

# **IMO MARPOL ANNEX VI EU SULPHUR DIRECTIVE MEANS TO AN END?**

How long before tighter regulations?

Bill Hemmings

Director Shipping and Aviation

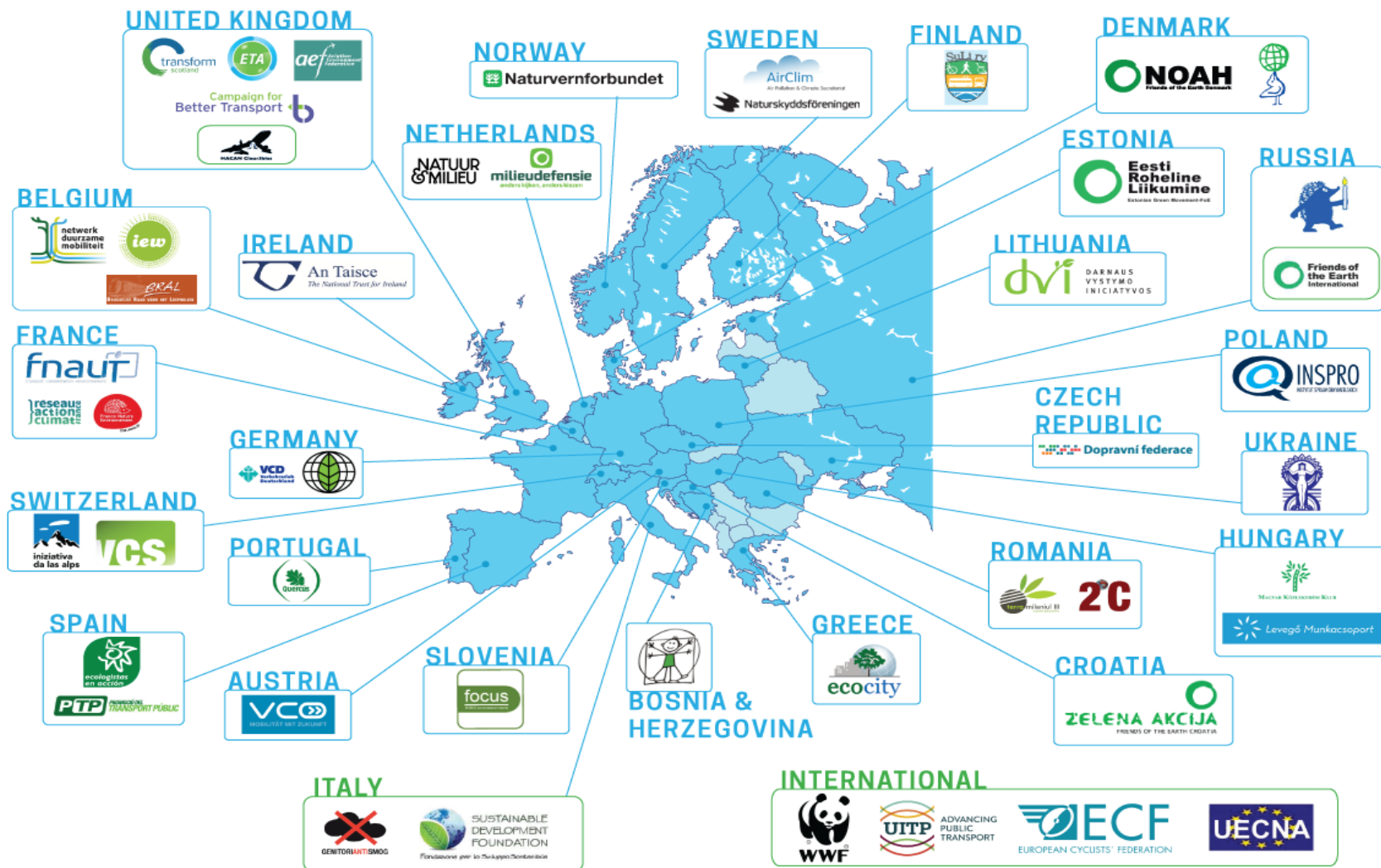
Copenhagen

21 March 2017

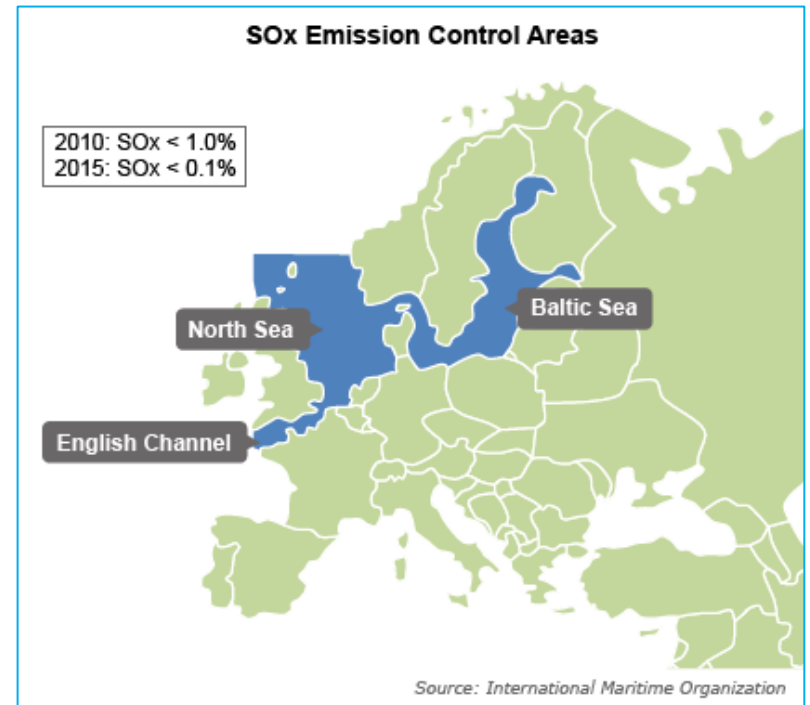
# Transport & Environment

## 49 members in 27 countries

### Brussels Base



# MARPOL ANNEX VI SECAS AND NECAS



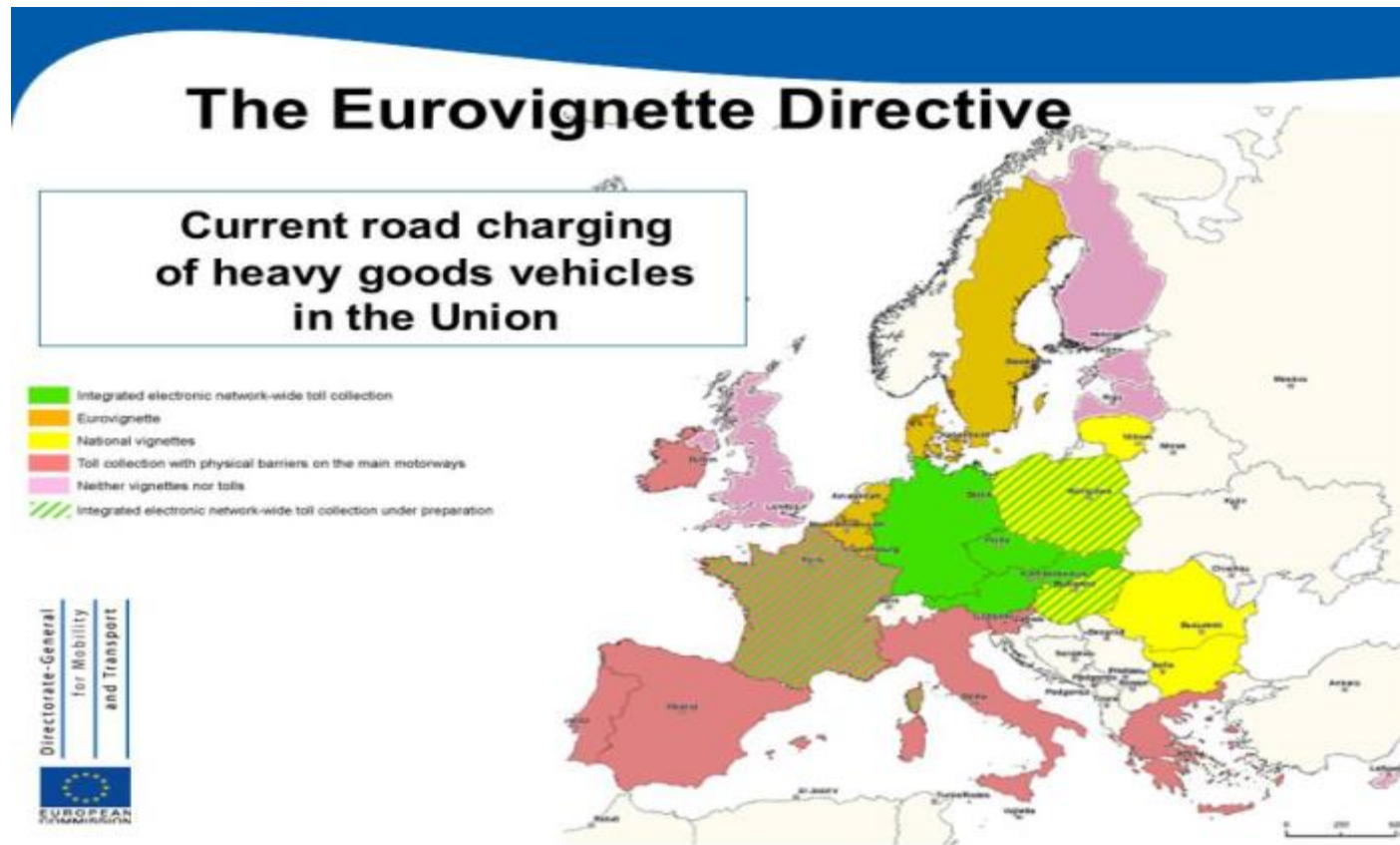
## AQ Regional regulations A-OK

# GOING BEYOND IMO IS A-OK

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- **2016 IMO** 0.5% S agreement from 2020
  - **2012 EU** 0.5% S in EU seas from 2020
  - **2005 EU** 0.1% S for ships at berth/anchorage in EU ports
  - **2005 EU** 1.5% S obligation for passenger ships frequently entering EU ports
  - **2005 EU** introduced the possibility to test & use the emission abatement
- **2016 IMO** Data Collection System (DSC)
  - **2015 EU** ship MRV
- **1992 IMO** double hull reg., yet single hull still allowed after 2015
  - **1990 US** double hull reg., no single hull after 2015
  - **EU** bans single hulls in 2011, ahead of IMO deadline

# SECAS/NECAS FOR TRUCKS



Brenner Pass; truck noise, congestion, air pollution  
 EU states reacted to Austria/Swiss unilateral action  
 Eurovignette doesn't mandate road charging  
 But specifies how they are to be levied  
 And what pollutants/external costs can be tolled

# REGIONAL INCREMENTALISM

## 0.5% S EU SEAS

- EU implementation MARPOL ANNEX VI 2008
- 2012 sulphur Directive
- SECAs already in Baltic, North Sea, Eng Channel
- Southern states reluctant
- Compromise; 0.5% in all non-SECA EU seas in 2020
- EU common position at MEPC70 on 2020 sulphur cap
- 22 of 29 IMO states in favour were from EU
- France now talking of a Mediterranean ECA
- China ports talking about SECAs
- S Korea & Japan must also act



