

# **Solutions for Sustainable Ports**

## **A Service Provider's Perspective**

**Presented By: Jay Jahangiri, REM, REA,  
CESM REEW, RIAQM, CIPS, CUO  
TRE Consulting, Inc**

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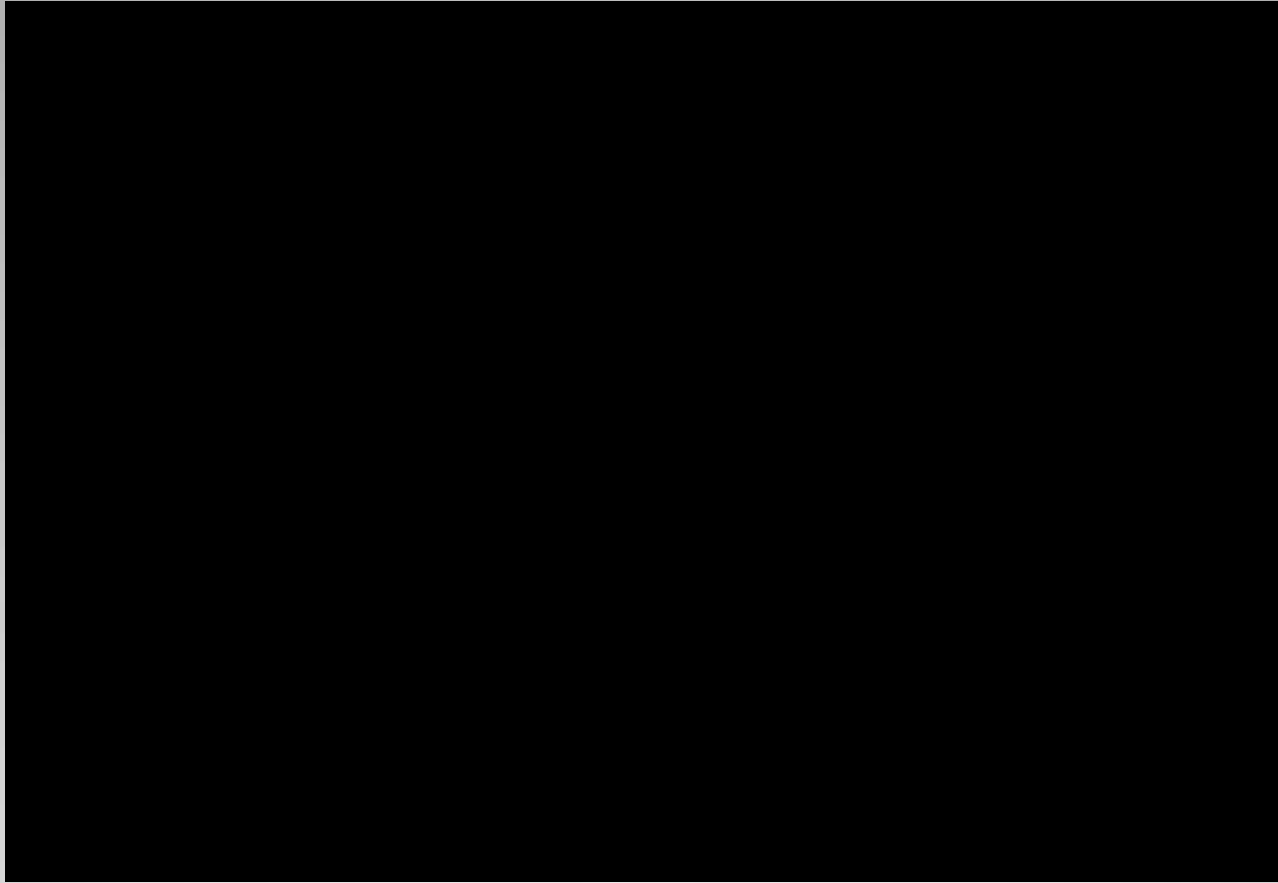
*A Sustainability Solution Provider for Ports , Maritime,  
Airports and Industrial Facilities*

- A glimpse into the world of sustainability solutions at US and International ports and maritime facilities.
- Comparative Analysis of the US and International Ports' Applications of Sustainability Solutions
- A service provider's perspective in providing sustainability solutions for ports':
  - Growth/Expansion
  - Development
  - Operations

