



*; KR's GHG Emission, Authentic Reporting System*

**KOREAN REGISTER**

**Future Technology Research Team**

# What's the *GEARs* ?



## Monitoring Fuel Consumption & Operation data

- Collection fuel consumption(CO2 emission) and operation data
- Generation of the report automatically for EU MRV & IMO DCS



## Compliance of GHG & Air pollution Reg.

- **(EU MRV) As the accredited verifier**
  - ✓ Assessment of Monitoring Plan & Verification of Emission Report
- **(IMO DCS) As the Recognized Organization (RO)**
  - ✓ Approval of SEEMP(Ship Energy Efficiency Management Plan) Part II
  - ✓ Verification of ship fuel oil consumption data
- **(SIP) As the Technical expert**
  - ✓ Developing tool & Providing SIP sample



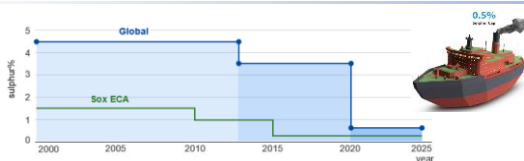
## Management of Ship Energy Efficiency

- Supporting the voluntary actions(e.g. EEOI )
- Visual checking of energy efficiency of ships
- Analysis of energy efficiency based on additional operation data

# What's the *GEARs* ?

## ✓ IMO Data Collection System

- Based on MARPOL Annex VI Reg.22 & 22A
- Development of SEEMP Part II(Auto-making from MP)
- Gathering data(FOC/hours underway/distance)
- Verification of annual data
- Generation of standardized format
- Issuance of Confirmation of Compliance(CoC)
- Issuance of Statement of Compliance(SoC)



- Building up Ship Implementation Plan
- Providing the real life sample documents
- Avoiding PSC's unnecessary actions
  - Warning letters - Paris & Tokyo PSC MOU
  - Advisory letters – AMSA
- Practically useful to comply with global sulphur cap

## ✓ Ship Implementation Plan

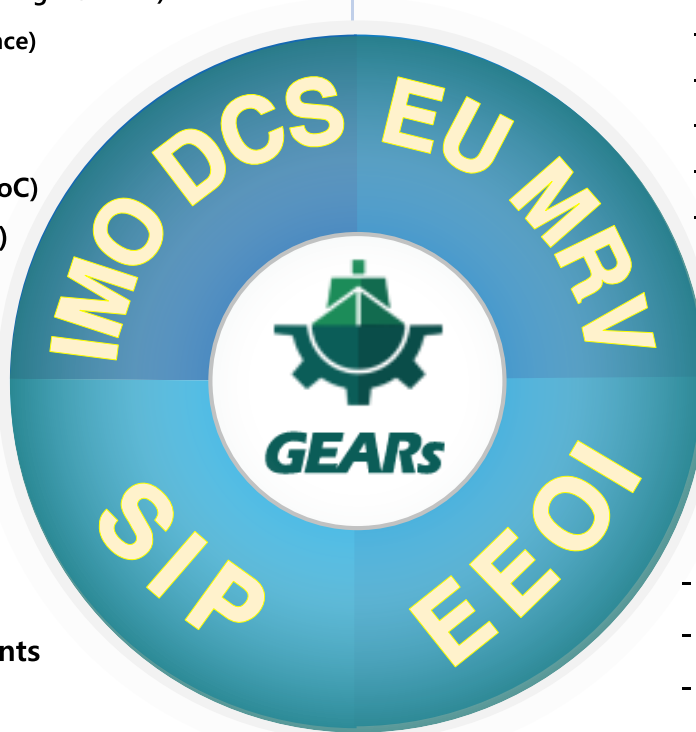
## ✓ EU Monitoring, Reporting & Verification of CO2 emission

- Based on Regulation (EU) 2015/757
- Development of Monitoring Plan
- Gathering data(FOC/CO2/time at sea/distance+α)
- Verification of voyage/annual data
- Generation of reporting format
- Issuance of Cert. for Monitoring Plan(MP)
- Confirmation of Document of Compliance(DoC)



