

# WHO CONTROLS CEMENT AND CLINKER SHIPPING?

Ad Ligthart

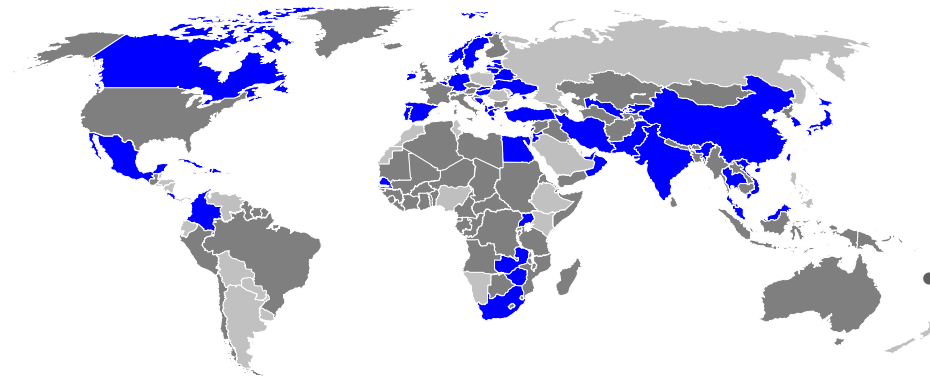
Cement Distribution Consultants



22-01-2014



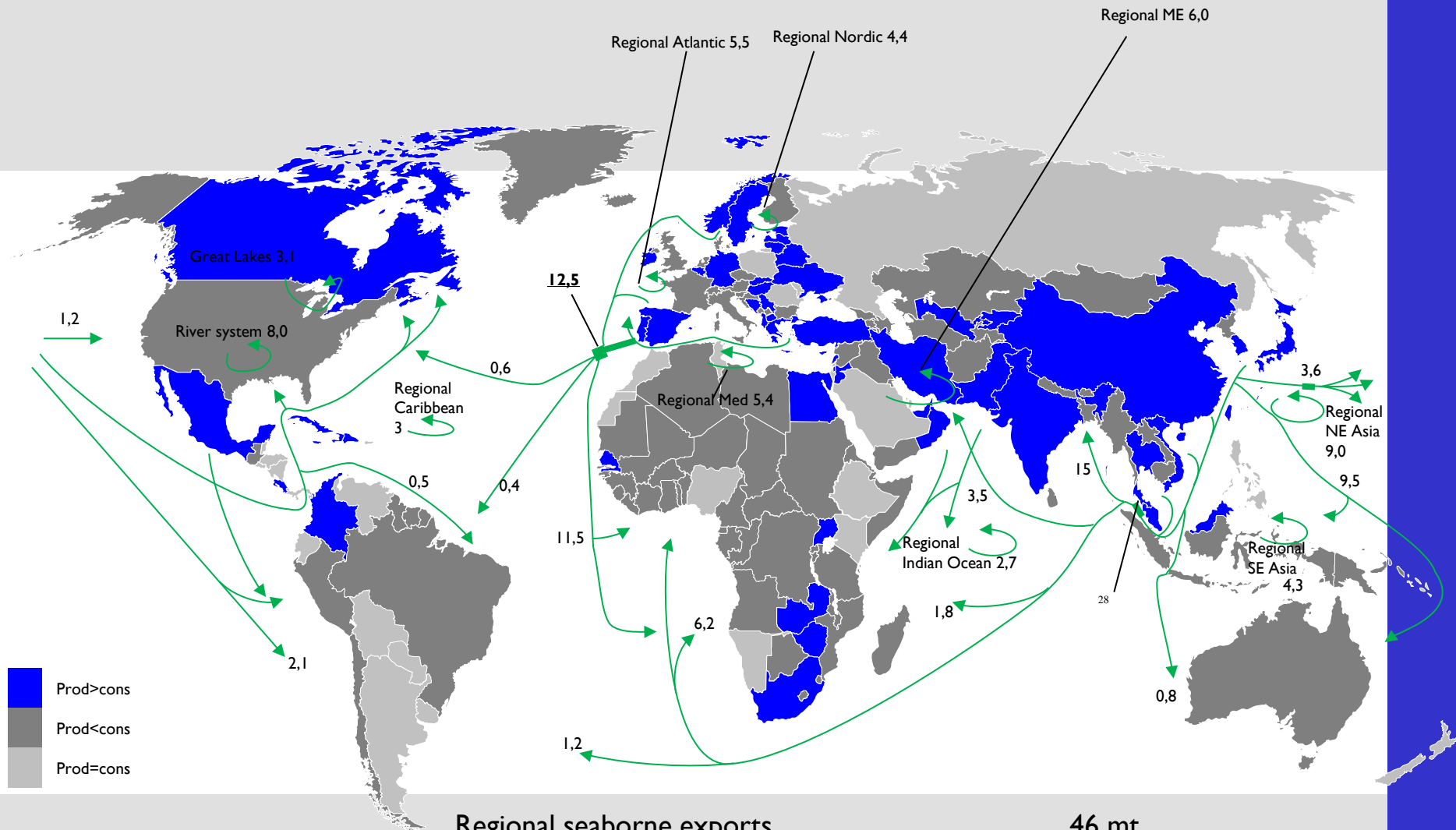
# CONTENTS OF PRESENTATION



- Global overview of cement and clinker shipping
  - Trade flows
  - Shipments by cargo type
  - Shipment by shipsize and type
- Who controls cement and clinker shipping
  - The requirement of dedicated facilities
  - The global cement industry on Google Earth
  - Key statistics
  - Facility ownership
  - Conclusions