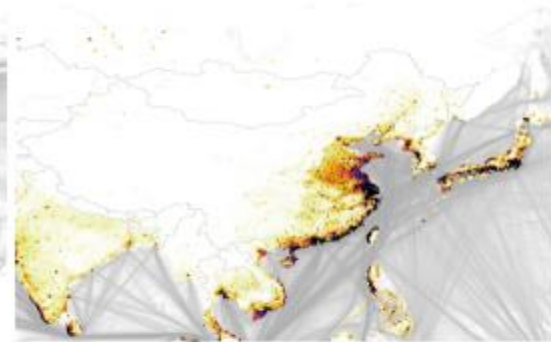
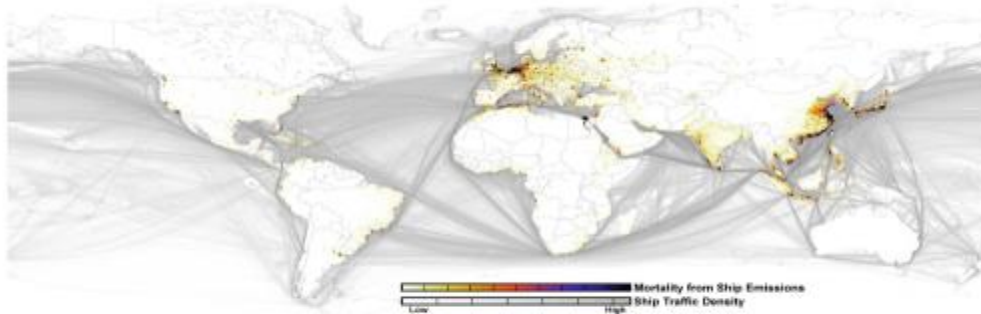
# WHY NOT JAPAN?



Japan now ranks #2 globally and  
#2 in Asia in ship air pollution deaths

Ships account for 14.1% of air  
pollution deaths in Japan

IMO action in 2020 means  
**3,800+ deaths per year avoided in Japan**  
at least 26,930 deaths per year avoided in Asia



## Clean Shipping Delivers Value

Healthier Coastal Communities

**41.8%**

Reduction in Japan  
ship air pollution deaths

International Trade: Japan

**\$1,502,000**

Million/year  
Maritime Trade

**20.74**

Million TEU  
Container Trade

# **AFTER SOX AND NOX**

PM

Diesel sulphur standard

CEMS

Arctic HFO ban

Ship BC measure

Ship Speed

EU CO2 Maritime Climate Fund



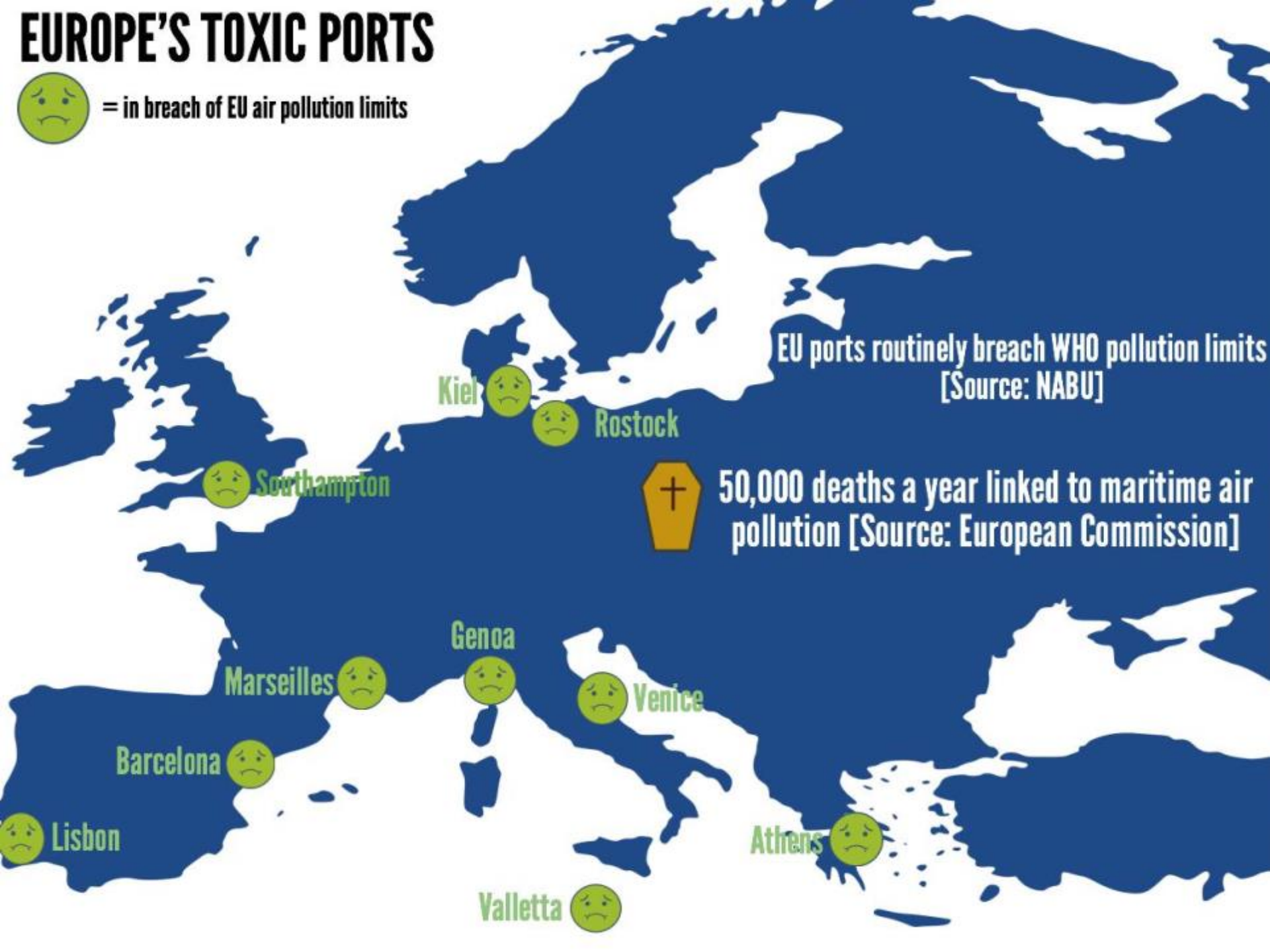
# GOING BEYOND SECAS & NECAS

- The case for going beyond 0.5%
- China, S Korea, Japan, Mediterranean, Adriatic, East Atlantic, Irish sea
- The case for road diesel standard in SECAs
  - - flashpoint issue
  - - DPF
- Arctic HFO ban on use
- Arctic BC measure
- NOx measure existing ships