- Recommendation of IMO to manage efficiency
- Additional points on ESI\* of IAPH\*\*
- Benefit from Panamanian flag authority
- Automatic calculation with cargo amount
- Visualization EEOI / CO2 / Consumption
- Supporting EEOI verification service

## ✓ Energy Efficiency Operational Indicator



# What's the *GEARs* ?

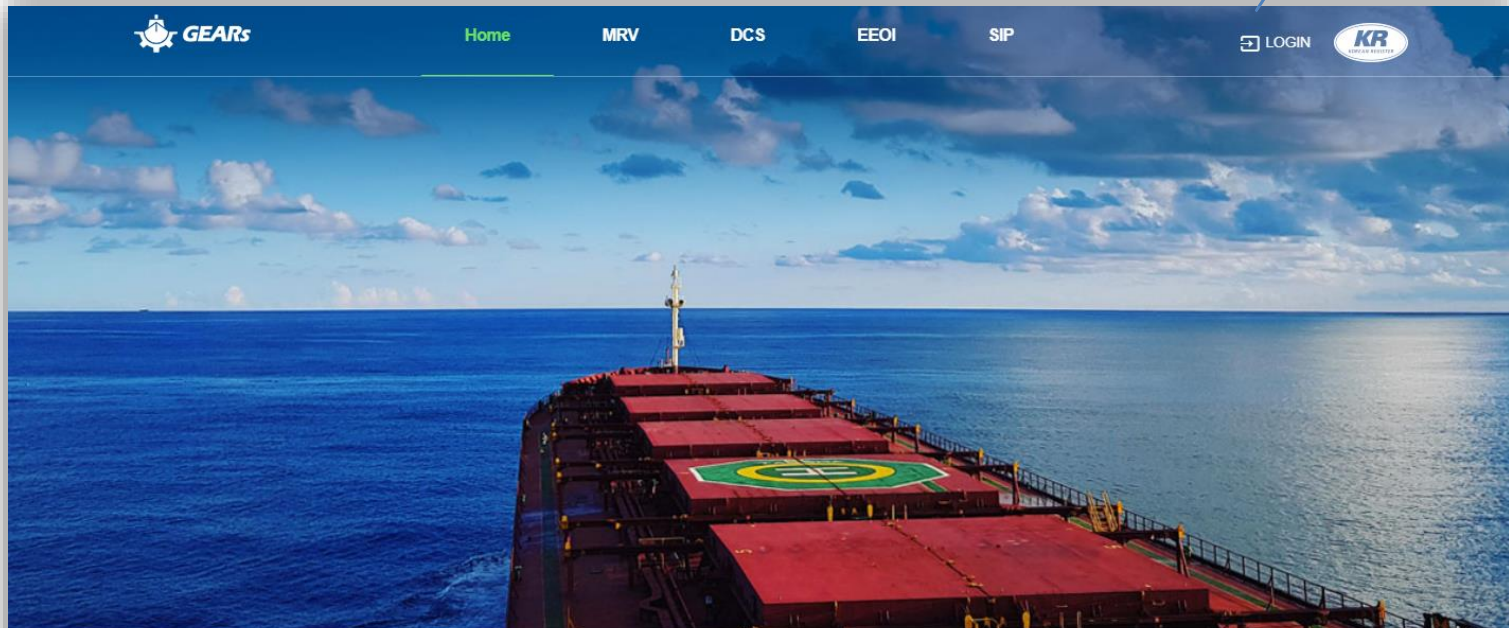


**Launching on August 2019**

 *GHG Emission, Authentic Reporting System*

[gears.krs.co.kr](http://gears.krs.co.kr)

**Go To Service**



GHG Emission, Authentic Reporting System

## GEARs

As global climate change awareness and the need for environmental regulation are emerging, the European Commission has implemented EU-MRV (Monitoring, Reporting, Verification) regulation on July 2015 and the International Maritime Organization has implemented IMO-DCS (Data Collection System) regulation on March 2018.



**GEARs**



# Thank you