



AAPA – Environment Committee

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West Coast & US Program Manager

Wednesday, April 10; Mobile, AL

www.green-marine.org

OUTLINE

- Recap from AAPA Board
 - MOU
 - Membership
- GHG & Air Pollutants Workgroup
- GreenTech
June 5 – 7, 2019
Cleveland, Ohio



AAPA – Green Marine Memorandum of Understanding



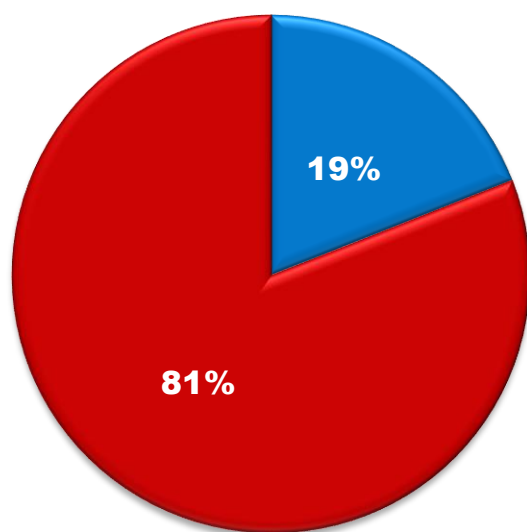
Five years ago we agreed to:

- Advance the environmental sustainability of port and terminal operators
- Exchange memberships
- Establish a productive working relationship
- AAPA encourages its members' participation in the Green Marine environmental program

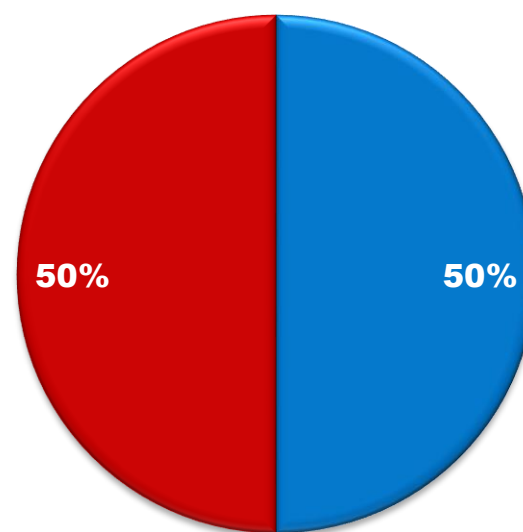


MoU's impact

Port participation in the Green Marine program:



Fall 2013: 21 ports



March 2019: 44 ports

 Canadian ports  U.S. ports

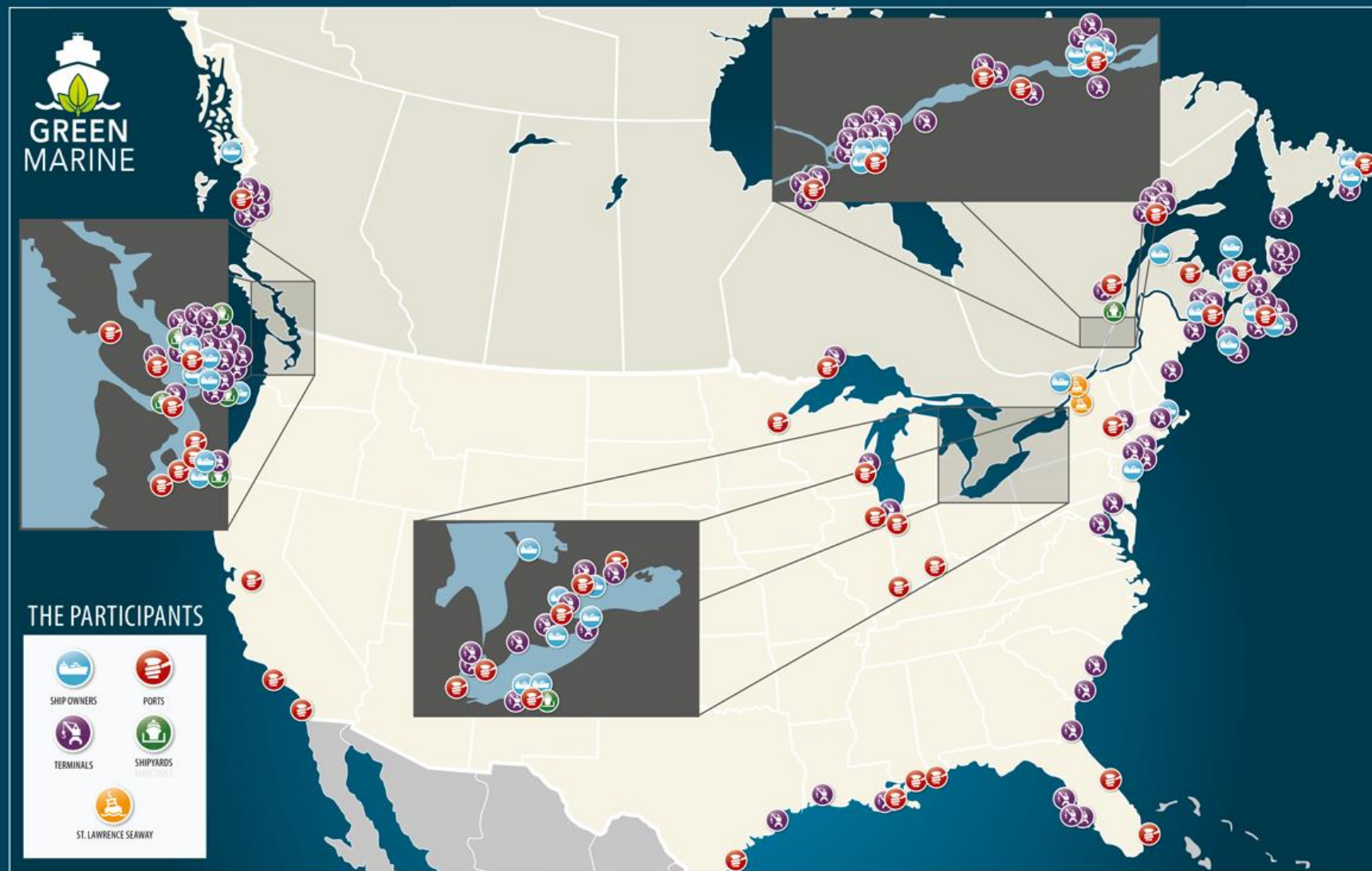


PORTS



- Alabama State Port Authority
- Albany Port District Commission
- Bécancour Waterfront Industrial Park
- Belledune Port Authority
- Canaveral Port Authority
- Duluth Seaway Port Authority
- Greater Victoria Harbour Authority
- Halifax Port Authority
- Hamilton Port Authority
- Montréal Port Authority
- Nanaimo Port Authority
- Northwest Seaport Alliance
- Oshawa Port Authority
- Port Alberni Port Authority
- **Port Charlottetown**
- Port Everglades
- Port Milwaukee
- **Port of Anacortes**
- Port of Cleveland
- Port of Corpus Christi
- Port of Everett
- Port of Gulfport (MSPA)
- Port of Hueneme
- Ports of Indiana – Burns Harbor, Jeffersonville, and Mount Vernon
- Port of Monroe
- Port of New Orleans
- Port of Olympia
- **Port of San Diego**
- Port of Seattle
- **Port of Stockton**
- Port of Valleyfield
- Prince Rupert Port Authority
- Québec Port Authority
- Saguenay Port Authority
- Saint John Port Authority, NB
- Sept-Îles Port Authority
- St. John's Port Authority, NL
- Thunder Bay Port Authority
- Toronto Port Authority
- Trois-Rivières Port Authority
- Vancouver Fraser Port Authority
- Windsor Port Authority