# EUROPE'S TOXIC PORTS



= in breach of EU air pollution limits



Kiel



Rostock



Southampton



50,000 deaths a year linked to maritime air pollution [Source: European Commission]

EU ports routinely breach WHO pollution limits [Source: NABU]

Genoa



Marseilles



Barcelona



Lisbon



Venice



Athens

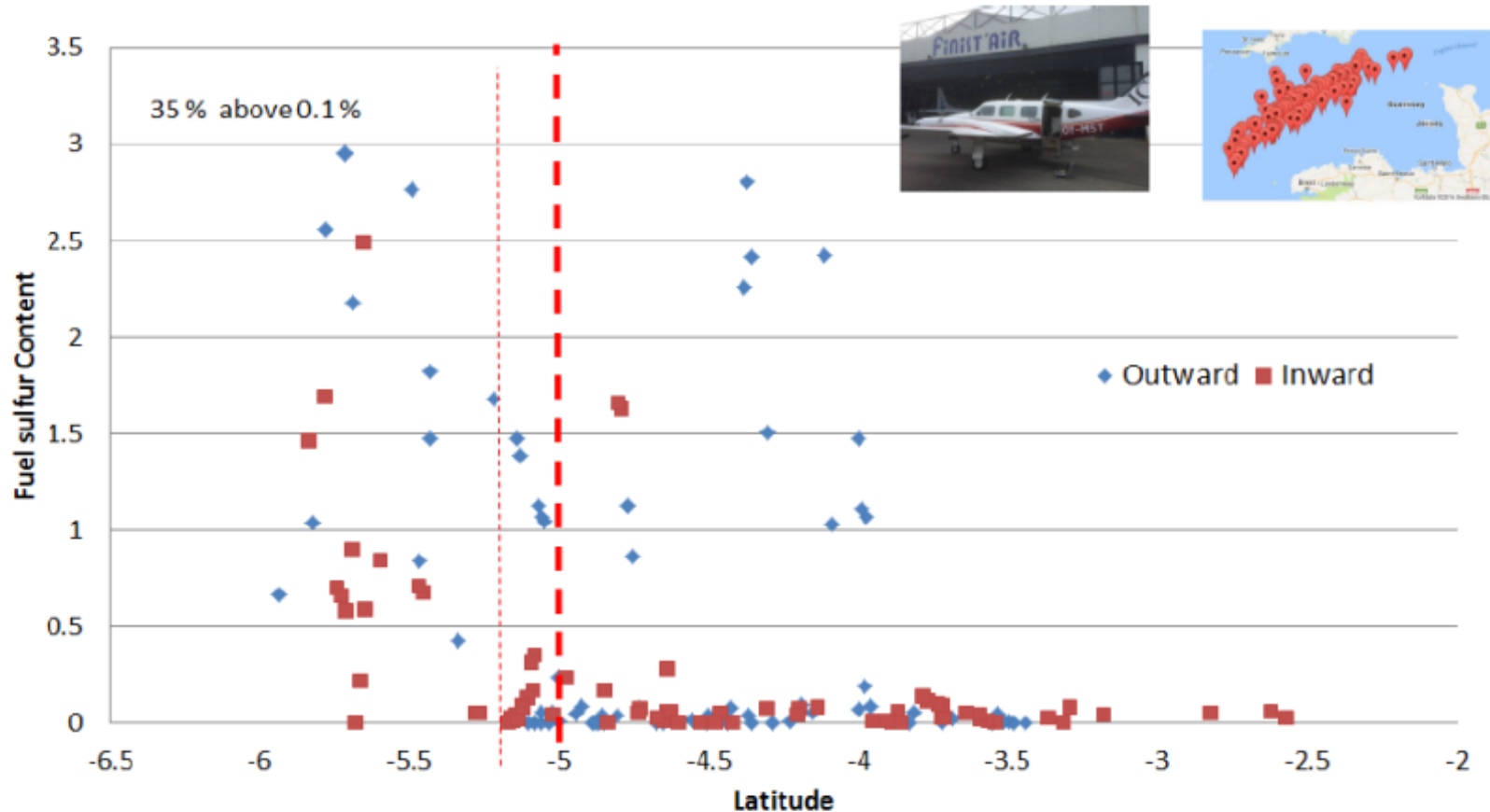


Valletta

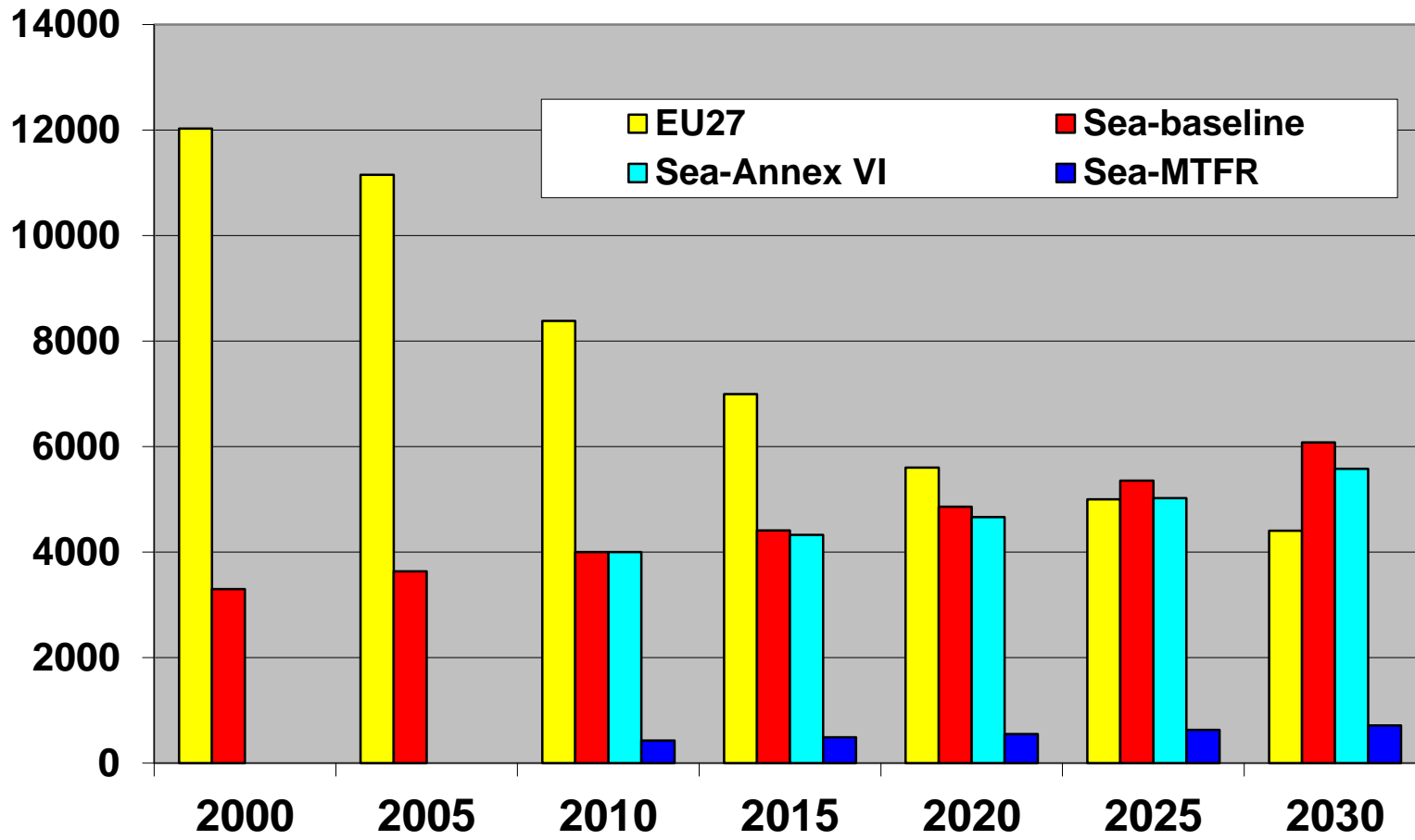


# EVERYBODY COMPLIANT?

Airborne sniffer measurements at SECA border (5 W). 84% compliance out of 74 ships



