

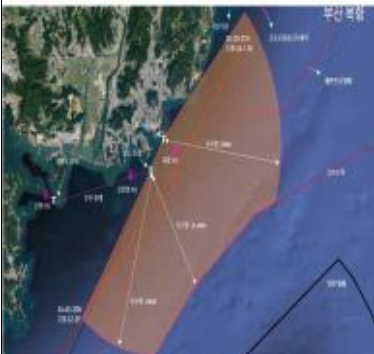
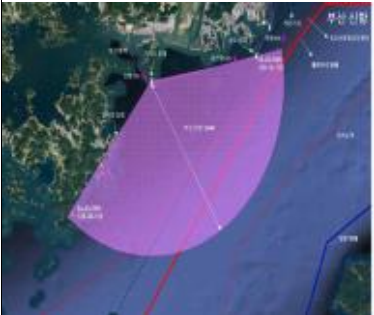
1. What is VSRP(Vessel Speed Reduction Program)

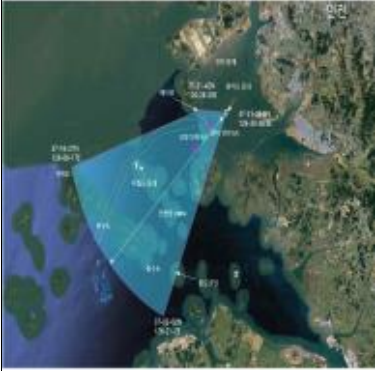
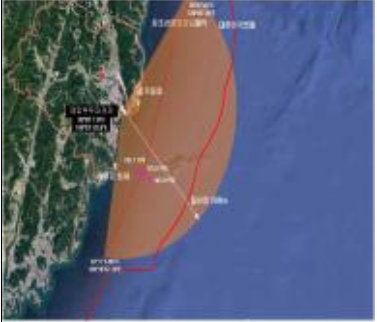
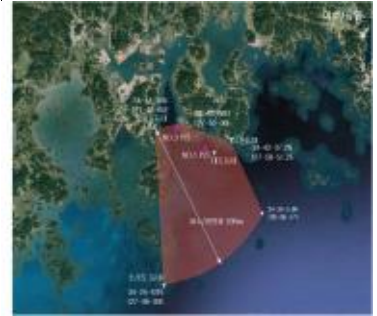
The Republic of Korea operates a Vessel Speed Reduction Program to improve the air quality of the ports. In order to reduce the amount of fuel used by vessels in VSR zones by lowering the speed, the policy is to reduce Port fees.

2. How to participate in

2.1. VSR zones

VSR zones have been designated as shown in the table below for the four major ports in Korea (Busan/Incheon/Ulsan/Yeosu Gwangyang), and should be operated with the recommended speed or slower in VSR zones.

Port	VSR Zones	Reference: VSR Zones by Ports
Busan Port (North Port)	•Circular arc with a 20 nautical mile radius from Oryukdo lighthouse, from the line connecting Oryukdo lighthouse (35-05-28N, 129-07-36E) and the point (35-20-21N, 129-24-15E) to the contiguous zone •Circular arc with a 20 nautical mile radius from Sangdo light beacon, from the line connecting Sangdo light beacon (35-02-13.7N, 129-05-34.8E) and the point (34-45-30N, 128-52-05E) to the contiguous zone	 A satellite map of the Busan North Port area. A large, semi-transparent orange circular arc is drawn around Oryukdo lighthouse. Another semi-transparent orange circular arc is drawn around Sangdo light beacon. The arcs extend from the coast into the sea, defining the VSR zones.
Busan Port (New Port)	•The line connecting Gadeokdo (Dongdoomal) lighthouse and the point (35-03-59N, 129-13-17E) •The line connecting Gadeokdo (Dongdoomal) lighthouse and the point (34-43-09N, 128-36-15E) •Circular arc with a 20 nautical mile radius from Gadeokdo (Dongdoomal) lighthouse, from one line to the other line stated above	 A satellite map of the Busan New Port area. A semi-transparent purple circular arc is drawn around Gadeokdo (Dongdoomal) lighthouse. The arc extends from the coast into the sea, defining the VSR zone. Two lines are also shown, connecting the lighthouse to specific points in the sea.