## **Presentation's Objectives:**

**US Example:  
Port of Long Beach**

**Sustainability Solutions**



**Port of Long Beach: Sustainability as a  
Comprehensive Development , Operations  
and Business Tool**

## GREEN PORT POLICY

- Protect the community from harmful side effects of Port operations
- Distinguish Port as leader in environmental stewardship and compliance
- Promote sustainability
- Employ best available technology to minimize environmental impacts
- Engage and educate the community

### *SIX KEY STRATEGIES*

#### AIR



#### WATER



#### WILDLIFE



#### SOIL/ SEDIMENT



#### SUSTAINABILITY



#### COMMUNITY ENGAGEMENT



Green Port Policy

# Clean Air Action Plan Strategies

- Clean Trucks Program
- Clean Vessels Program
  - Vessel Speed Reduction (Reaching 94% Compliance)
- Shore-side power for ships
- Clean Locomotives Programs
- Clean Cargo Handling Equipment
- Clean Harbor Craft
- Alternative technology Program



The Goal is Reduce pollution by 45%  
within five years

# Other Sustainability Programs

- Green Port Integrating Committee
- Green Leases
- Solid waste recycling programs
- Green Port Fest
- Educational Partnerships
- “Let’s Talk Port” Community Outreach
- Urban Reforestation Program
- Sustainable Landscaping Palettes



- General perception was:
  - Sustainability is primarily an environmental program
- Implementation centers on environmental issues first
- Sustainable environmental initiatives evolve into sustainable operations
- Sustainable operations requires sustainable engineering practices
- Sustainable development focuses on the building industry
  - Commercial and residential accounts for 40% of total US energy consumption
- What about **Sustainable Infrastructure**?
- How do we apply sustainability to the engineering environment?

## Switching Sustainability from Environmental to Engineering:



# Port Engineering Applications

- LEED “Green Building” Program
- Materials Recycling/Reuse/Reduction
- Railroad Sustainability Standards
- “Green” Construction Methodologies
- Engineering Bureau Purchasing and Procurement Environmental Management System



# **Latin American Example**

**Sustainability Solutions  
Port of Santa Marta  
Colombia, South America**



Sociedad Portuaria  
de Santa Marta 



SOCIEDAD PORTUARIA  
DEL NORTE S.A.



SMITCO



Fundación  
Sociedad Portuaria  
de Santa Marta



# QUIENES SON?: Who Are They?

- La Sociedad Portuaria de Santa Marta inició sus operaciones en el año 1993. El estado colombiano le otorgó una concesión por 20 y posteriormente aumentó el periodo a 40 años, es decir hasta el año 2033. Es una sociedad de economía mixta mayoritariamente de capital privado. **The Port of Santa Marta Santa Marta is a city located in northern Colombia by the Caribbean sea and the Sierra Nevada de Santa Marta mountains. The Port began operations in 1993. The Colombian state was granted a concession for 20 and then to 40 years, until 2033. It is a mixed economy of mainly private capital.**
- **The Port Authority has invested in developing marine Terminals at Santa Marta in excess of \$ 59 million US.**