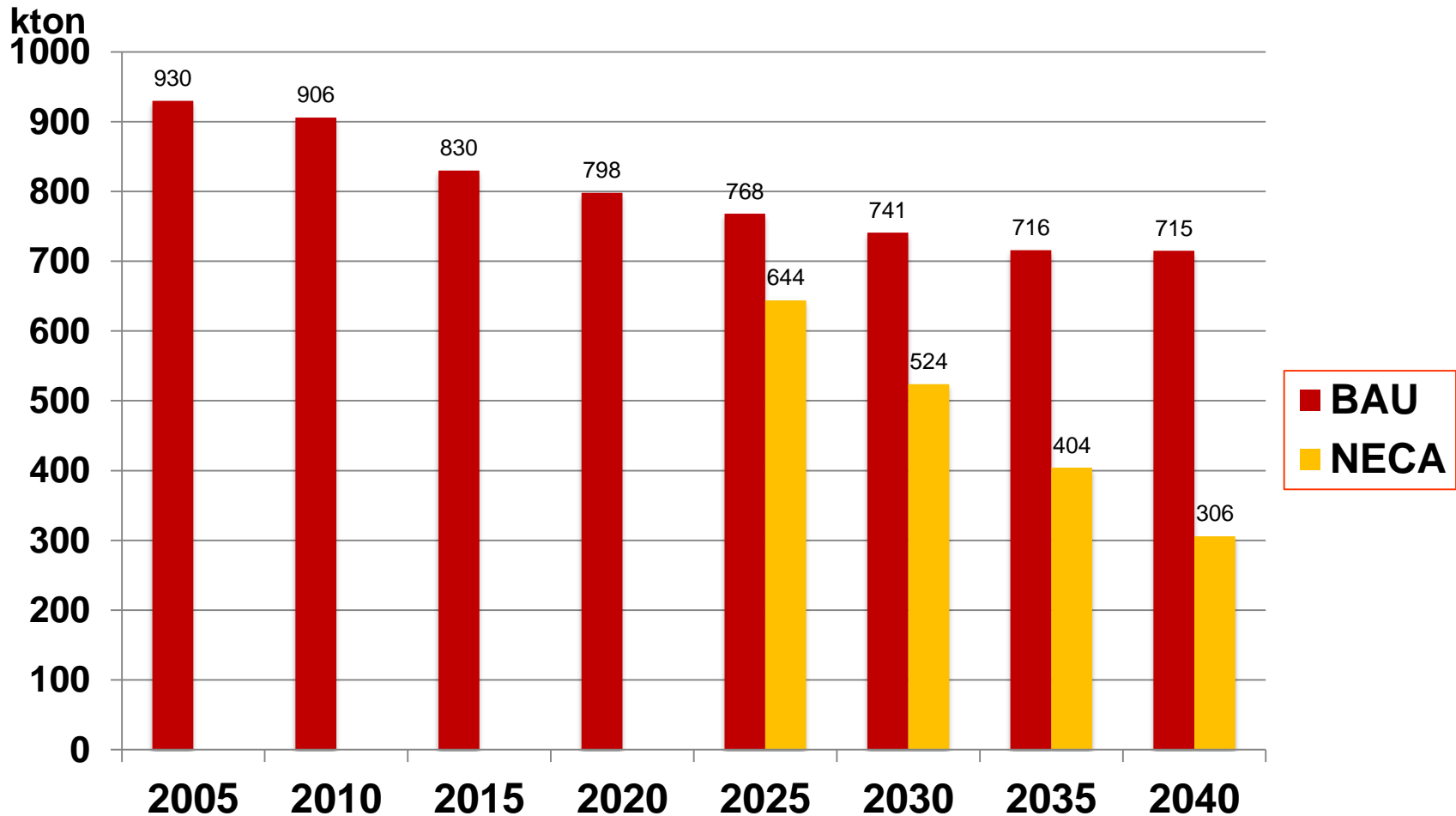
# EU NOX DIESELGATE, NEC



# NOX IN BALTIC & N SEAS

## NO NECA

## NECA



NOx-ECA assumed from 1 January 2021

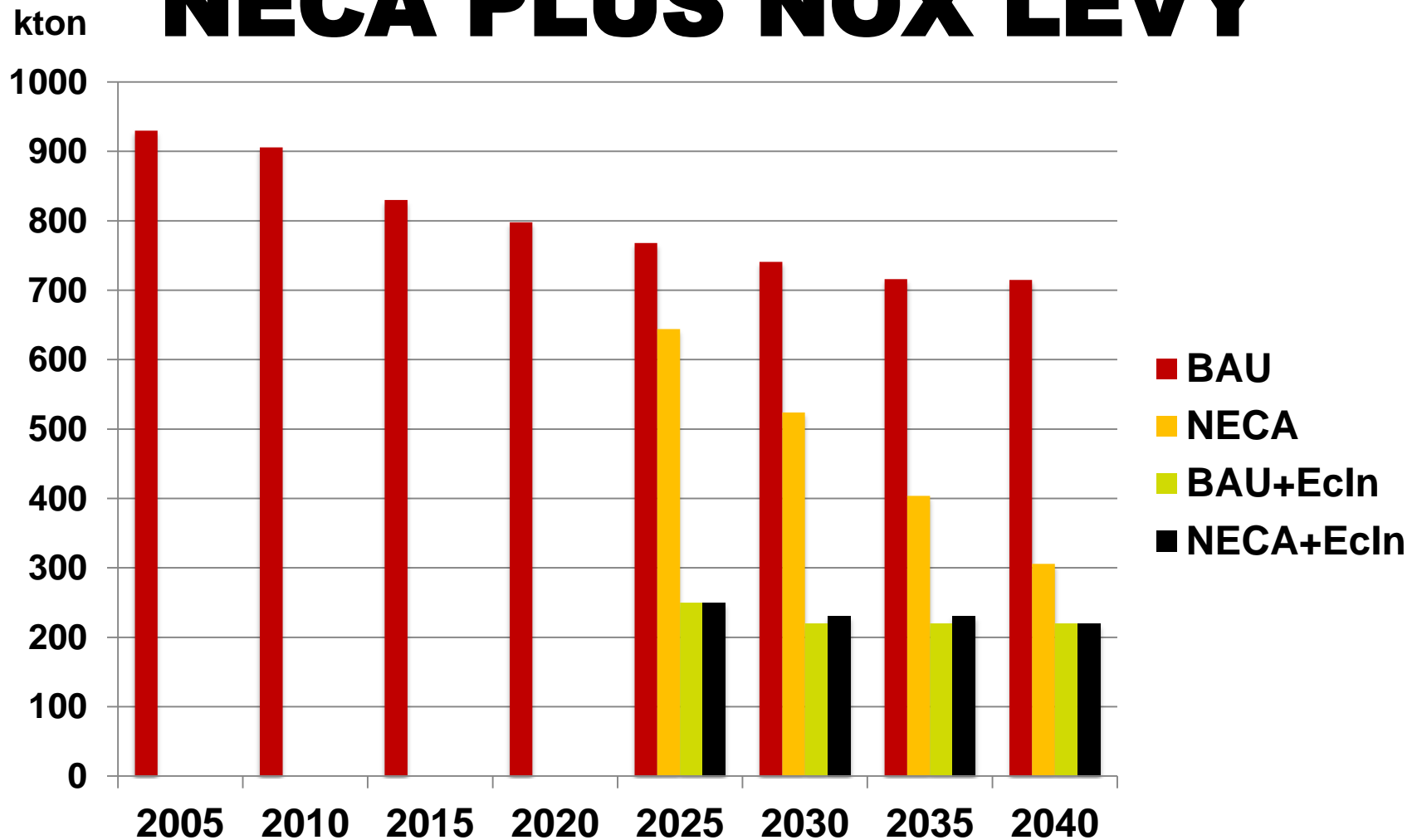
Source: IVL/CE Delft (2016)

# NOX BALTIC N SEA

## NO NECA

## NECA

# NECA PLUS NOX LEVY



Source: IVL/CE Delft (2016)