132 PARTICIPANTS IN U.S. AND CANADA



PROGRAM SCOPE



PERFORMANCE INDICATORS

○ Shipowners ○ Ports and seaway ○ Terminals and shipyards



AQUATIC INVASIVE SPECIES



CARGO RESIDUES



COMMUNITY IMPACTS



DRY BULK HANDLING AND STORAGE



ENVIRONMENTAL LEADERSHIP



GARBAGE AND WASTE MANAGEMENT



GREENHOUSE GAS EMISSIONS



OILY WATER



POLLUTANT AIR EMISSIONS NOx



POLLUTANT AIR EMISSIONS SOx & PM

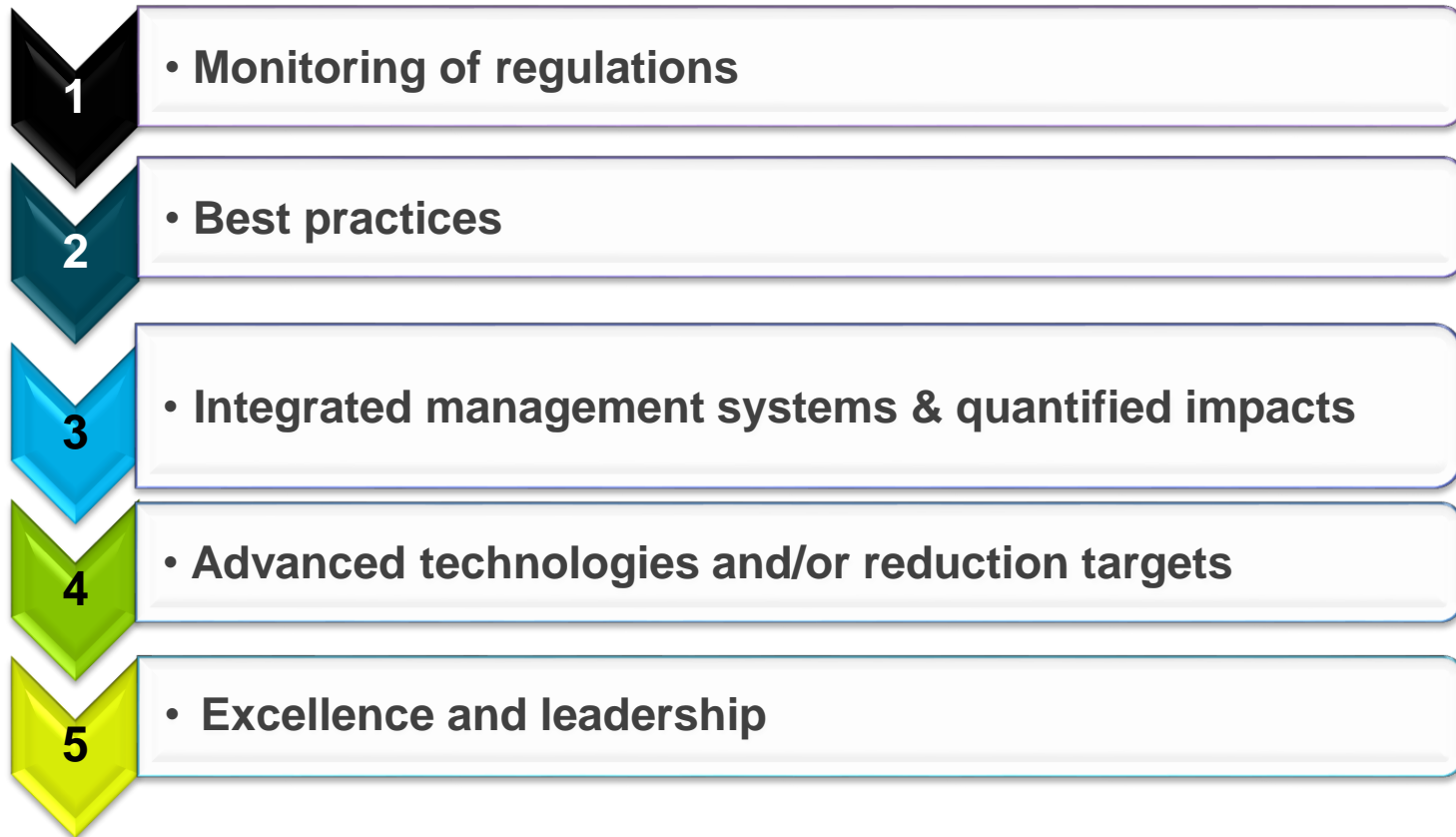


PREVENTION OF SPILLS AND LEAKAGES



UNDERWATER NOISE

PERFORMANCE INDICATOR



Greenhouse Gas & Air Pollutants Workgroup Mandate



Green Marine's strategic plan and 3-year action plan

- Dates back to 2014
- From the Board of Directors and the three advisory committees