Sociedad Portuaria  
de Santa Marta



USD 15 MM



USD 9 MM



USD 20 MM



USD 10 MM



USD 2.0 MM



USD 3.0 MM

# Puerto de Santa Marta, 1993



**Puerto de Santa Marta, 2009**

**16 años después...: 16 Years Later**



# SPSM, PUERTO CERTIFICADO.

## Model of Environmental Sustainability:

**ISO 9001: in 2000 AND ISO 14001 Certified: in 2004**



CO06/1546



CO03/483



ISPS



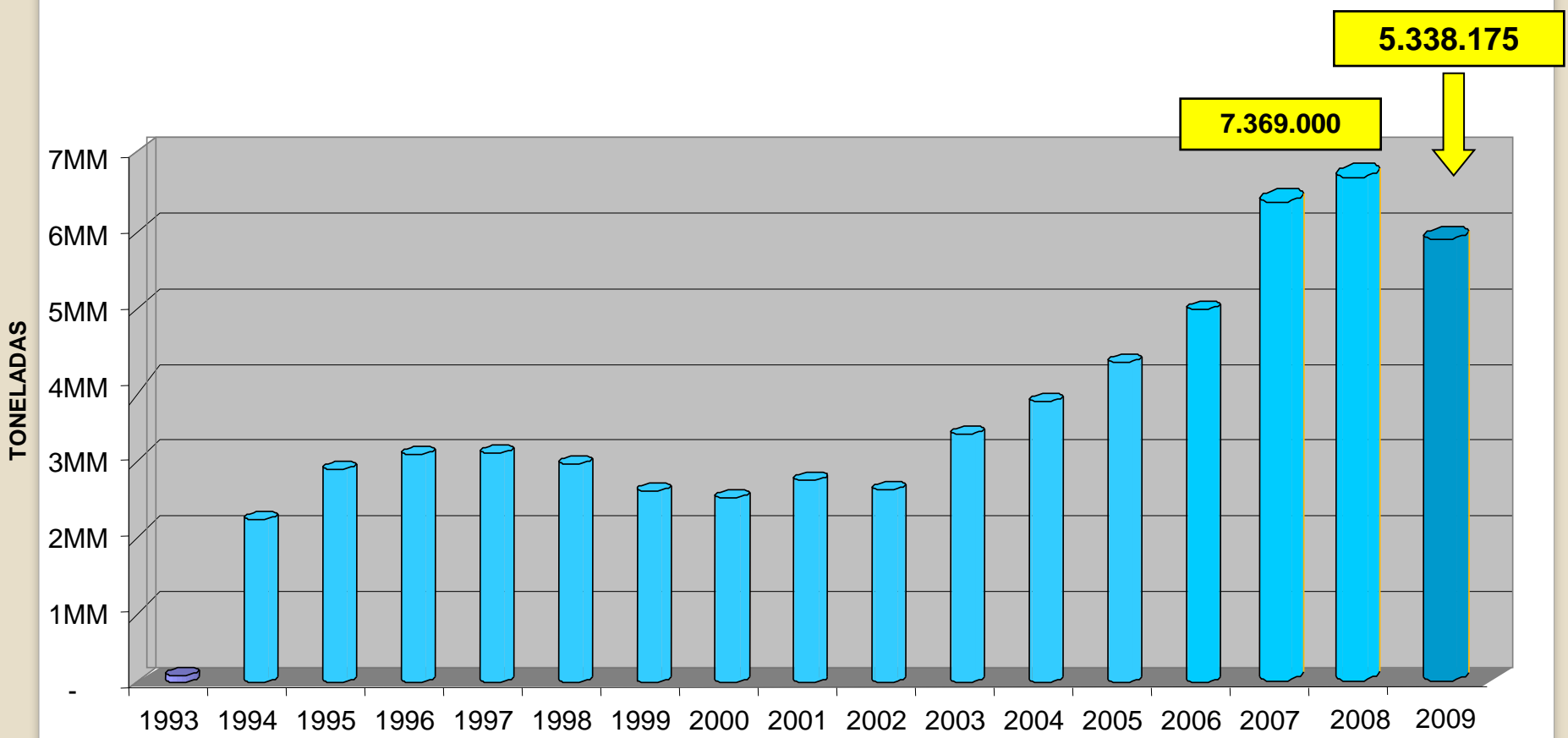
Banco Asegurador de Seguros



**Contamos con Certificado ISO 9001:2000 y 14001:2004 parte de SGS, PBIP por parte de la OMI y BASC.**

# TOTAL DE CARGA DESDE 1994 HASTA 2009

## Total Cargo from 1994 until 2009





# LLEGADA DE CRUCEROS A SANTA MARTA : **CRUISE SHIP** **ARRIVALS/TRAFFIC:**

A SEP 2009

	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010*</b>
<b>No. Cruceros</b>	<b>13</b>	<b>17</b>	<b>44</b>	<b>70</b>
<b>No. Viajeros</b>	<b>13.432</b>	<b>17.424</b>	<b>73.951</b>	<b>105.814</b>