# CO2: EU SHOULD ACT

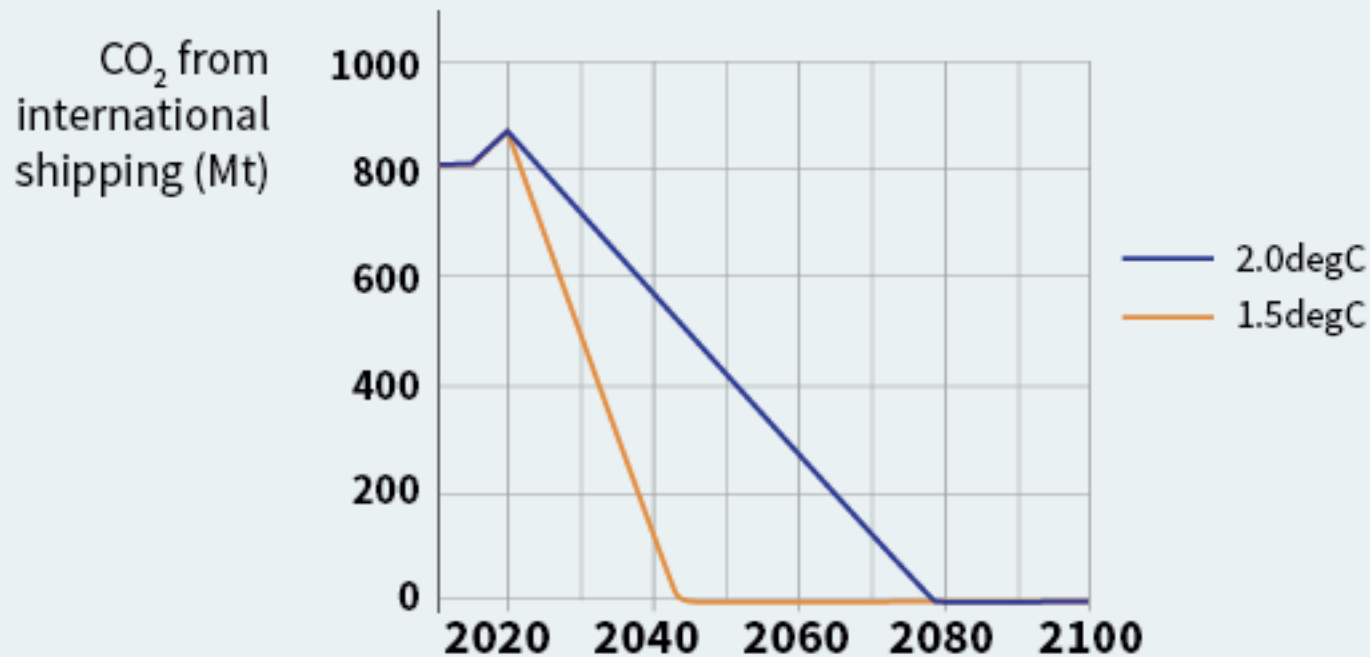
## Regions always drivers of IMO action

- Australia – ballast water
- US/EU - Double hulls
- Baltic Seca, 1.5% S passenger ships, 0.1% S at berth.0.5% in EU seas in 2020
- EU MRV lead to IMO DCS
- Maritime Climate Fund/ETS in 2023



# 2/1.5 C PARIS TARGET & SHIPPING EMISSIONS

## International shipping emissions



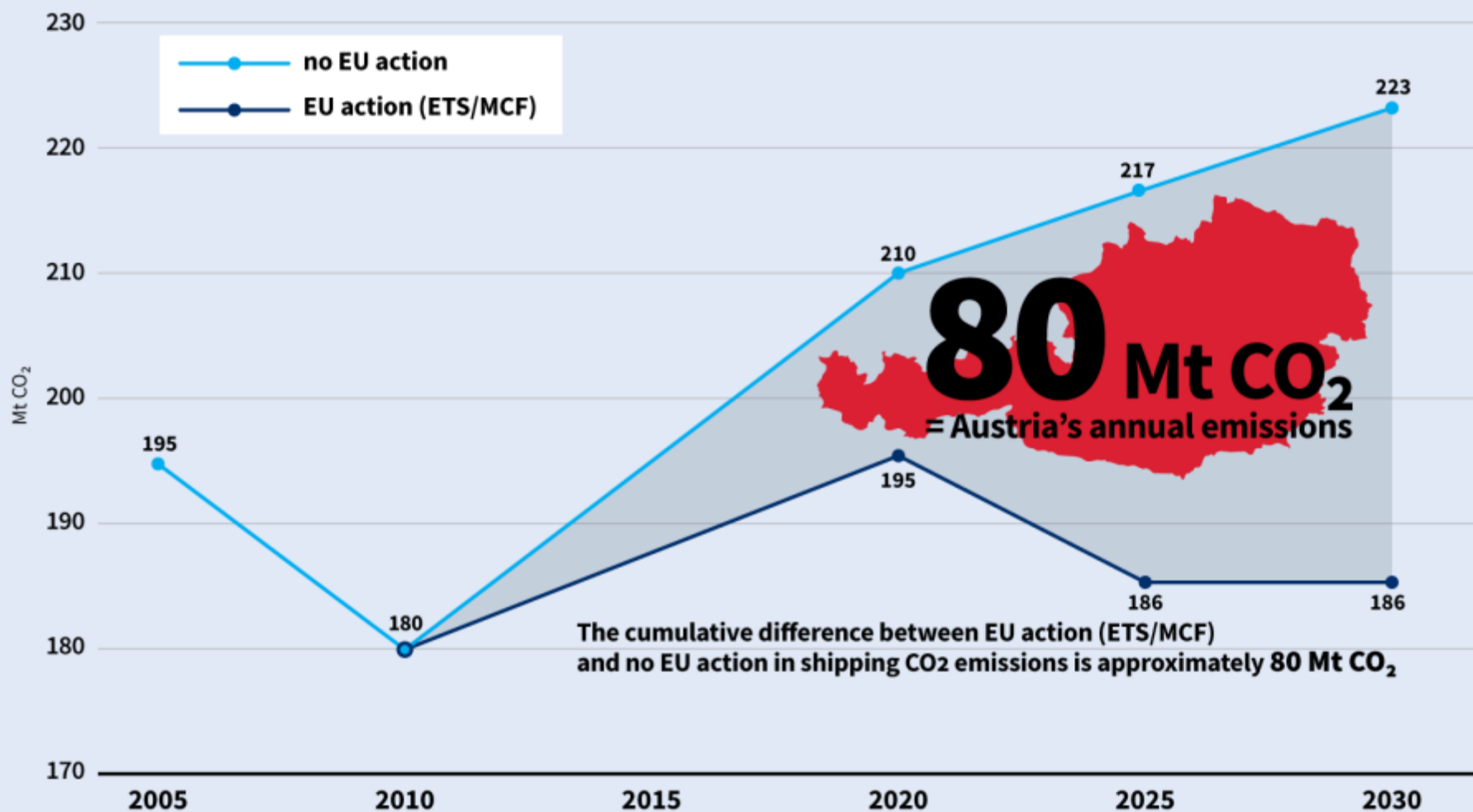
Source: University College London, University of Manchester  
Transport & Environment

