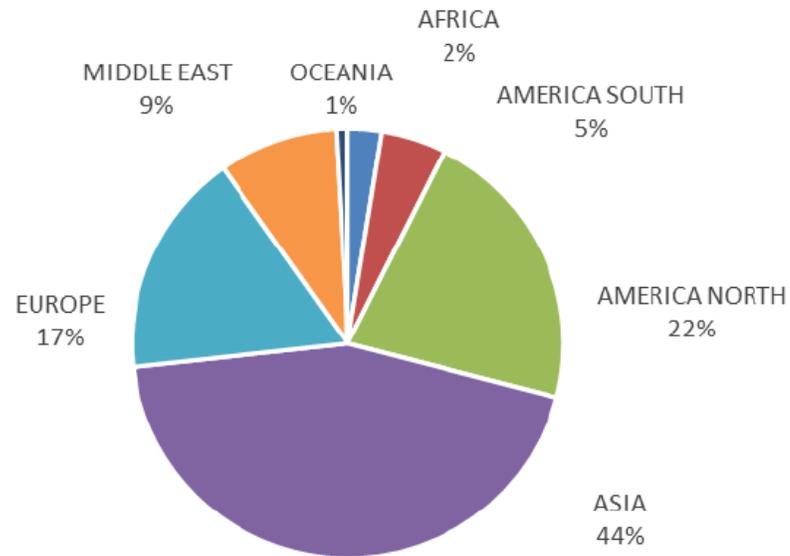
## Evolution Volume Asphalt Emulsion 2013-2022