# 2012 Global seaborne cement and clinker trade flows (est.)



Regional seaborne exports  
Global seaborne exports  
Waterborne domestic distribution  
Total

46 mt  
52 mt  
106 mt (excl. China)  
204 mt

# SHIPMENTS BY CARGO TYPE

## CLINKER AND CEMENT TRADE BY WATER

Clinker / cement type	Seaborne trade (Mt)		Inland water domestic trade (Mt)
	International	Domestic	
Clinker	37,9	8,4	4,1
Cement – Bulk	43,1	69,1	9,7
Cement – Bagged	17,0	11,5	3,2
<b>Total</b>	<b>98,0</b>	<b>89,0</b>	<b>17,0</b>

GLOBAL OVERVIEW CEMENT AND CLINKER SHIPPING

# CLINKER AND CEMENT TRADE BY VESSEL TYPE

## CLINKER AND CEMENT TRADE BY VESSEL TYPE

Clinker / cement type	Bulk Carriers (Mt)		Self-disch. cement carriers (Mt)	Inland ships & water barges (Mt)*
	Large	Coastal		
Clinker	36,1	10,2	0	4,1
Cement – Bulk	6,1	9,8	96,3	9,7
Cement – Bagged	19,6	8,9	0	3,2
<b>Total</b>	<b>61,8</b>	<b>28,9</b>	<b>96,3</b>	<b>17,0</b>
* excluding china				

GLOBAL OVERVIEW CEMENT AND CLINKER  
SHIPPING

# THE REQUIREMENT OF DEDICATED FACILITIES

In the international trade about 83% of cement and clinker trade consists of clinker and bulk cement. For domestic distribution (seaborne and inland waterways) this is an estimated 86%. Clinker and bulk cement require dedicated facilities (grinding plants and bulk cement terminals). The owners of these receiving facilities determine who will supply them. They control cement and clinker shipping.

## WHO CONTROLS CEMENT AND CLINKER SHIPPING?

## So who owns

- The cement plants that export by sea?
- The grinding facilities receiving clinker by sea?
- The cement terminals along coasts and rivers?
- How are trading networks build up? How do they enhance the land locked plants behind them?
- How do seaborne trade and seaborne domestic distribution interact?

To answer these questions

Cement Distribution Consultants has put  
the global cement industry on Google Earth