Incheon Port	•The line connecting Palmido lighthouse (37-21-29.8N 126-30-38.9E) and Haenyeo island (37-21-42N,126-26-30E) •The line connecting Haenyeodo and the point passing through the end of Deokjeokdo (37-16-27N, 126-06-17E) •The line connecting Palmido lighthouse and the point passing through the end of Pungdo (37-03-02N, 126-21-02E) •Circular arc with a 20 nautical mile radius, from the line connecting Palmido lighthouse and the point passing through the end of Deokjeokdo (37-16-27N, 126-06-17E) and to the line connecting the lighthouse to the point passing through the end of Pungdo (37-03-02N, 126-21-02E)	
Ulsan Port	•The lines connecting from Maeam Pier breakwater (35-30-7.9N, 129-23-22.8E) to the point (35-47-40N, 129-35-20E) and to the point (35-11-3.85N, 129-16-57E) •Circular arc with a 20 nautical mile radius from Maeam Pier breakwater, from the line with the point (35-47-40N, 129-35-20E) to the line with the point (35-11-3.85N, 129-16-57E)	
Yeosu-Gwangyang Port	•The lines connecting Odongdo lighthouse (34-44-36N, 127-46-00E), Jukdo (34-45-36N, 127-50-6E), Gumsan lighthouse (34-42-37.2N, 127-58-51.2E) and the point (34-34-5.8N, 128-06-57E) •Circular arc with a radius of 20 nautical miles from the line between Odongdo lighthouse and the point (34-34-5.8N, 128-06-57E) to the line between the Odongdo lighthouse and the Sorido lighthouse (34-24-42N,	

	127-48-00E)	
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* (Destination point) The pilot station of each port shall be the destination point in principle (The destination point for the vessels without a pilot shall be the pilot station nearest to the land.). In case of using an anchorage that is closer to the open sea than the pilot station, consider the anchorage as the destination point

2.2. Applicable Vessel Type and Recommended Speed

Among the following vessel types, ocean-going vessels of 3,000 tons or more and the vessels that sailed normally* via routes are subject to the program.

* (normally) ① the vessels with an average speed of 5-minute interval exceeding 110% of the recommended speed twice or more in waters(however, in the case of Incheon port, the vessels with an average speed of 5-minute interval exceeding 130% of the recommended speed twice or more in waters) and ② the vessels that applied for delayed arrival at anchorage or pilot station are not applicable for the program.

Busan Port		Incheon Port		Yeosu-Gwangyang Port		Ulsan Port	
Vessel Type (Port-Mis Code)	Rec Speed (knot)	Vessel Type (Port-Mis Code)	Rec speed	Vessel Type (Port-Mis Code)	Rec speed	Vessel Type (Port-Mis Code)	Rec speed
Container (41)	12	Container (41)	12	Container (41)	12	Container (41)	12
Automobile (27)	12	Automobile (27)	12	Automobile (27)	12	Automobile (27)	12
Semi Container	12	Semi(mix) Container	10	Semi(mix) Container	10	Semi Container (42)	10

(42)		(42)		(42)			
		LNG (56)	10	LNG (56)	10	Crude Oil (51)	10
						Chemical and Product oil (52, 53)	10

※ Port facility operators according to the Article 30 of the Harbor Act are allowed to add applicable vessel types, change speed limits by vessel types, and set exceptions to the program (vessels that use piers requiring low speed operation, etc.) when they are deemed to be necessary considering the port air quality, status of vessels entering and leaving the port, etc.

2.3. Application and Confirmation

Shipping companies shall submit a pay-back application through Port-Mis. Port Authority confirms actual low speed operation through data from GICOMS (Ministry of Oceans & Fisheries).

2.4. 60% rule

Port-fees reduction incentive is provided to the shipping company that slowdown the speed of 60% or more of their vessels entering into the relevant port in terms of annual basis. Incentives are not provided if the number of low speed operations is less than 60% of the annual number of arrivals and departures.

* However, Ulsan Port pays incentives for each VSR case regardless of 60% rule for crude oil, chemical, and product oil carriers.

3. Incentives: Reduction of Port fees

3.1 the amount of reduction

Incentive of reduction of entrance and departure fee (111 won/ton) will be provided. Incentives of 30% reduction of entrance and departure fee for container vessels and 15% reduction for other vessels will be provided.

3.2. Upper limit

If the reduction amount exceeds the upper limit provided by port authority, the amount up to the upper limit will be provided to each shipping company. Upper limits by port are as follows; Total 3.25 billion won, including Busan (1.65 billion won), Yeosu-Gwangyang (750 million won), Ulsan (500 million won) and Incheon (500 million won).

For the vessels that are already enjoying the fee reduction incentive based on other policies, additional 15% to 30% of reduction will be applied to the remaining fee.

* (e.g.) A container vessel that is already enjoying the incentive of 30% reduction from 1 million won port entry/departure fee will get additional 210,000 won fee reduction, which is 30% reduction on 700,000 won, which is an amount excluding the existing reduction amount (30%).

3.3 Pay-back

Port fee pay-back will be paid to shipping companies in lump-sum based on annual settlement of accounts, and this may change based on port situations.

3.4. Additional incentives during the fine dust season

The Korean government manages the fine dust season from December to March of the following year when the concentration of fine dust increases.

As a result, the Port fee reduction rate will be increased by 10% point if a shipping company participates in the VSRP during the fine dust season. In other words, the reduction rate will be raised from 30% to 40% for the container ships and for other vessels from 15% to 25%.