Incorporate quantitative measures

Greenhouse Gas & Air Pollutants Workgroup Composition



Ports

- New Orleans
- Northwest Seaport Alliance
- Prince Rupert
- Vancouver, BC
- Quebec

Terminals

- Transmountain (Westridge)
- Ceres

Associations

- AAPA
- Assoc of Canadian PAs (ACPA)

Environmental, Gov't, SME

- Environmental Defense Fund (EDF)
- Environment Canada
- SNC-Lavalin
- Climate Smart Business
- US EPA - special observer

Greenhouse Gas & Air Pollutants Workgroup

Background



- Workgroup was formed in 2016
- **Phase 1 (2017 program):** Include port-wide emissions inventory in GHG performance indicator / Review measures at level 2
- **Phase 2 (2018+ program):** Work towards emissions reduction targets and quantitative metrics

Greenhouse Gas & Air Pollutants Workgroup

Takeaways from Phase 2 meetings



How to incorporate targets and metrics for landside participants?

April, 2017

- Flexibility
- Control versus Influence

March, 2017) not yet agreement on long term goal of common target. Proceed with information gathering. Look for whether there is any comparability or shared metrics across participants.

March, 2018) review of data/info request letter.

Nov, 2018) 144 Survey Monkey invites went out

Survey Results – Responses, Emissions, Metrics

- Q2) 54 participants responded (57% response rate)
 - Split equally between ports and terminals, plus the seaway and shipyard
- Q4) 34 track GHG
- Q7) 23 track an efficiency metric



“emissions / cargo”

- Emissions: CO2e, GHG, total
- Cargo: tonne, tons, metric tons, TEU, product, throughput, shipped, handled

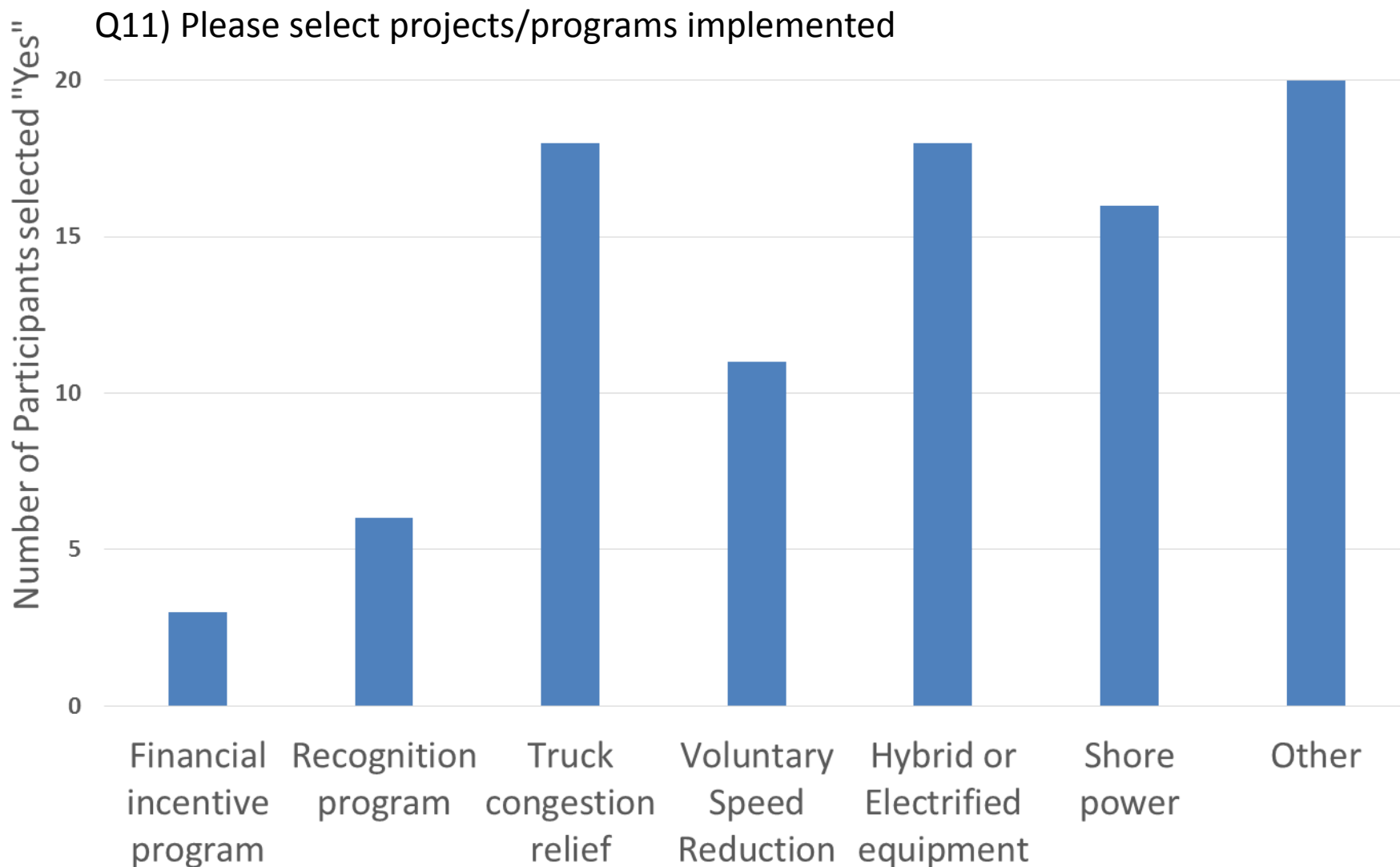
Also by equipment:

- Type
- hours of operation,
- # km driven on electric/hybrid vehicles
- Total Terminal Moves

Survey Results - Targets

- Q2) 54 participants responded (57% response rate)
- Q4) 34 track **GHG**
- Q7) 23 track an efficiency metric “**emissions / cargo**”
- Q8) 12 have set a quantitative target or targets
- Q9) What are your quantitative targets?
 - Both efficiency (intensity) and absolute
 - Mostly only GHG
 - Some have both near and far term targets
 - Consistently stated as a %age reduction from a Baseline to a Target year
 - Range of Annualized average targets: 0.7~11.7%
 - Most common (8): **~1%**
 - Split equally between both ports and terminals

Survey Results - Measures



What's Next?

2019 – 2021 Action Plan



Maintenance

- Invasive Species
- SOx&PM
- Greenhouse Gas
- Spill Prevention (stormwater)



Growth

- Ship Recycling
- Community Relations
- Aquatic Ecosystems



12th ANNUAL CONFERENCE



- 2008 ➡ Montreal
- 2009 ➡ Toronto
- 2010 ➡ Montreal
- 2011 ➡ Chicago
- 2012 ➡ Quebec city
- 2013 ➡ Vancouver
- 2014 ➡ Saint-John
- 2015 ➡ Seattle
- 2016 ➡ Quebec city
- 2017 ➡ Fort Lauderdale
- 2018 ➡ Vancouver

GreenTech 2019 :
Cleveland, Ohio
June 5 – 7, 2019



GREENTECH

ENVIRONMENTAL CONFERENCE

June 5 to 7, 2019 — Cleveland, OHIO.

2019



- [Program](#) almost completed: 9 sessions, 30+ speakers confirmed
- Certification ceremony at the Rock & Roll Hall of Fame
- Lake Erie cruise tour on the *Nautica Queen*
- Key sessions themes:
 - GHGs
 - Community building
 - Digitalization and big data
 - Blue economy
 - Electrification
 - Clean waterways
 - Human factor in sustainability
- 8 exhibitors so far
- Thank you SPONSORS!
- Call for [posters](#): deadline April 15





www.green-marine.org

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GREEN MARINE IS...



A **voluntary certification program** to reduce environmental footprint of marine operations by

- exceeding regulatory compliance
- promoting a culture of continuous improvement

A **benchmarking tool** to measure performance

A **partnership** initiative involving stakeholders