

Sustainable & Resilient Maritime Transport

**Withstanding the impact of COVID-19 and Building back better
: Republic of Korea's perspective**

4 March, 2021

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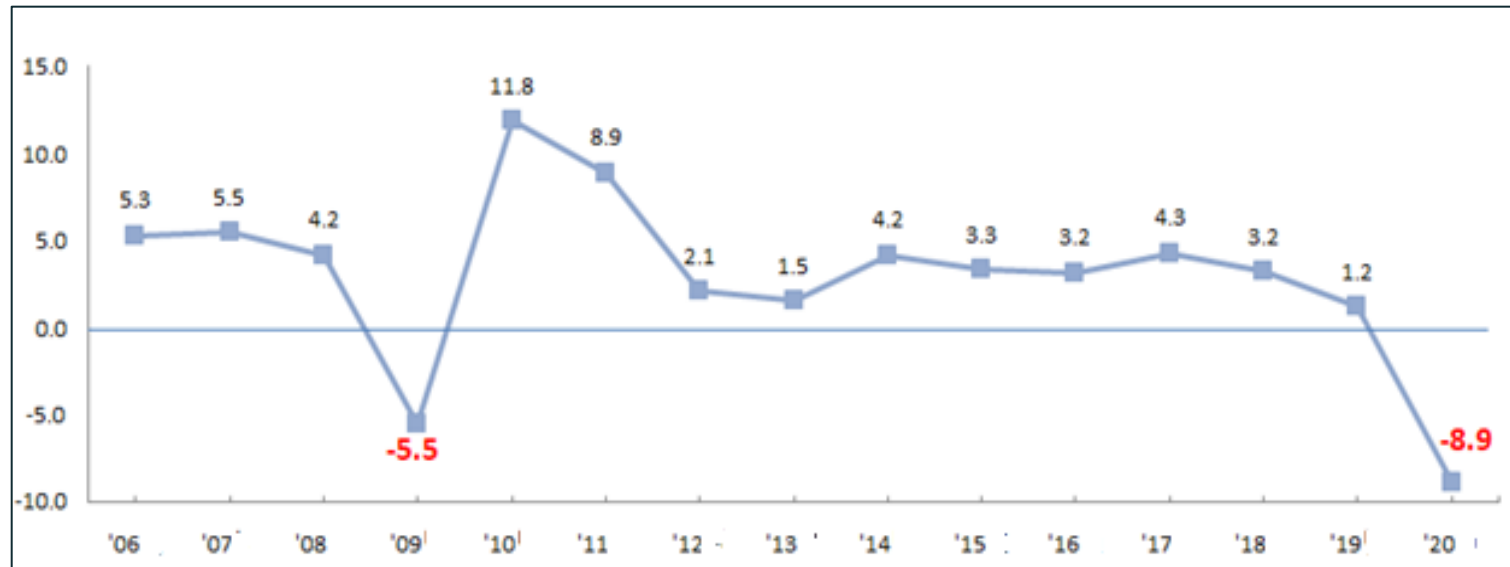
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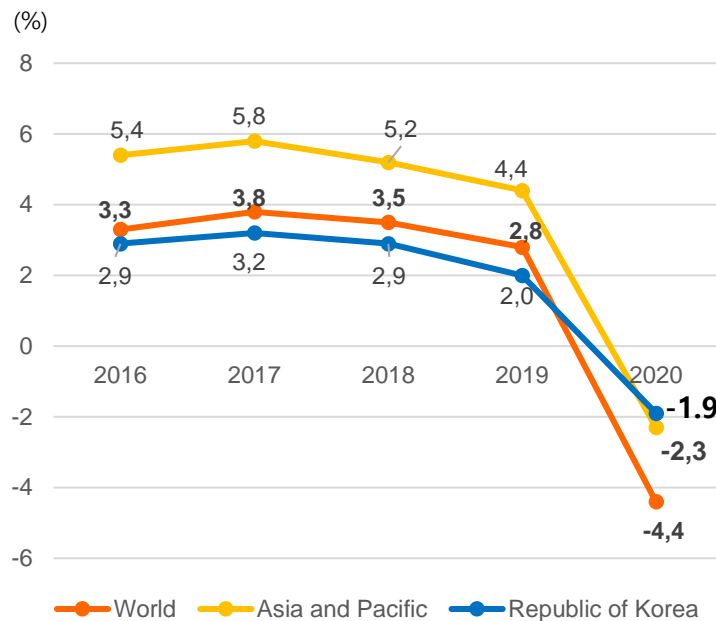
Impact on Shipping Industry