\* Proyección 2010

Fuente: Oficina de Turismo Distrito de Santa Marta





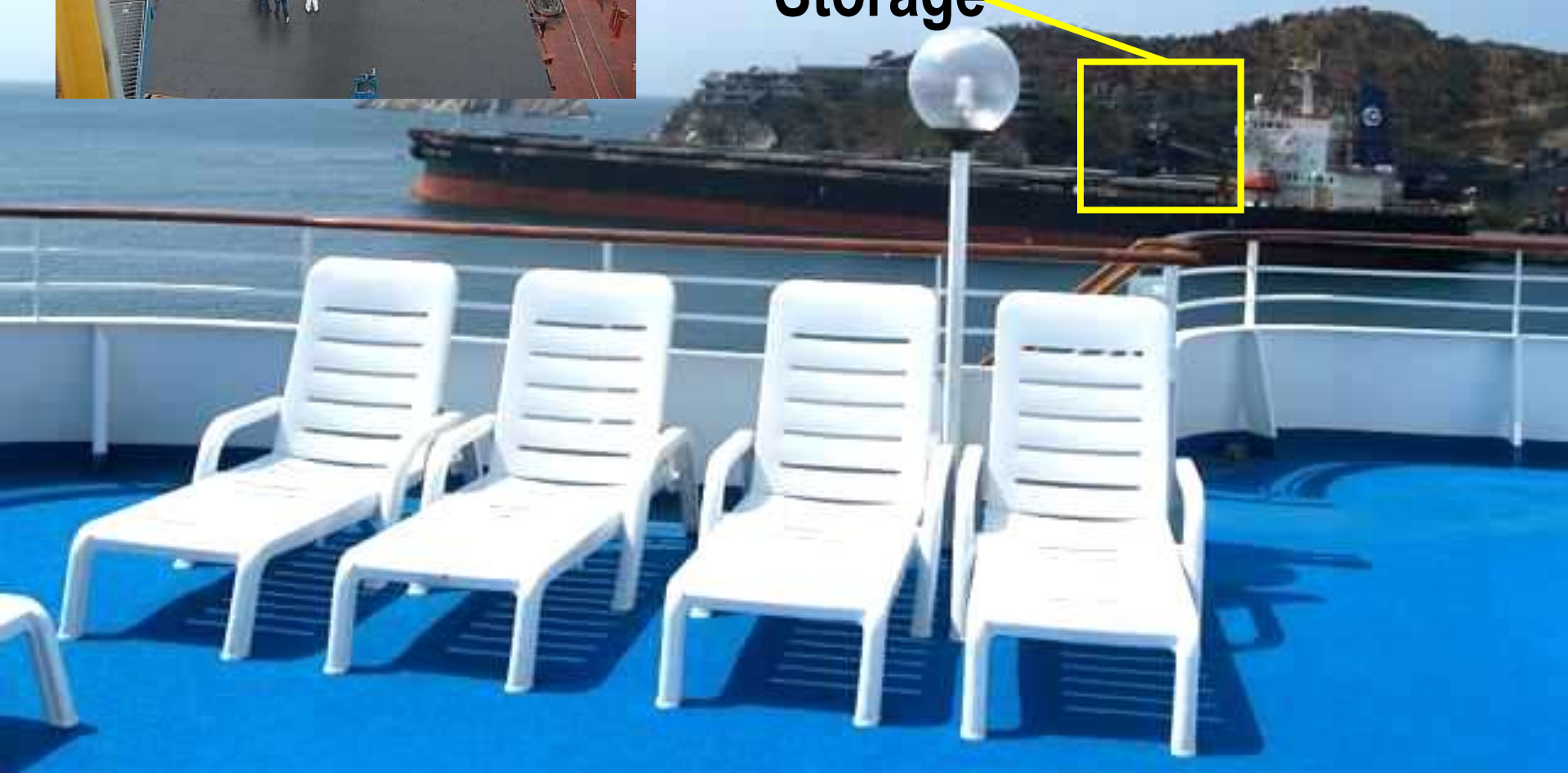
**Nuestras operaciones, ambientalmente controladas, han permitido combinar amigablemente el turismo y las exportaciones de carbón debido al riguroso cumplimiento de los requisitos de calidad exigidos.**

**The Port's operations, through environmental controls, allowed to combine friendly tourism and coal exports due to strict compliance with sustainable development and quality requirements.**