# WHO CONTROLS CEMENT AND CLINKER SHIPPING?



# The global cement industry on Google Earth



## WHO CONTROLS CEMENT AND CLINKER SHIPING?

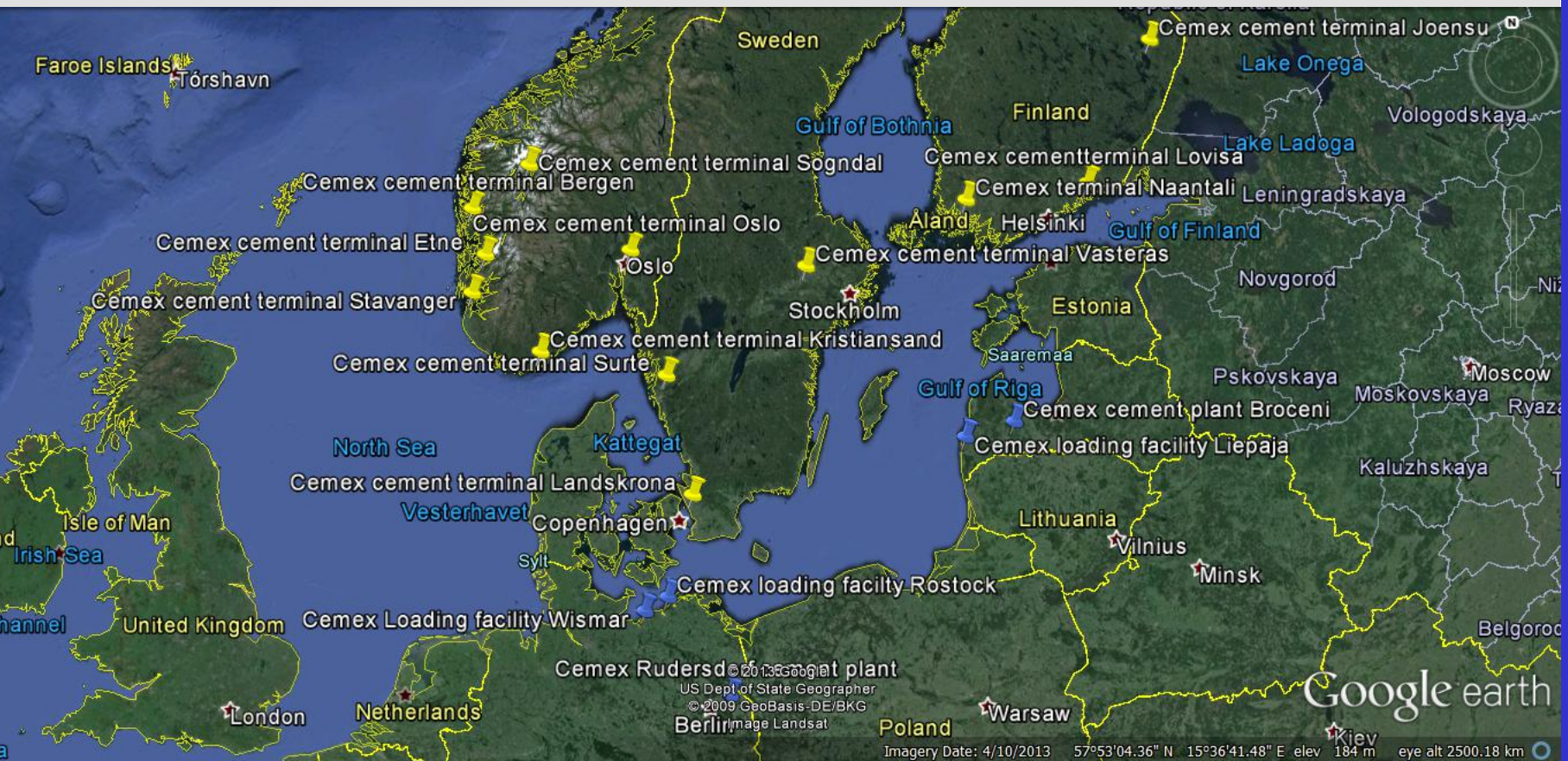


# The cement industry on Google Earth Europe



## WHO CONTROLS CEMENT AND CLINKER SHIPPING?

# Cemex Nordic Network



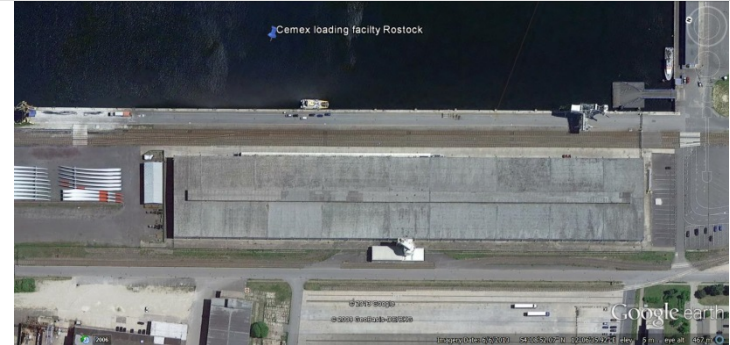
## WHO CONTROLS CEMENT AND CLINKER SHIPING?