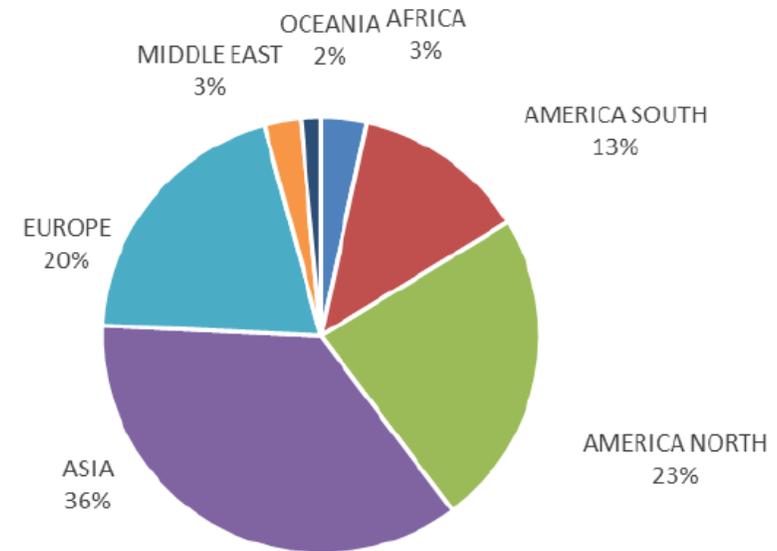
## Top 15 producers 2022



# Asphalt emulsion per continente in 2022