# Sustainable Co-existence of Cruise and Coal Terminal Handling and Storage



## **INVERSIONES PARA LAS OPERACIONES DE CARBÓN:**

### **INVESTING IN COAL OPERATIONS:**



**Hemos invertido en una moderna infraestructura para el cargue directo de carbón con tecnología de punta y altos estándares en controles ambientales.**

**investment in modern infrastructure for the direct load of coal with high technology and high standards in environmental controls.**

## **INVERSIONES PARA AUMENTAR RECALADAS DE CRUCEROSTO**

### **INCREASE IN INVESTMENT ON CRUISES:**

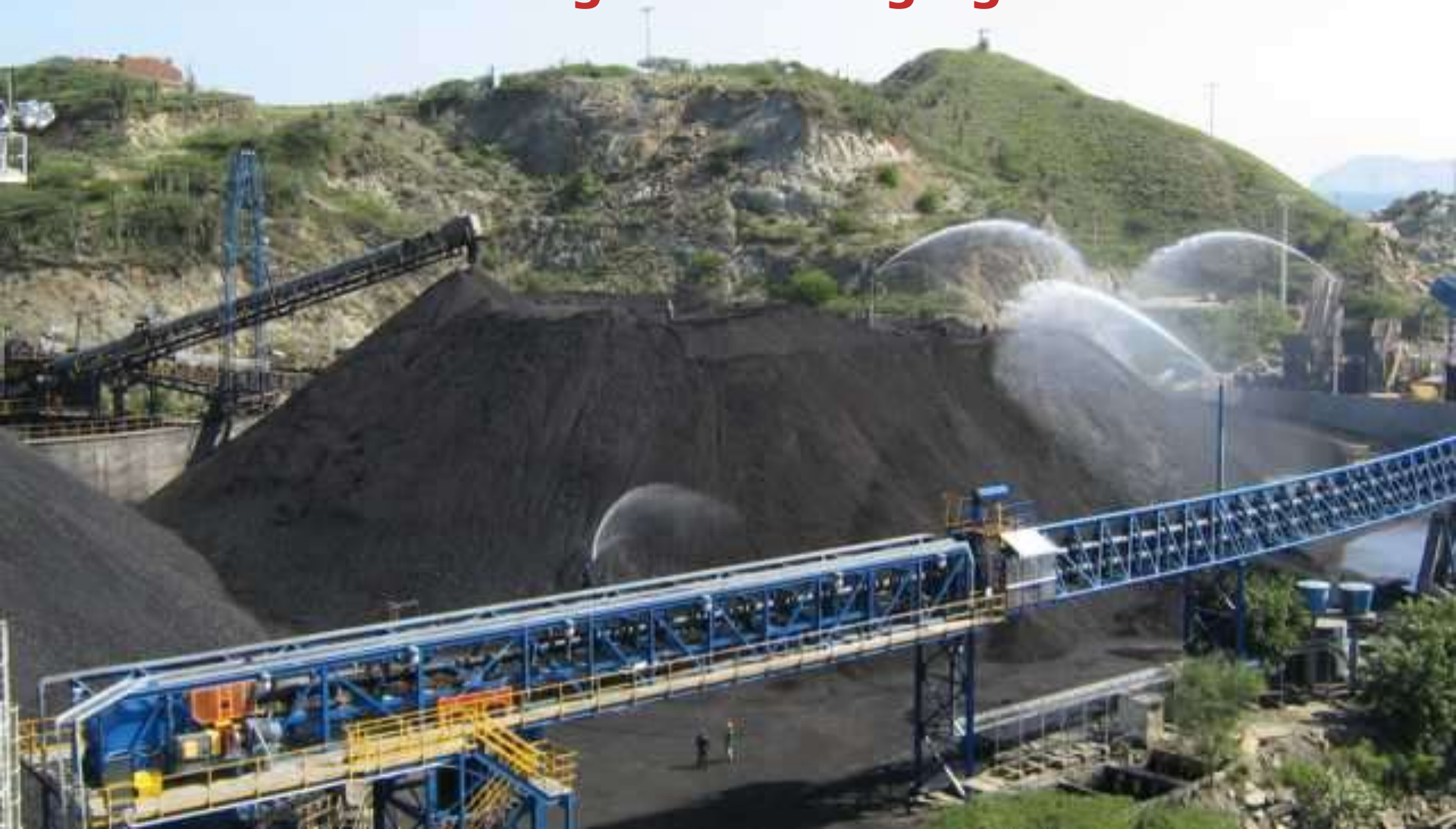


**Hemos trabajado en la consolidación de alianzas estratégicas para la conquista de cruceros y la inclusión de Santa Marta como destino turístico internacional.**