# Cemex Nordic Network



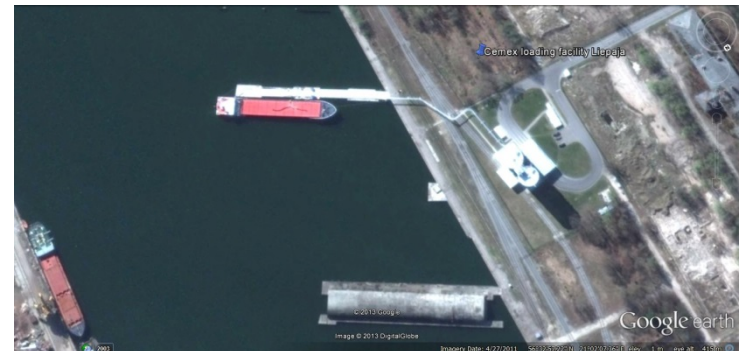
Cemex, Rudersdorf plant



Cemex, Rostock loading facility



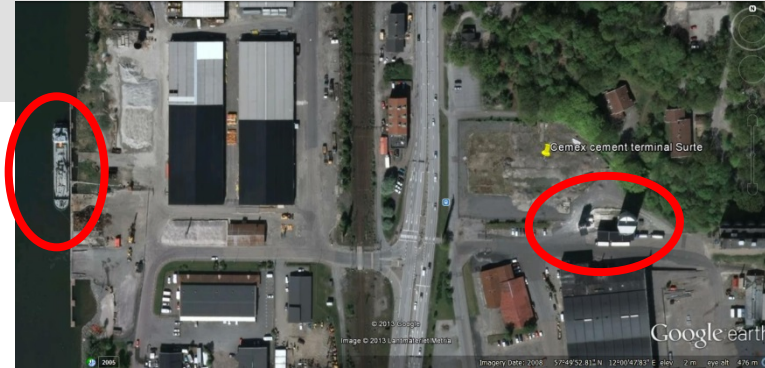
Cemex, Broceni plant



Cemex, Liepaja

## WHO CONTROLS CEMENT AND CLINKER SHIPPING?

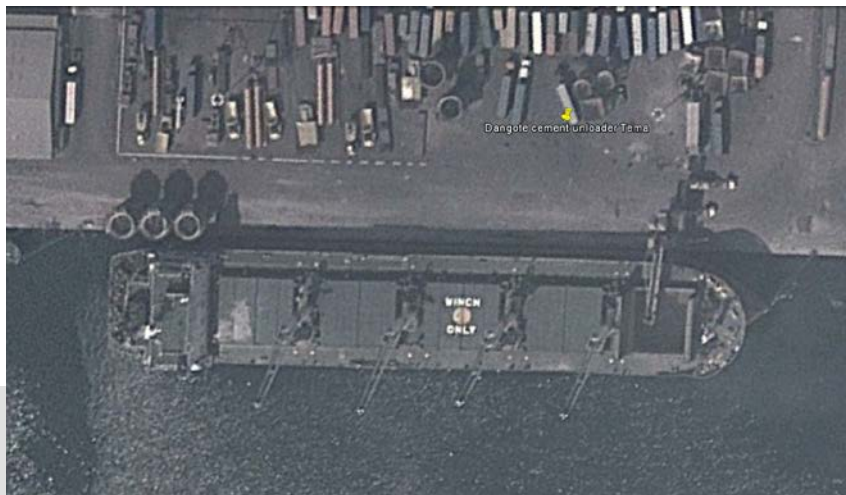
# Cemex Surte Terminal



## WHO CONTROLS CEMENT AND CLINKER SHIPPING?



# Some other examples of the database



Dangote cement terminal Tema, Ghana

# Some other examples of the database



Ship loading in Nice, France



Kangan cement plant, Iran shiploading

## WHO CONTROLS CEMENT AND CLINKER SHIPING?



# STATISTICS

All figures have been established by Cement Distribution Consultants to its best knowledge but are for general information only.

WHO CONTROLS CEMENT  
AND CLINKER SHIPPING?

# CHINA

There are no facilities included from China!

China is a very large exporter but its cement companies do not own a single overseas terminal or grinding plant.!!! Chinese cement companies have no real control over their exports.

- Only six facilities have a dock that can receive Handysize / Handymax vessel
- Most exports are based on barge to ship and truck to ship transfers in the general ports.