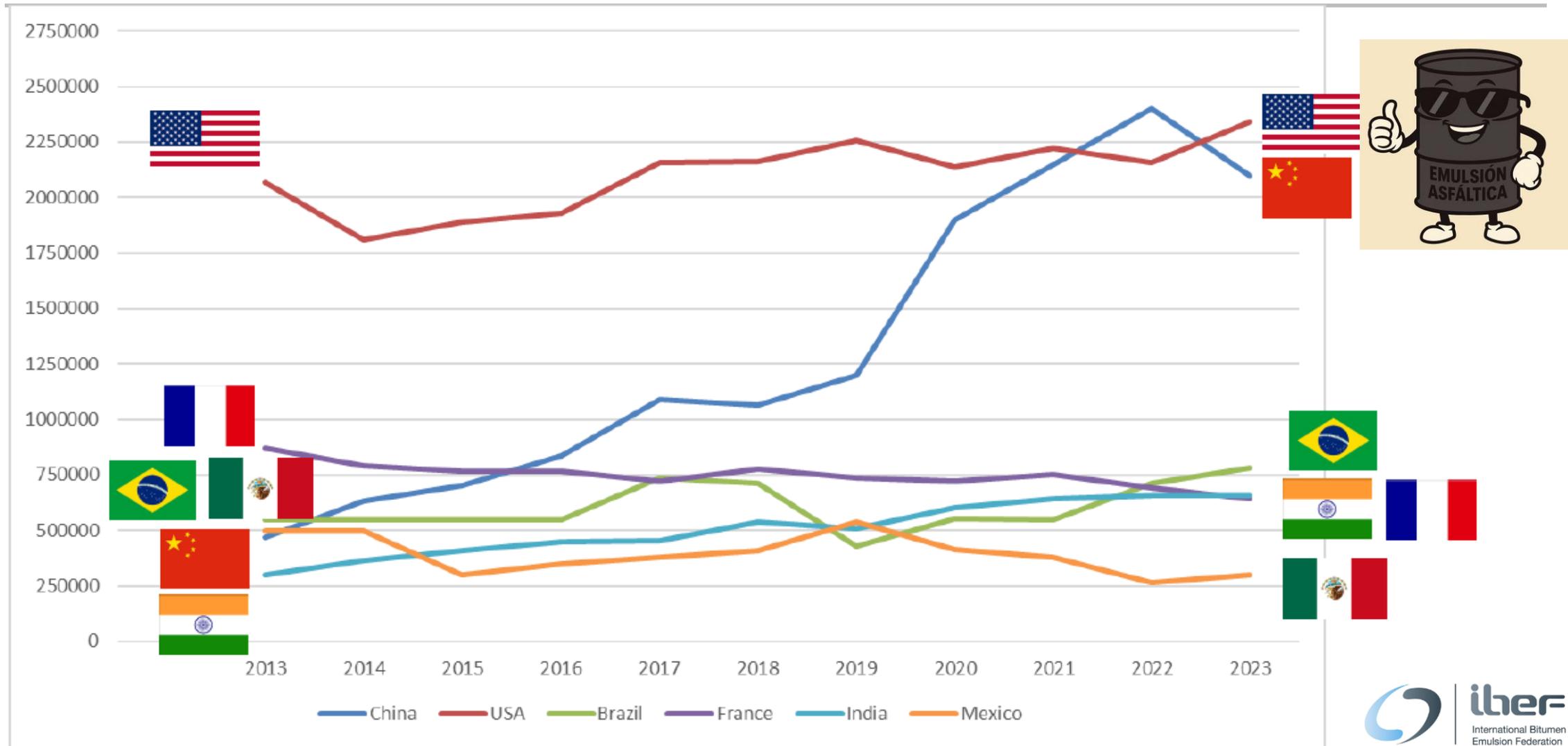
Bitumen Volume 2022 per continent



Emulsion Volume 2022 per continent

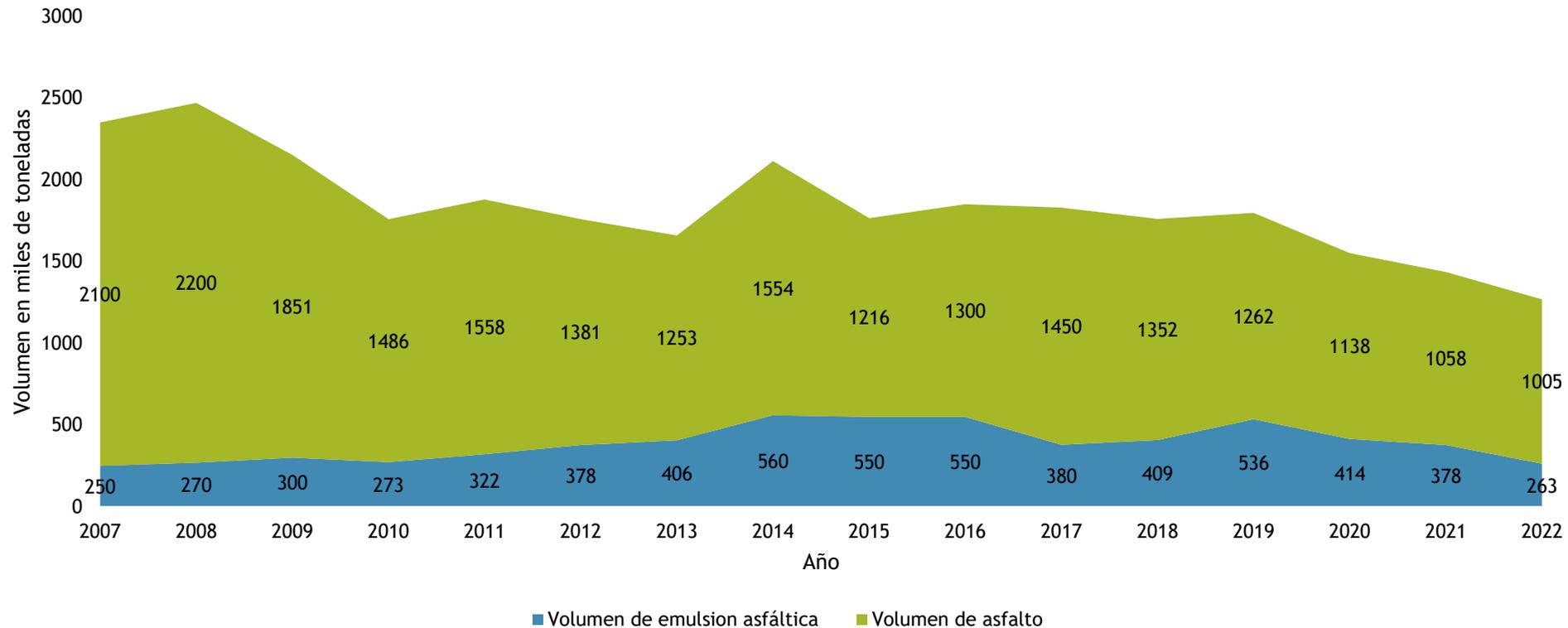