# WHY MARITIME CLIMATE FUND

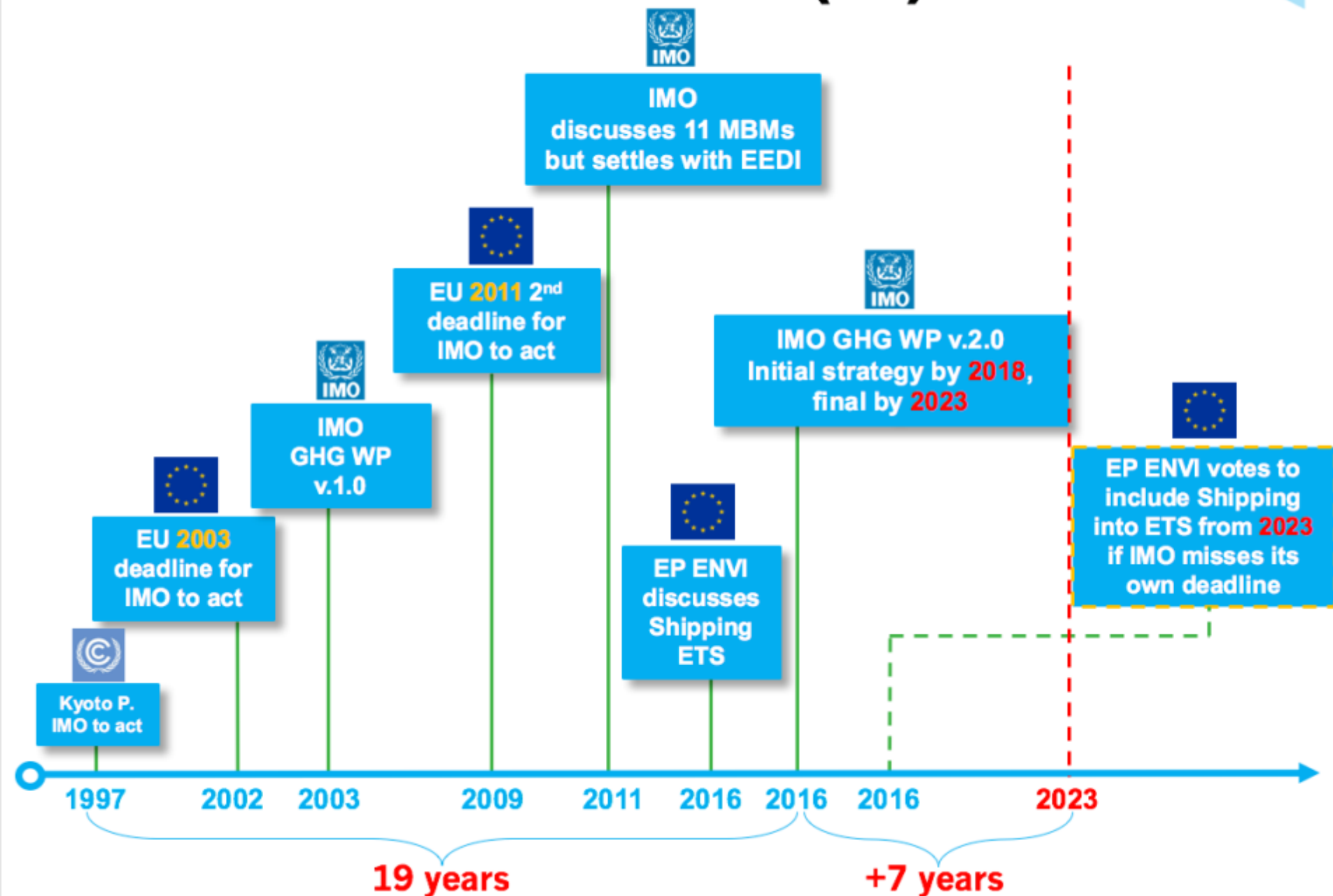
## Ship CO2 emissions:

- **3%** global -> **17%** global CO2 by 2050 if no action
- **13%** EU transport emissions in 2013.
- **54%** increase by 2030 & **86%** by 2050
  - over 1990-levels – EC.
- Shipping EU emitter **#7** of EU 28
- only transport mode not in EU reduction target
- Akin to giving Netherlands a free pass
- Ships/planes will negate 50% of road transport reductions in 2030

# GROWTH IN EMISSIONS IF SHIPPING IN EUROPE IS NOT REGULATED



# TIMELINE OF IMO (IN)ACTION



# FIRST MOVER ACTION

- Insurance policy if IMO doesn't act by 2023
- Doesn't cut across IMO process
- Protects EU ambition and domestic targets
- Flag neutral; no distortions
- No avoidance – too costly
- Responds to Paris urgency call
- Climate Fund promote ship and port efficiency
- Potentially alt fuels research