## WHO CONTROLS CEMENT AND CLINKER SHIPPING?

# Facilities involved in sea/waterborne cement and clinker trade and distribution

217 Cement plants

857 Cement terminals

195 Grinding plants

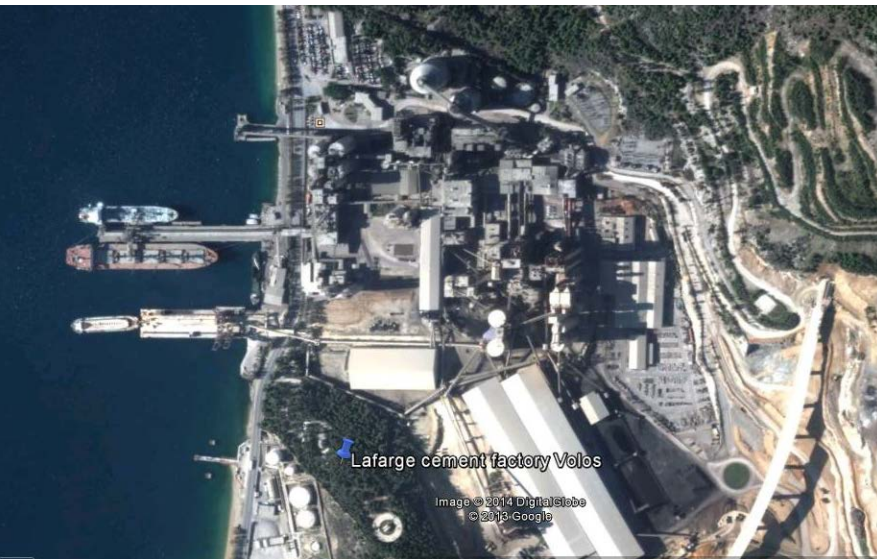
**Total 1269 Facilities**

**WHO CONTROLS CEMENT  
AND CLINKER SHIPPING?**

# 217 Cement plants involved in sea / waterborne trade and distribution of cement and clinker of which...

91 plants have their own port or dock

*Lafarge, Volos*



*Nuh Cimento, Hereke*



## WHO CONTROLS CEMENT AND CLINKER SHIPING?

# 217 Cement plants involved in sea / waterborne trade and distribution of cement and clinker of which...

*Cementos Lima - Plant*

8 Plants connected to a loading facility in the port by a conveying belt



*Cementos Lima - Jetty*



*Cementos Lima - Overview*



# 217 Cement plants involved in sea / waterborne trade and distribution of cement and clinker of which...

16 Plants rail cement to a  
loading facility in the port



*Semen Padang - Plant*



*Semen Padang - Jetty*



*Semen Padang - Overview*



# 217 Cement plants involved in sea / waterborne trade and distribution of cement and clinker of which..

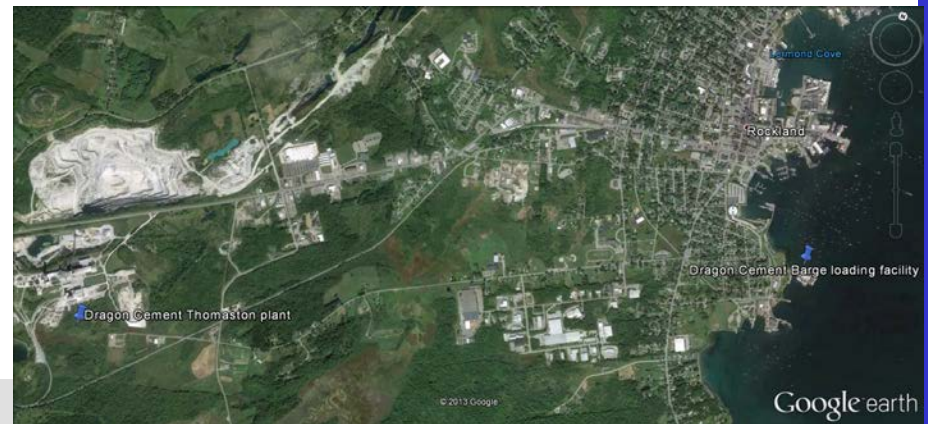
3 Cement plants rail  
cement to the port and  
load ships directly from  
the railcars



*Dragon cement US - Plant*



*Dragon cement - Port*



*Dragon cement - Overview*

# 217 Cement plants involved in sea / waterborne trade and distribution of cement and clinker of which..

22 Plants truck cement to  
a loading facility in the  
port



*Holcim Lagersdorf - Plant*



*Holcim Brunsbüttel loading facility*



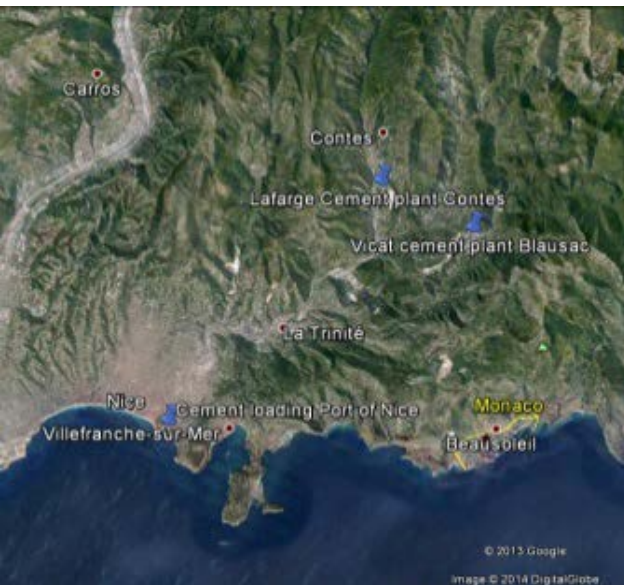
*Holcim Lagersdorf - Overview*



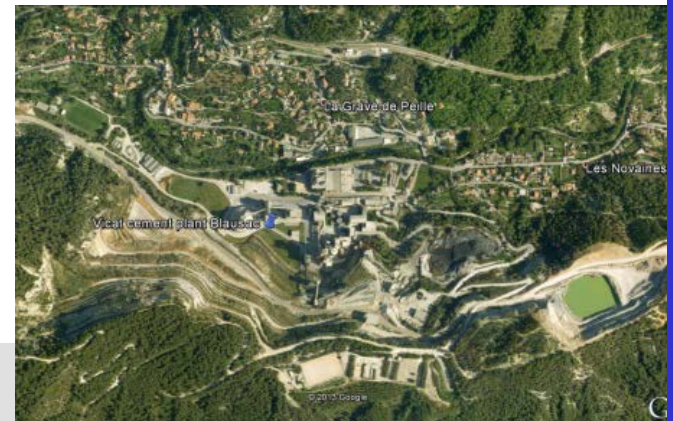
# 217 Cement plants involved in sea / waterborne trade and distribution of cement and clinker of which...