# • Top asphalt emulsion producer countries 2013-2023

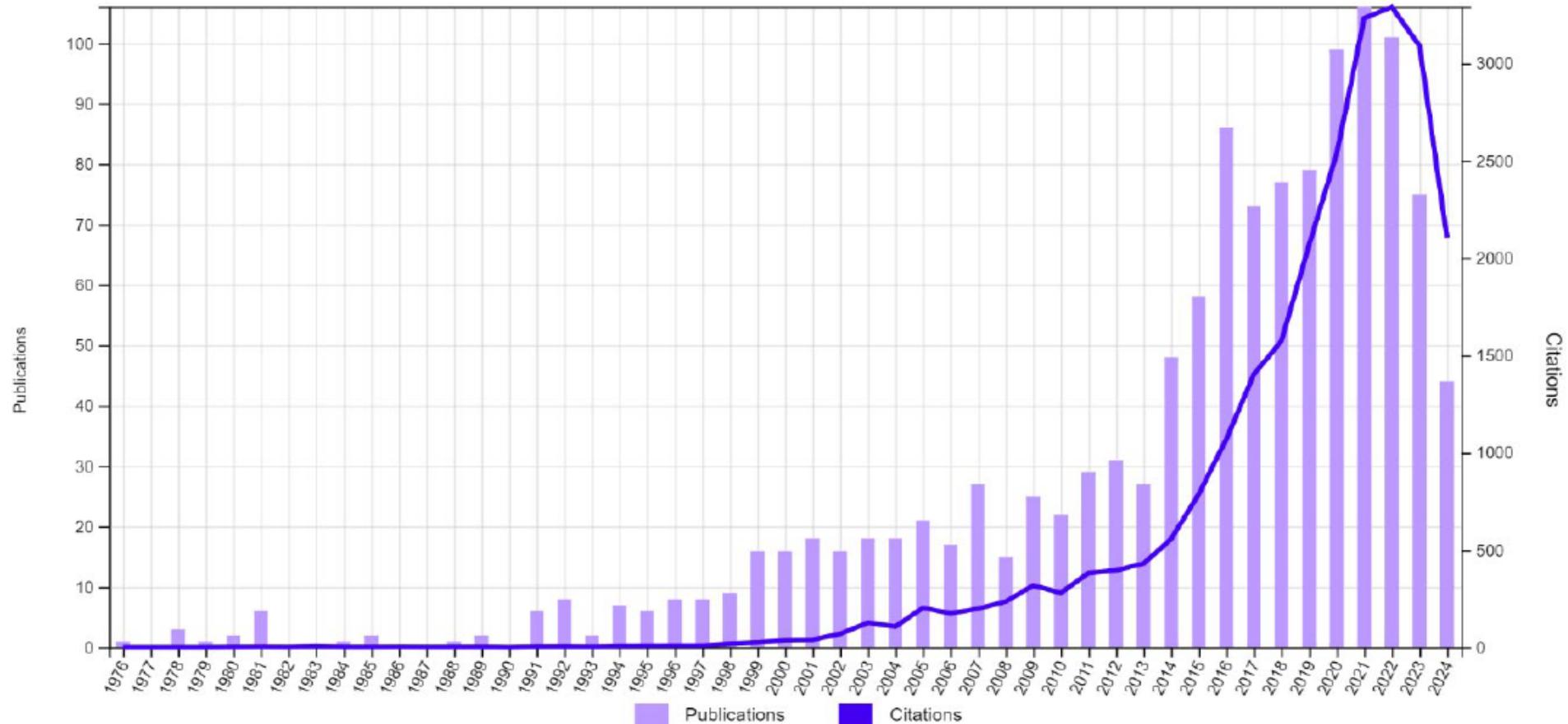


# Asphalt emulsion in Mexico

