



March, 2006



Actions for 3R Development in Mexico















- 1. Crusade for Cleaning México.
- 2. Management plan for used oil.
- 3. Co processing of hazardous wastes in cement kiln industry.
- 4. Recycle of plastics Polyethylene terephtalate (PET).
- 5. Recycle of dust from metal smelting industry.







#### Crusade for Cleaning México





#### Summary of the practice

This is a national effort that implies programs like clean school, clean localities, solid wastes management, among others. At the moment the crossed is a consolidated program that counts on success experience and that ties with other programs of the government. Examples of stakeholders involved are: GTZ, Local and regional governments and NGO's. One of the main goals are related to reuse and recycle actions.



#### Impact

The Crusade looks for to insert, to educate and to generate a conscience of the values, a culture of respect to the environment by means of a main axis like the 3R's.

# Key for Success

The participation of the different sectors from the Mexican society to fortify the conscience around the environment and the natural resources in our country, since only with its commitment and its actions, the environmental deterioration of our country can be stopped.







# Management plan for used oil





#### Summary of the practice

This is an initiative that at the present time is in the phase of approval by the federal government, the main target is environmental sound management to the used oils in all the country as of 2006.

#### Impact

The implementation of the plan will reduce the impact of used oil in the environment, as well as to take advantage of its potential like alternating fuel, and of course reduce, reuse and recycling it.



Management plan for used oil

#### Key for Success

The consolidation of markets of wastes, the conventional fuel substitution by other alternative ones, and reducing the pollution of the environment caused by the inappropriate disposal of used oils.



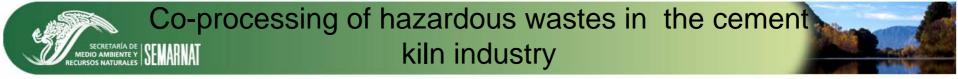






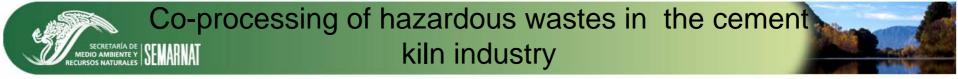
### Co-processing of hazardous wastes in the cement kiln industry





#### Summary of the practice

There are many hazardous wastes that are being used as alternative fuel or raw material in cement kilns in México, all of these cement kilns have emissions controls that make there use environmental friendly.

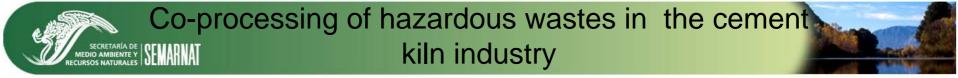


#### Impact

The huge kind of hazardous wastes and big amounts of them that are susceptible to feed to a cement kiln, being used as alternative fuel or as raw materials in the cement production.

Great saving of conventional fuel with it's a no renewable resource, when it's substituted by hazardous wastes.

The high temperature and long time of residence that are necessarily applied in a cement kiln, when hazardous wastes are feed.



#### Successes Key

The active participation of the Cement National Chamber (CANACEM).

The creation of the Mexican Official Standard, NOM-040-SEMARNAT-2002.

The high number of facilities that the Mexican cement industry have the all over the country.







# Recycle of plastics (PET)





#### Summary of the practices

Mexico:

- New facility with capacity of 25,000 ton/year.
- •1,900 millions of packages of PET Processed.
- •Actual total capacity 75,000 ton/year.
- •2 out of 10 packages of PET are collected for recycling.



**Recycle of plastics (PET)** 

# Impact, Main Uses of PET:

- Manufacturing of Polyester Fiber
- Plastic Wood
- Additives
- •Base for Paving



**Recycle of plastics (PET)** 

### Key for Success

Active Participation of:

• Goverment

•Pet material chain

•Civil Society

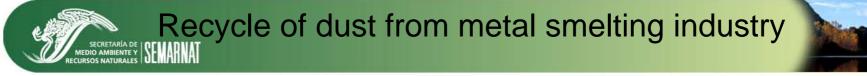






# Recycle of dust from metal smelting industry





#### Summary of the practices

#### Dust of Electric Furnace Use to Obtain:



•Cd

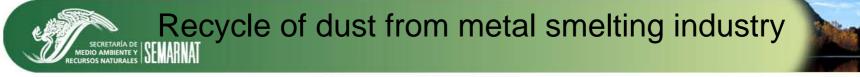


#### Impact

As a result of the zinc recovery, this facility produce:

- •Oxide of zinc nutritional degree for animal balanced food
- •Agricultural fertilizers
- •Raw materials for the ceramic industry
- •Rubber and painting industries
- •Chemical industry.

The company gives direct and indirect jobs for about 4500 people and had obtained the certificate of clean industry by PROFEPA (Federal Environmental Attorney)



# Keys of Success

These enterprise have developed their own technology through 30 years.

The demand from the international market for their products (zinc oxide).

The facility have an optimum environmental performance, almost 60% of their equipments are dedicated for emissions, effluents, and wastes controls.

The exceptional relationship with the local community and their workers.





#### **Contact Information**

#### Quim. Felipe Adrián Vázquez Gálvez Subsecretario de Gestión para la Protección Ambiental SEMARNAT

#### Tel: +(55) 56 24 35 44, 56 24 35 45 Email: adrian.vazquez@semarnat.gob.mx Fax: +(55)56 24 36 80

ADRESS: AV. REVOLUCIÓN 1425, COL. TLACOPAC SAN ANGEL, DELEGACION ÁLVARO OBREGÓN C.P.01040. MÉXICO, D.F.