51 truck cement or  
clinker to the port for  
direct ship loading



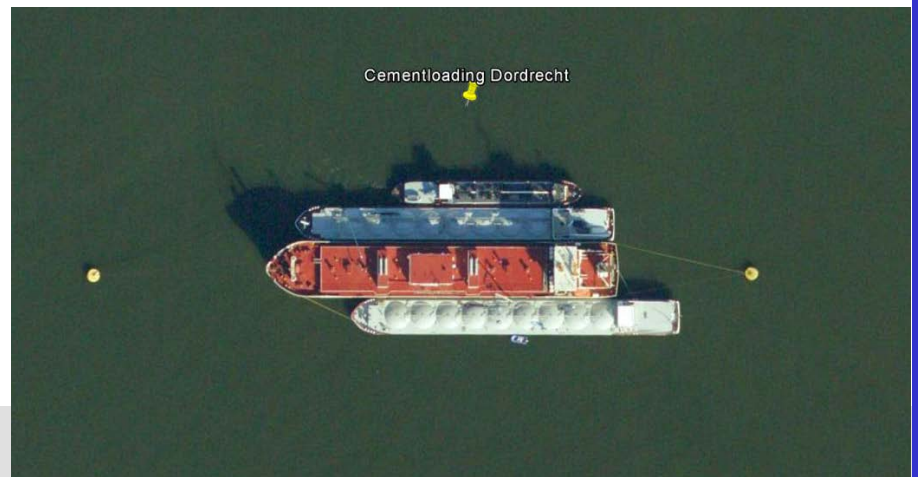
*Lafarge and Vicat loading  
ships in Nice*



# 217 Cement plants involved in sea / waterborne trade and distribution of cement and clinker of which...

9 Cement plants barge cement or clinker to ports for direct transfer of barges to ships (as well as using barges for domestic distribution).

*Barge to ship transfer  
in Dordrecht, NL*



## WHO CONTROLS CEMENT AND CLINKER SHIPING?



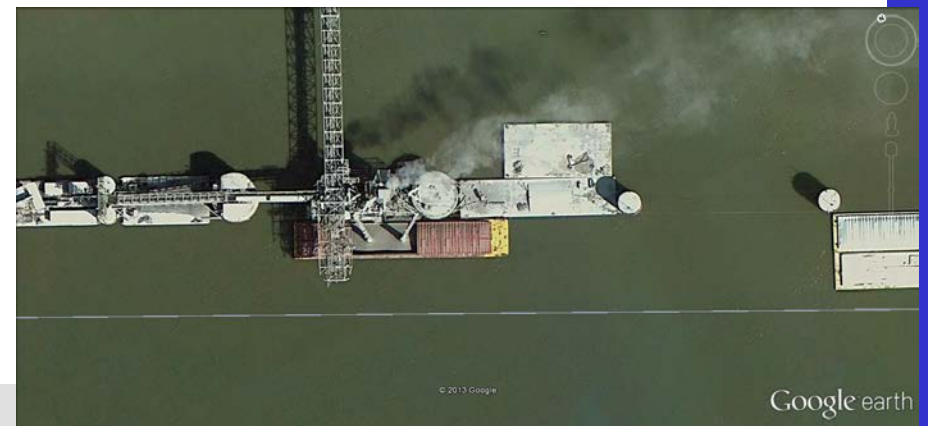
217 Cement plants involved in sea / waterborne trade  
and distribution of cement and clinker  
of which 17 cement plants distributing domestically in barges



*ENCI, NL*



*Lafarge Jopka, US*



WHO CONTROLS CEMENT  
AND CLINKER SHIPPING?

## 217 Cement plants involved in sea / waterborne trade and distribution of cement and clinker of which...

134 load up to Handysize and Handy max bulkers

61 load up to coastal (<10.000 Dwt vessels)