**Building strategic partnerships for the inclusion of Santa Marta as an international destination.**

# Aspectos ambientales

## Environmentally Sustainable Way of Handling and Managing Coal





International recognition for implementing technology and processes that ensure a clean operation by AAPA in 2007 and Inter American Commission on Ports in 2009

# **CORAL REEF PROTECTION**

**Los corales se constituyen en refugio de peces pequeños que posteriormente, cuando se han desarrollado, favorecen las actividades de los pescadores en la Bahía.**



# **Visión del desarrollo del puerto**

## **Vision of Sustainable Development of the Port: Economic Sustainability**





**USD57 MILLONES**

**Bulk Terminal**  
Capacity: 1,500,000 tons  
Operational performance: 370 tons hours  
Operational Improvement: 85%

**Subterminal de Graneles**

Capacidad : 1.500.000 tons  
Rendimiento operacional: 370 tons hora  
Mejora operacional: 85%

**Container Terminal**  
Capacity: 300,000 TEUs  
Increased capacity: 172%  
Operational performance: 20 cont / time hook  
67% operational improvement

**Subterminal de Contenedores**

Capacidad : 300.000 TEUS  
Incremento capacidad: 172%  
Rendimiento operacional: 20 cont/hora gancho  
Mejora operacional 67%

*Segunda Fase 2012 - 2020*

**Phase II: 2012-2020**

**USD44.9 MILLONES**



# **Tercera Fase 2021 – 2033**

## **Phase III: 2021-2033**

**USD25.3 MILLONES**

**420.000 TEUs**

**Increased capacity:  
40%**

**Operational  
performance: 20 cont /  
time hook**

***Subterminal de Contenedores***

***Capacidad : 420.000 TEUS***

***Incremento capacidad: 40%***

***Rendimiento operacional: 20 cont/hora gancho***





Con inversiones en tecnología, logramos conciliar las actividades turísticas paralelas al desarrollo portuario: **With investments in sustainable and clean technologies, tourism activities and port operations and development can symbiotically co-exist**



# SOCIAL OBJECTIVES

# Responsabilidad Social Empresarial



# Delivery of 1,000 school kits

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de Santa Marta



1.000 kits escolares  
Llenos de amor, sabiduría,  
compromiso y esperanza.



2010: Entrega de 1.000 kits escolares





*Hoy* es una **realidad**  
**El Centro Integral Comunitario**

**2010: Entrega del Centro Integral Comunitario en Zona de Influencia Directa:**  
**Creating Community Centers in Surrounding Port Communities**





Programa para el mejoramiento de la calidad de vida de “Niños en Situación de Calle”

Padre Javier de Nicoló: **Programs to improve the quality of life of "Children of the Street" Father Javier de Nicolo**

Fundación  
Sociedad Portuaria  
de Santa Marta







Proyecto de construcción de un Centro para el “Servicio de Atención Comunitario” que beneficiará a mas de 5.000 niños de comunidades desfavorecidas. **Proposed construction of a “Community Service” center which will benefit over 5,000 children from disadvantaged communities.**

- Conduct sustainability review of the port (how much is in place and how much needs to be done)
- Develop a formal port wide sustainability policy
- Develop sustainability program elements that support the policy
- Provide strategic recommendations in integrating sustainability across all organizational and business lines/functions and operations of the port/facility tempered by the business priorities and objectives.

## **A Service Provider's Approach in Providing Sustainability Solutions:**

- Sustainability solutions are universal (US, Latin America, Europe) in scope and nature
- However, what is different: is their applications as they depend on:
  - Cultural and socioeconomic make up of the communities that surround them
  - Programmatic and business priorities at the port
  - Political drivers
  - Other drivers/factors

## Conclusions: