



# Financing Green Ports & Shipping: Choices & Challenges

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# About Us

- **Non-profit** financial research & advisory for healthy oceans
- **Advice** on Green Shipping & Ports, Marine Energy & Seafood
- **Engagement** with financiers to speed transition to sustainability



## **Blue Economy Investment Platform:**

Evaluated 500 SMEs for EC & EIB financing.  
Presented to investors in multiple forums.



## **Pacific Ocean Finance Program:**

Advising 11 Pacific Island States on financing marine reserves & local Blue Economy enterprises.  
Funded by The World Bank & Global Environment Facility

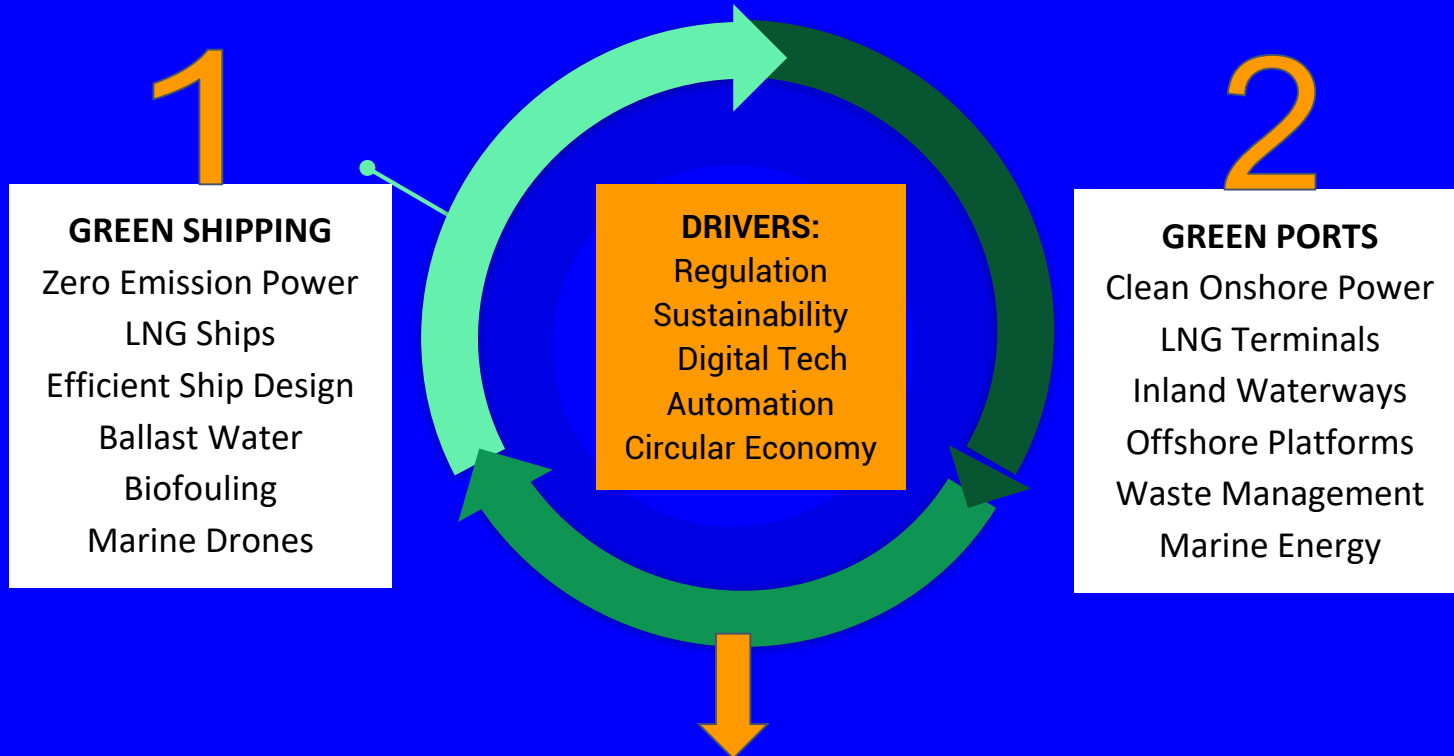


**Climate**  
INITIATIVE  
**Bonds**

**Green Bond Standards** for maritime issuers into high-growth global market.  
Setting standards based on scientific & industry inputs.  
*Now: Shipping & Ports*

# The Need

**\$200bn** of financing is needed to make the green transition. Yet most banks left ship finance after the 2008 financial crisis.



**At Ocean Assets, we are developing 2 impact investment solutions:**

- **Green Port Credit Facility** to help Ports improve sustainability
- **Green Maritime Impact Fund** for private equity stakes in Innovators

# Maritime Impacts & SDGs

## 9 SDGs

- 3. Good Health & Well-Being
- 6. Clean Water & Sanitation
- 7. Affordable & Clean Energy
- 9. Industry, Innovation & Infrastructure
- 11. Sustainable Cities & Communities
- 13. Climate Action
- 14. Life Below Water
- 15. Life on Land
- 17. Partnerships for the Goals



# Impact Investment in Green Ports



# Ports: Crisis & Opportunity



**Crisis**

**Opportunity**

Most caused by vessels but ports also contribute:

- **60,000 premature deaths** per year in EU due to SOX pollution from ships
- **7mn tons/year of marine waste** discharged into seas
- **Port impacts include** Air and water pollution, habitat alteration, noise, waste
- **Heavily-populated** areas near Ports
- **Conflicts** over use of coastal areas

- **Focal points** for national development
- **Control points** for shipping, fishing, marine energy, coastal issues
- **Leverage points** for maritime & community sustainability
- **Shipping carries 80%** of global trade
- **Recovery from 2008** has been accomplished, with positive growth now

# Green Port Investments



**Clean Energy** for onshore power  
**Servicing & Decomm** offshore platforms  
**Wind & Solar** installations  
**Tidal & Wave** tech goes commercial

**Shipyards** tech & servicing  
**LNG** terminals, equipment & training  
**Expansion** with dredging, docks, support  
**Upgrades** for clean air, water, noise regs



**Recycling** port & municipal waste  
**Waste** to energy & to product  
**Prevention** of waste entering the sea

**Coastal Resilience:**  
Storms, rising seas...  
Bonds & insurance on  
the market



**Digital Tech** for logistics mgt  
**Monitoring** emissions/waste  
**Marine Drones & ROVs**  
**Health/Safety** issues targeted

# The China Factor

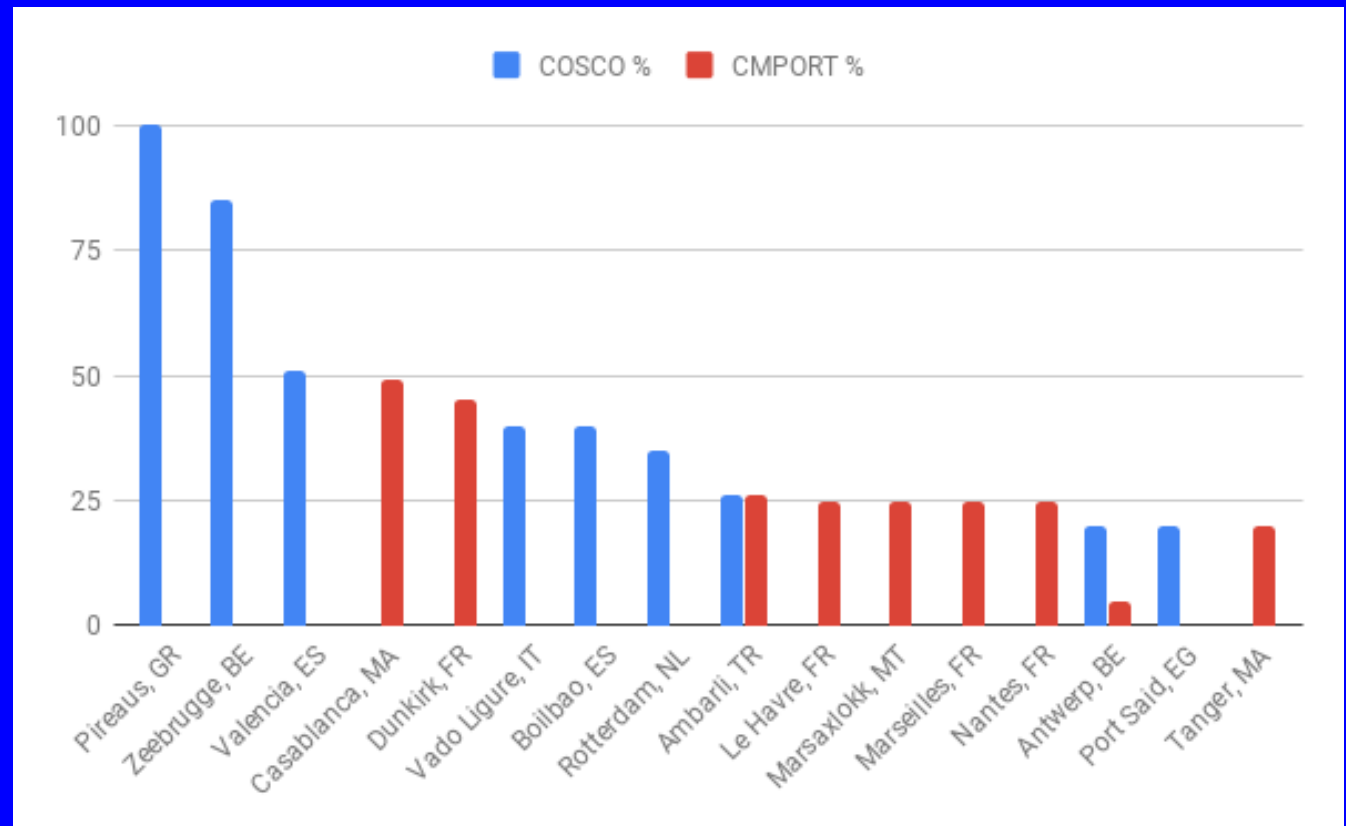


## Chinese investments in Europe & Med Ports

Over \$1TR infra investment expands military & economic power  
Led by COSCO Shipping Corp & China Merchants Port Holdings

### Why?

- **Economic:** EU is China's #1 source of imports & 2nd largest export market
- **Military:** China as maritime superpower
- **Anaconda Strategy:** Surround & Squeeze Europe's periphery
- **Sustainability:** No leaders yet in China's maritime industry
- **Western Investors** more likely to consider ESG



Source: [Olaf Merk, Revue internationale et stratégique \(2017\)](#)



# Capital Needs

## European Ports

- **€750bn Investment needed by 2030** to realise core ports network
- **€5bn minimum** annual investment to maintain Europe's port infrastructure
- **Only 5%** of CEF Budget to Ports (2014-17)
- **100+ Green Ports certified under European SeaPorts Organisation**



## African Ports

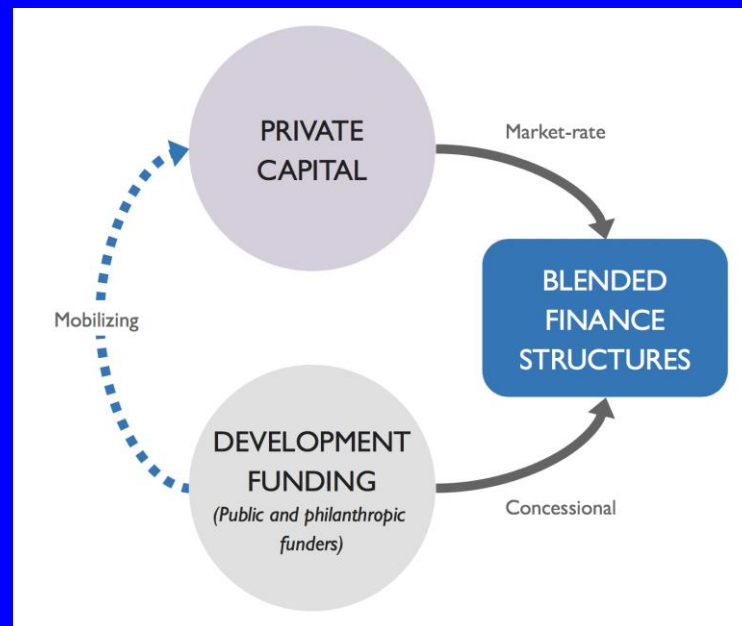
- **\$50bn invested** in Africa's Ports (2012-2017)
- **Managed by PPPs** under World Bank terms
- **Carrying 5%** of international maritime trade
- **Economic Development** depends on Ports
- **North-South transfer** of shipping capacity from Europe to Africa for competitiveness



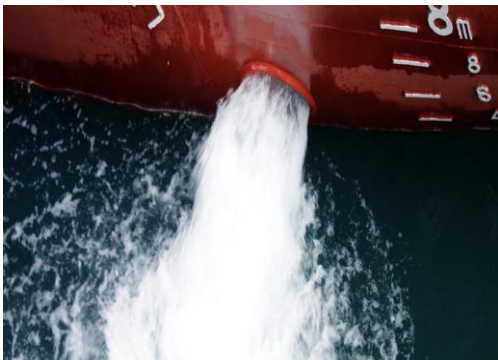
# Green Ports Credit Facility

**We will advise a group of institutions on private placements to Ports:**

- **Credit to acquire** approved green solutions
- **Impact measurement** to achieve ESG Targets
- **Europe & Africa** pipeline
- **Privately-managed** port concessions
- **Blended Finance** loan structures to reduce risk
- **Invest alongside** concessionary capital programs



# Impact Investment in Green Shipping



# 7 Drivers of Green Shipping

Europe's Shipping Industry Leads Global Maritime Sustainability

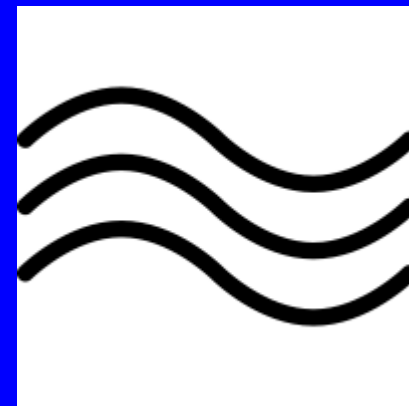
40% of Global Fleet  
E160bn Annual Value



1. **Global regulations** from IMO require a steep drop in SOx emissions by Jan 2020. Estimate \$200bn required for compliance by 2030
2. **Cleaner Fuels** like LNG for transition. Scrubbers: immediate solution.
3. **Zero Emission Power**: Sails, Biofuels, Hydrogen Fuel Cells. Big European shipowners investing now.
4. **Global Ballast Water Treaty** (stop water pollution & invasive species): Avg investment \$2mn per cargo ship.
5. **Digital Technologies** improve maritime communications, management, navigation, efficiency and sustainability.
6. **Efficient Vessel Design** creates opportunities to meet fuel & performance standards for commercial & leisure markets
7. **Automation** is improving safety/efficiency at sea and in ports, with marine drones and remote-operated vehicles (ROVs)

# 7 Drivers of Marine Energy

1. **Regulatory & Investor demand** drives clean energy applications at scale
2. **Tidal, Wave, Geothermal:** Proven sources for global clean energy
3. **Europe's Offshore Wind** industry grew by 18% in 2018, with 18.5 GW installed
4. **Tidal Technologies** expected growth: 20%+
5. **Wave & GeoThermal:** Proven tech but early-days of commercialisation
6. **Levelised Cost of Energy (LCoE)** is declining
7. **Investor risk reduced** by concessionary public funding & OEM investments (Original Equipment Manufacturers)



240GW by 2050

# European Maritime Impact Fund



## We will provide impact advice to a Registered Investment Advisor:

- **Portfolio** of European private greentech growth companies serving maritime industry
- **Sustainability & impact criteria** based on appropriate standards
- **Technology reviews** from a Technical Committee of recognised experts
- **Pipeline of innovators** drawn from our BlueInvest, Green Bond and maritime hub networks
- **Solutions** for global shipowners, ports, communities. Green Shipping & Marine Energy
- **Investment Structuring** that aligns investors-investees without excessive costs
- **Registered Advisor with 15-year record** in all aspects of maritime investment management



Thank you!

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