5 load Great Lakes vessels

17 load inland barges solely for domestic distribution



# 857 Cement terminals of which...



*Houston Cement*

688 served by self discharging  
vessel

169 with ship unloader

*Norcem, Oslo*



# 857 Cement terminals

## 140 Suitable for handysize / handymax vessels

### of which....

61 served by self  
discharging ships

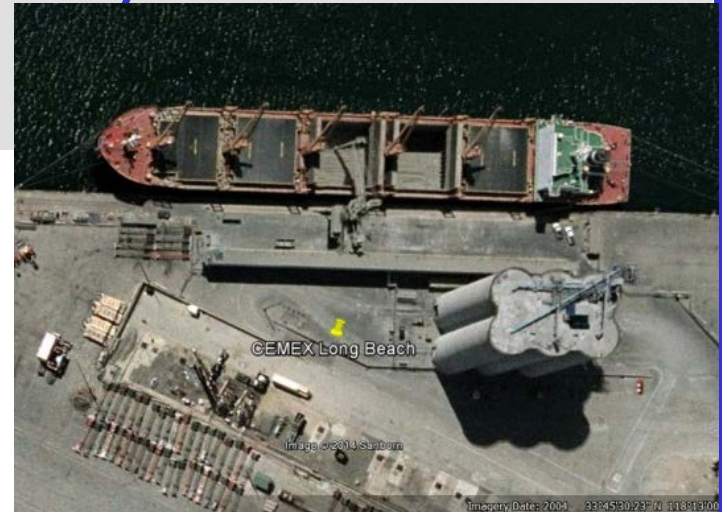
50 have a  
mechanical  
unloader

24 have a pneumatic  
unloader

5 have grab and  
hopper system



Taiwan Cement, Taichung  
Silvi, Bristol



Cemex, Long Beach

Lafarge, Onne



## WHO CONTROLS CEMENT AND CLINKER SHIPPING?



# 857 Cement terminals

## 717 suitable for coastal (< 10.000 dwt) and inland vessels

### of which....



*Holcim, Plymouth*

558 served by  
self discharging  
vessels

77 have a  
pneumatic  
unloader



24 have a  
mechanical  
unloader

I has a grab &  
hopper system



*Cemvest, Lorient*

## WHO CONTROLS CEMENT AND CLINKER SHIPING?

# 857 Cement terminals of which....

722 silo terminals

74 flat storage terminals

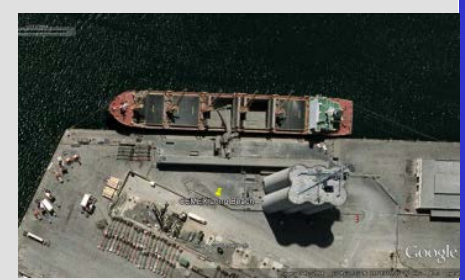
24 dome terminals

18 floating terminals

8 direct to end user (no storage)

11 unknown

## WHO CONTROLS CEMENT AND CLINKER SHIPING?



# 195 Grinding plants of which....

163 receive up to Handysize / Handymax bulkers

19 receive coastal (<10.000 Dwt) vessels

8 receive Great Lakes carriers

5 receive inland barges

217 Cement plants, 857terminals, 195 Grinding plants

BUT WHO OWNS THEM?