Consumo de asfalto y emulsión asfáltica en México

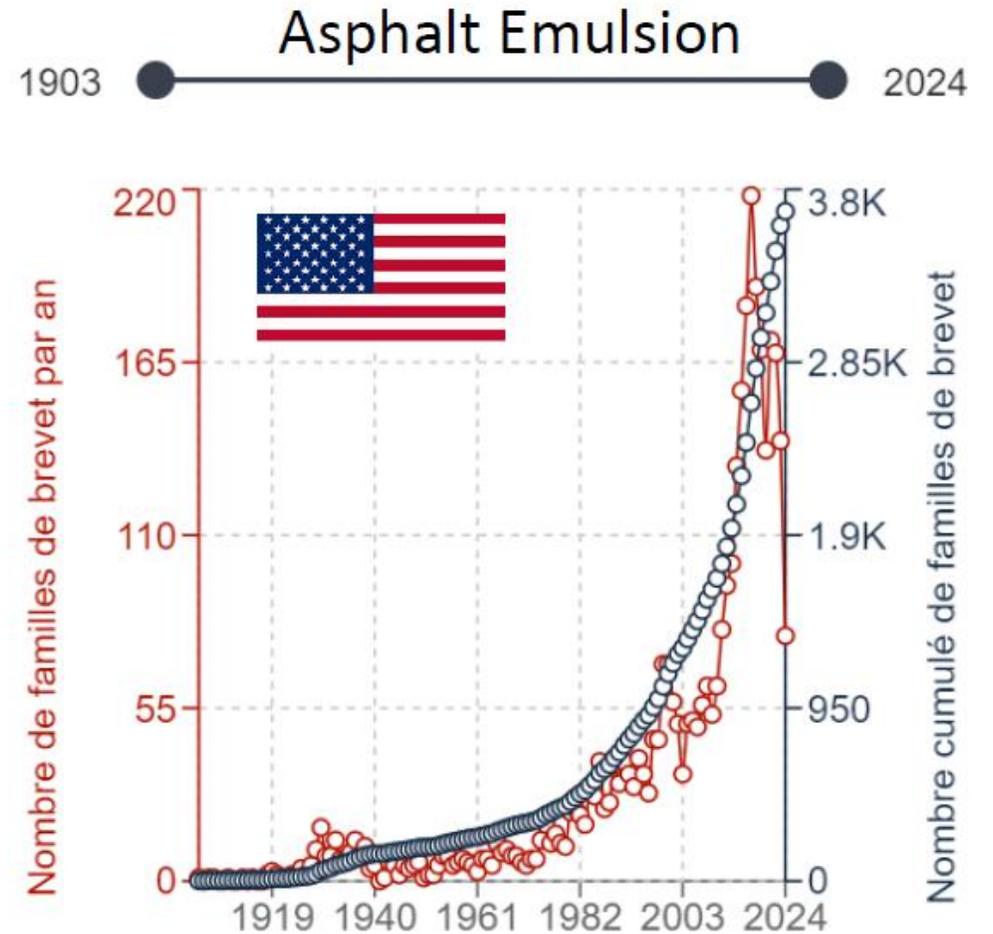
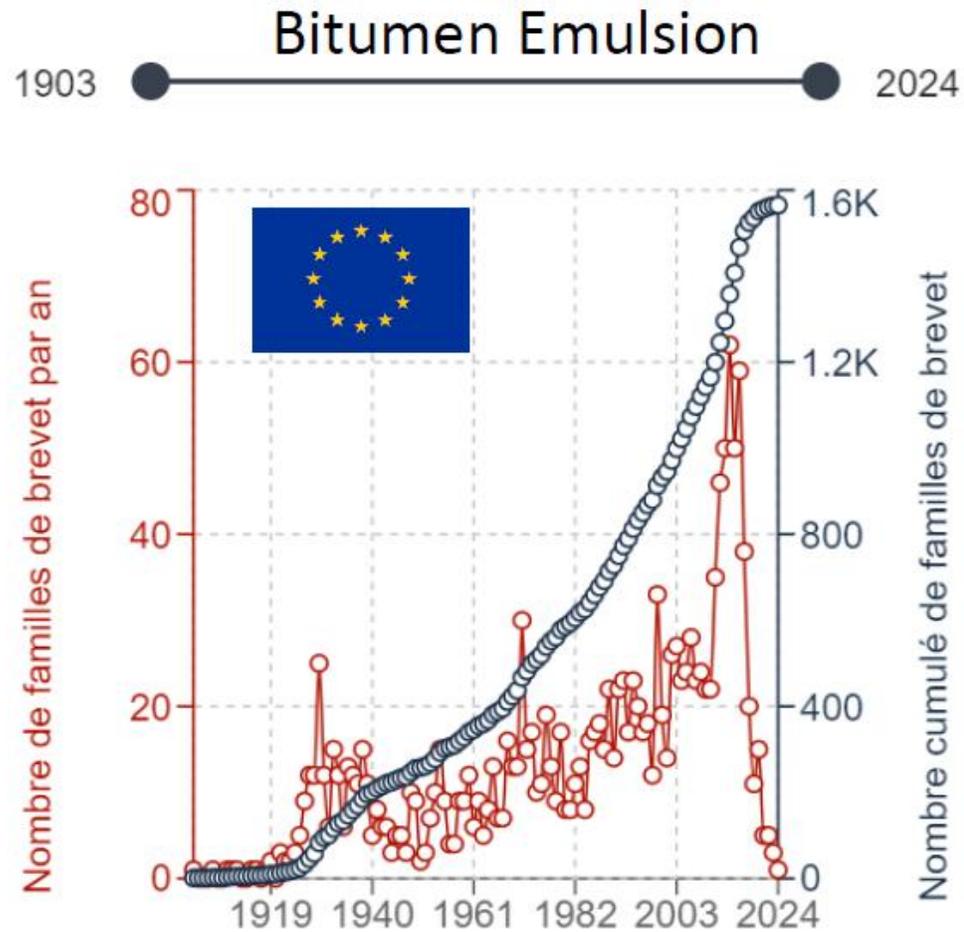


# Articles published about asphalt emulsion

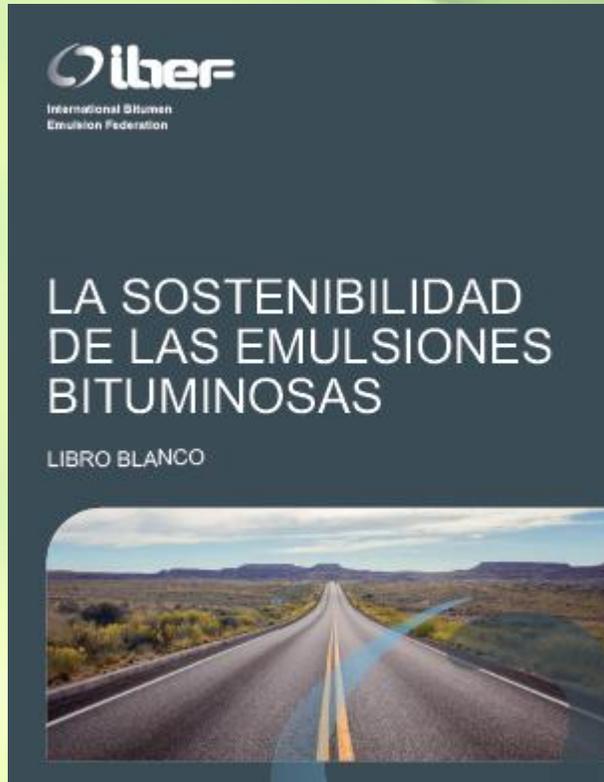


Research Web of science

# Patent registered about asphalt emulsion



# • Sustainability of emulsion. White Paper



## **English version:**

[Sustainability-of-Bitumen-Emulsions\\_ENGLISH.pdf](#)

## **Spanish version:**

[Sustainability-of-Bitumen-Emulsions\\_SPANISH.pdf](#)

## **Chinese version:**

[IBEF-Booklet---\\_Sustainability-of-Bitumen-Emulsions\\_CHINESE.pdf](#)

## **French version:**

[Sustainability-of-Bitumen-Emulsions\\_FRENCH.pdf](#)

<https://www.ibef.net/en/report/sustainability-of-bitumen-emulsion-whitepaper/>

# PILLARS



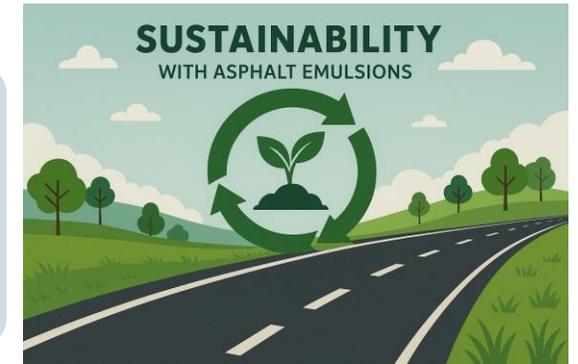
Pavement Durability



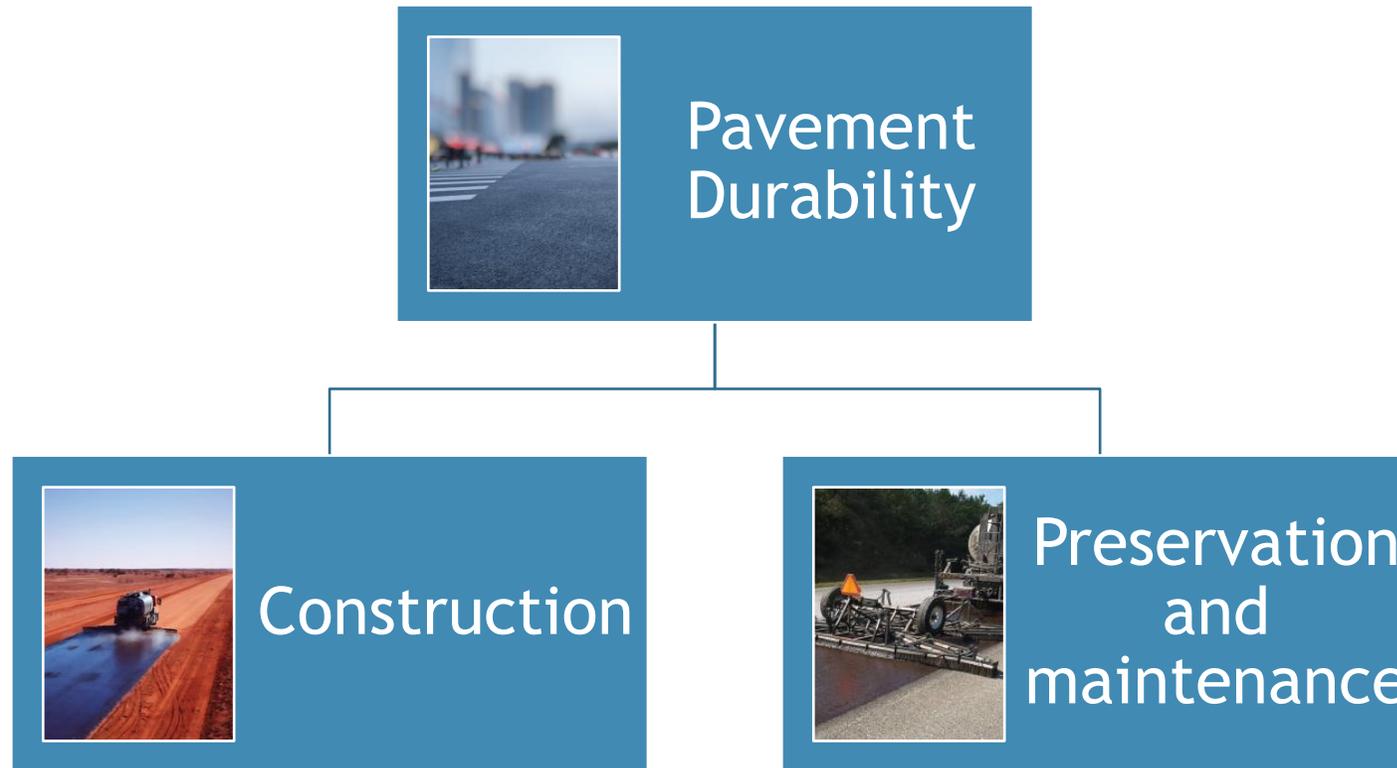
Pavement Structural Improvement



Environmental and Social Impact



# PILLAR 1



El objetivo principal es optimizar o maximizar la durabilidad y vida útil del pavimento.

# • Construction



## • Prime coat

Prime coats are specifically designed to enhance adhesion between hot mix asphalt layers and the aggregate or stabilized base, creating a stronger and more structurally sound foundation.

## • Tack coat

If a proper bond is not established between the existing pavement surface and the new asphalt pavement layer, delamination may occur, resulting in the separation of layers. Delamination can lead to various structural distresses, with the primary types being slippage cracking and fatigue cracking (Ref. 4).

# • Preservation and maintenance

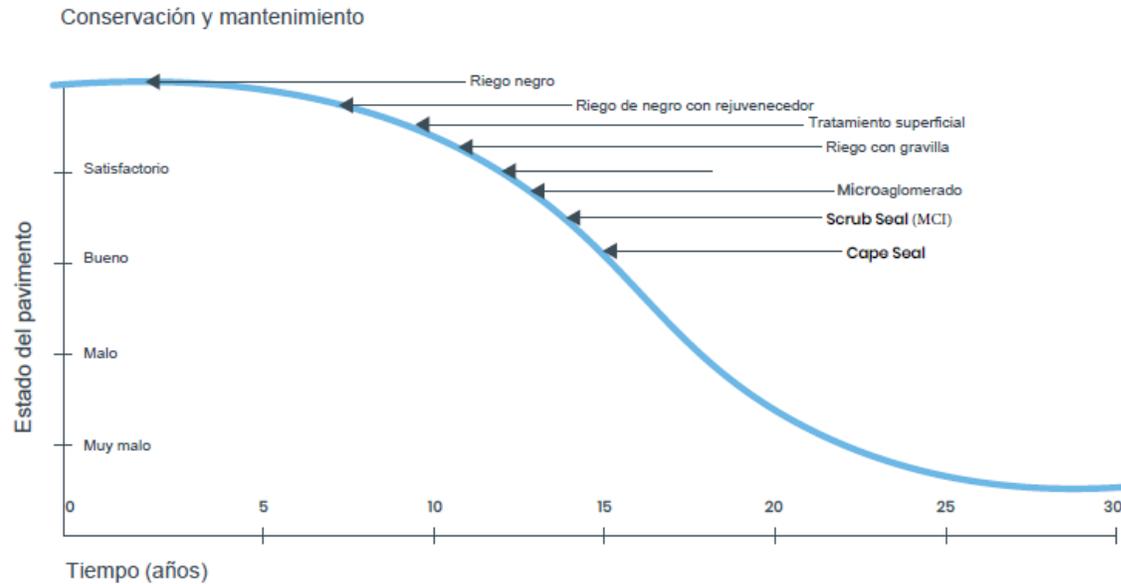


Figura 4- Matriz del tratamiento, estado del pavimento a lo largo del tiempo

**Preventative treatments effectively reduce the life-cycle embodied carbon of existing pavement and the use of natural resources through increased durability.**

The material production phase is the biggest contributor to CO<sub>2</sub>e emissions in the road life cycle. This phase includes the extraction of raw materials, manufacturing of mixtures, and transportation of both materials to manufacturing sites. The second biggest contributor to CO<sub>2</sub>e emissions in the road life cycle is the use phase. Fuel consumption in vehicles slightly increases due to pavement roughness, measured by the International Roughness Index (IRI) (Ref. 9). Although the effect is small per vehicle, it has a significant impact on the total emission when applied to high volume roads.

# • Product and Processes for Surface treatment



Fog seal



Chipseal



Scrubseal



Microsurfacing

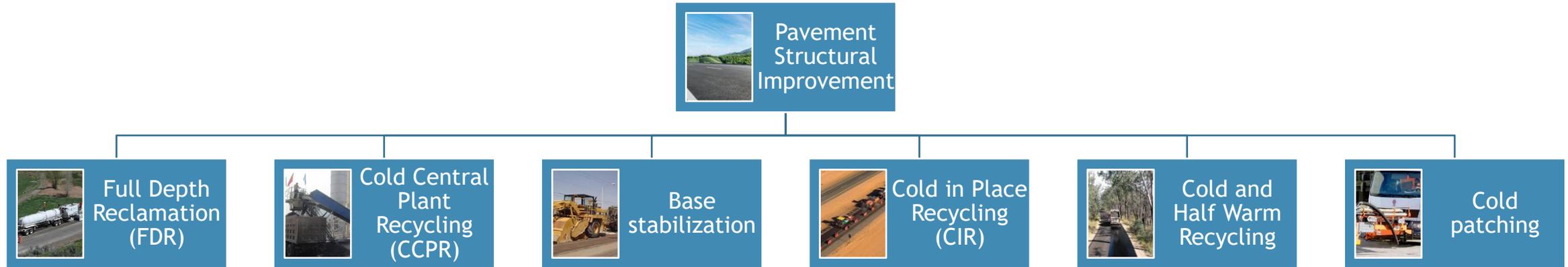


Grava-emulsión



Cape-seal

## PILLAR 2



Rehabilitation aims to restore the structural integrity of distressed pavements that require more than routine maintenance or preservation methods. Effective techniques that can be used depend on project conditions and needs.

# PILLAR 3



Environmental and Social Impact



Saving energy and lowering carbon footprint



Recycling option

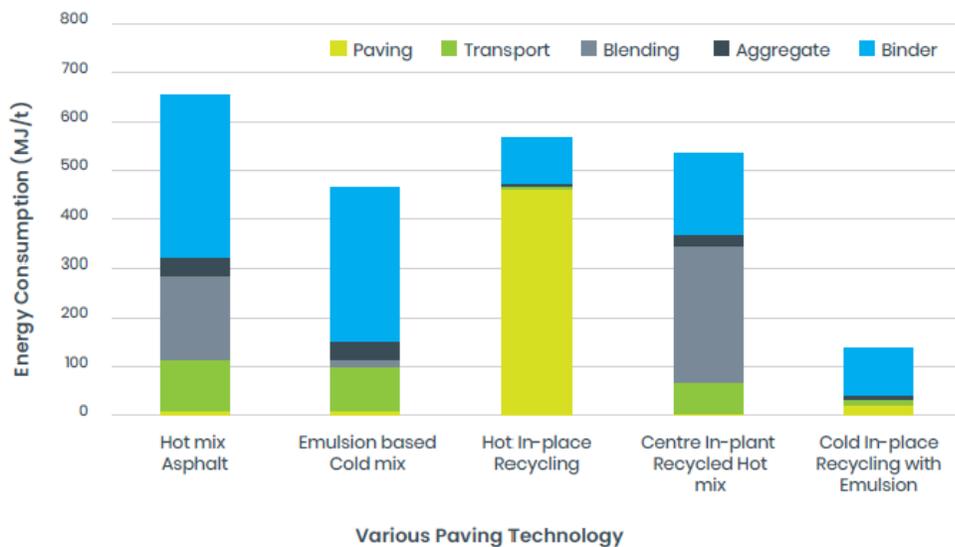


HSE aspects



Social impact

## Saving energy and Lowering carbon footprint



## Recycling options that reduce virgin materials



## Recycling: Aggregates/RAP/CCPR/CIR

## HSE Aspects

- Less fumes, dust, and low VOC emissions
- Improved working conditions
- Environmental Impact quantification (LCA)

## Social Impact

- Reduction in smell
- Improved skid resistance
- Increasing working season
- Improved safety



Bitumen emulsions are used in various surface treatments and recycling applications that have been proven to save costs by reducing material and energy usage.

# The cheapest energy is the energy you don't use

The cheapest and greenest energy is the energy we don't use. And this is especially true in industry, where energy waste reduction can result in real financial gains. Plus benefits to the planet and wider society.

THANKS FOR  
A SUCCESSFUL CONFERENCE

*¡ muchas gracias!*

**Ponente:** Rosita Martínez Arroyo

**Contacto:** Rosita.martinez@ergon.com