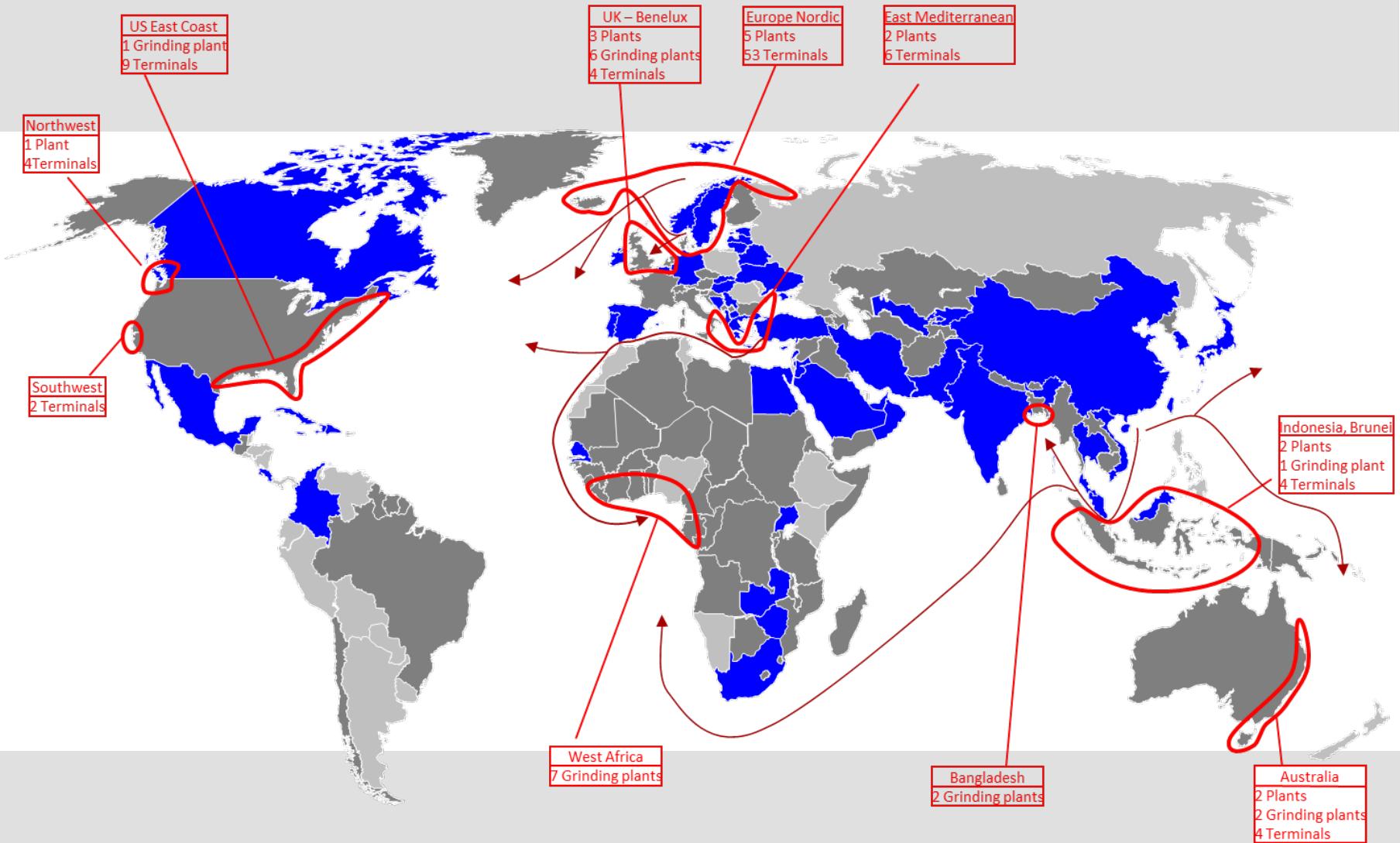
## The top 5 multinationals

**Overview of facilities of the top 5 multinationals that involved in waterborne trade and distribution.**

Company	Cement plants	Grinding plants	Terminals	Total
Lafarge	23	16	89	128
Heidelberg	11	19	88	118
Holcim	20	20	77	117
Cemex	19	3	71	93
Italcementi	10	7	21	38
	83 (38%)	65 (33%)	34 (40%)	494 (39%)



# Example: Heidelberg global maritime network



# THE ACTUAL TOP RANKINGS

## (owners with 20 facilities or more)

	Cement Plants	Terminals	Grinding Plants	Total Facilities
Lafarge	23	89	16	128
Heidelberg	11	88	19	118
Holcim	20	77	20	117
Cemex	19	71	3	93
Taiheiyo	12	78	2	92
UBE/Mitsubishi	5	58	0	63
Sumitomo/Osaka/Nippon Steel	4	47	0	51
Italcementi	10	21	7	38
Tokuyama	1	27	1	29
Buzzi Unicem	5	16	2	23
CRH	4	17	2	23
Cement Indonesia	3	19	0	22
Votorantim	4	10	6	20
13 Owners controlling	121 56%	618 72%	78 40%	817 64%

WHO CONTROLS CEMENT  
AND CLINKER SHIPPING?

# AND THE REST

1 owner with 19 facilities  
2 owners with 16 facilities  
1 owner with 13 facilities  
2 owners with 11 facilities  
3 owners with 9 facilities  
2 owners with 8 facilities  
3 owners with 7 facilities  
3 owners with 6 facilities  
6 owners with 5 facilities  
5 owners with 4 facilities  
9 owners with 3 facilities  
22 owners with 2 facilities  
141 owners with 1 facility

## WHO CONTROLS CEMENT AND CLINKER SHIPPING?



# IN SHORT

Total 213 owners with 1269 facilities

13 Owners having 817 facilities (64%)

59 Owners having 298 facilities (23%)

141 Owners having 1 facility each (11%)  
(22 cement plant, 53 terminals, 64 grinding plants)

Of 22 facilities the ownership is unknown

# Coming Soon!!

## The ICR Handbook on Global Cement Trade and Distribution



- ❑ Overview of Global cement and clinker trade
- ❑ Country and regional cement trade analysis and statistics
- ❑ Fully illustrated with 70 detailed colour maps indicating material flows and trading networks and facilities
- ❑ Cement shipping and distribution economics
- ❑ Review of cement terminal design and operation
- ❑ Facilities directory

Authors:

**CEMENT**  
DISTRIBUTION  
CONSULTANTS

# Cement Distribution Consultants

## an introduction

Market knowledge	Consulting	Project / interim management
<ul style="list-style-type: none"> <li>• The global cement industry on Google Earth</li> <li>• Large database on waterside cement plants, waterside grinding plants and terminals</li> <li>• 30 Years experience</li> </ul>	<p>Logistical, economical and technical services</p> <ul style="list-style-type: none"> <li>• Feasibility studies of complete logistical chains for trade and distribution</li> <li>• Shipping solutions</li> <li>• Development of new facilities</li> <li>• Terminal and equipment design</li> </ul>	<p>Realising and managing projects</p> <p>Examples</p> <ul style="list-style-type: none"> <li>- Redevelopment of large “brown field” bulk terminal</li> <li>- Temporary cement and fly ash import project for construction of large concrete dam</li> </ul> <p><b>Logistics management for large scale fly ash trade from India to the Gulf</b></p>



STEAG

- 30 Years in power plant by-products
- Partner for energy and construction industry
- Market leader in Europe

Shipping company  
(TBA)

Hawar Group

- Family owned holding company
- Business focus on GCC countries
- Activities in logistics, construction and engineering

Knowledge Transfer & Investments



**HAWAR POWER MINERALS**

حوار باور مينرالز

End to end supplier of cementitious materials

Supply sources

Creating multiple reliable sources by guaranteeing export volumes and assisting with quality management and certification

(co) investing in  
export facilities

Logistics

Minimizing overall transport costs by creating volume and realizing optimal “end to end” logistics

Investing in  
specialist ships

Markets

Creating partnerships with cement and concrete companies providing a cost effective supply as well as technical, economical and market knowledge

(co) investing in  
export facilities

# THANK YOU

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