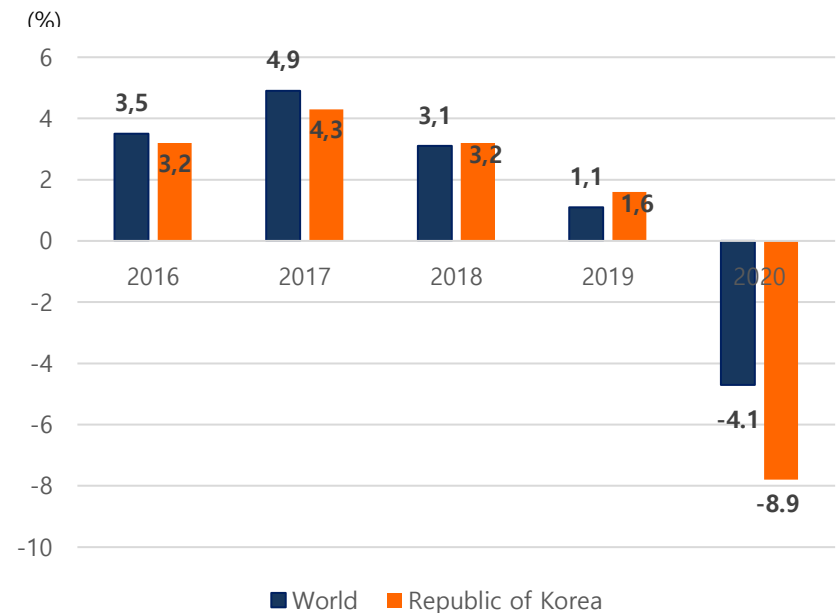
- According to the recent 15 years' record, the volume itself has declined for the first time in 2020 since 2009 due to the economic downturn caused by the 2008 U.S. Financial crisis.
- In 2021, it is expected that the impact of the base effect from the significant decrease in the previous year will be large. If the impact of COVID-19 continues globally, a significant recovery is expected to be difficult.

Impact on Shipping Industry

Economic Growth Rate (Real GDP Growth)
- Global, Asia-Pacific, Republic of Korea



Maritime Trade Growth (y-o-y)
- Global, Republic of Korea



Sources : IMF
(https://www.imf.org/external/datamapper/NGDP_RPCH@WEO/WEO/ORLD/APQ/KOR)

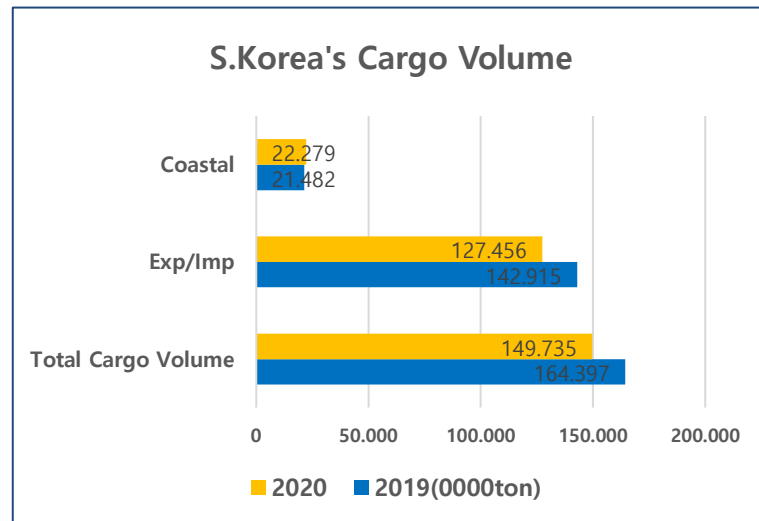
Sources : Clarksons, KPMG KOREA Analysis report(2020.6)
(https://assets.kpmg/content/dam/kpmg/kr/pdf/2020/kr_covid-19-shippingmarket-20200622.pdf)
KMOF Port Manual(2016,2017,2018,2019)

Impact on Port Industry

● Reduction of Port Cargo Volume in S.Korea

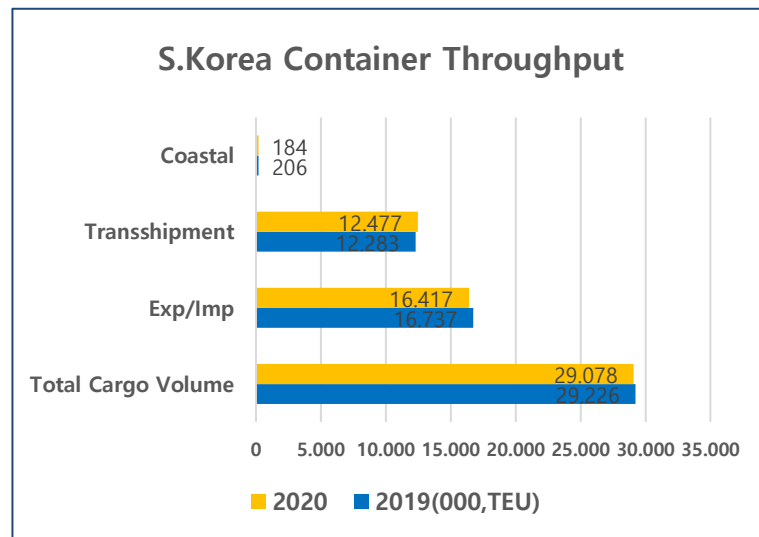
Total national cargo volume(Ex/Import + Coastal) contracted by 8.9% compared to 2019

- ✓ Ex/Import cargo volume decreased by 8.9% while coastal cargo volume increased by 3.7%
- ✓ Ex/Import Volume: 1,497.3MT('20)
- ✓ Coastal: 222.7MT('20)



● Container throughput volume is contracted by 0.5% during compared to 2019

- ✓ Container throughput increased by 1.2% in the Q1, yet decreased by 4.3% in the Q2
- ✓ During the Q3, the decline was reduced to 1.1%, particularly, after September, showing a recovery trend with an increase demand N.A and SEA
- ✓ Total throughput volume (Q1) 1.2%↑, (Q2) 4.3%↓, (Q3) 1.1%↓, (Q4) 2.4%↑



Response to COVID-19 in Shipping Industry

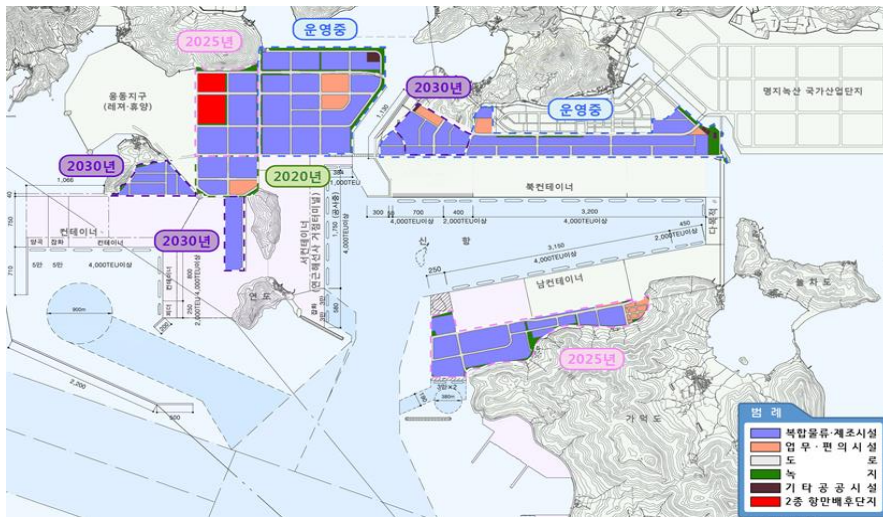
- Increasing shipping capacity: Build mega ships and expand investment to replace old ships
 - > New ships : 16 ships(24,000TEU class) 8 ships(16,000TEU)
- Strengthening cooperation between shipping companies and restructuring routes
 - > HMM join THE Alliance (20.4~)
 - > Restructuring between shipping companies serving Asian routes
- Develop national strategy for decarbonization shipping (Net-Zero)
 - > 2030 Green ship-K strategy(20.12) for sustainable shipping
- Digitalization
 - > Built the world's first e-Nav system to prevent marine accidents and quick response
 - > By applying advanced information technologies for contactless and seamless smart logistics
 - > Strengthening quarantine in the maritime and port sector for Post COVID-19

Response to COVID-19 in Port Development & Operation

▶ Establish a Sustainable Port Operation System

- Incentives to re-shoring firms through timely developing hinterlands and supporting tenant corporations
- Regional **Port Authorities** have established **“Business Continuity Plan”** to make major port facilities enable to be operated during COVID-19 crisis

Busan new port hinterland development plan(~2030)



Business Continuity Plan

PORT OPERATION BUSINESS CONTINUITY PLAN BY COVID-19 STATUS			
	① Precaution/Deter spread	② If confirmed cases occur	③ If confirmed cases spread
Comprehensive measures	<ul style="list-style-type: none"> Keep the Contingency readiness Enhance control of sanitation and environment Lower density of workers 	<ul style="list-style-type: none"> Quarantine the contacted, disinfection Allocate substitute personnel Deter unnecessary disrupt by revealing appropriate information 	<ul style="list-style-type: none"> Closure of the whole facilities temporarily Prepare secondary facilities
Port cargo offload	<ul style="list-style-type: none"> Secure emergency workforce (incl. consultation with port labor union) 	<ul style="list-style-type: none"> Temporarily halt the operation Relocate it to another terminal for emergent needs Send vessels to the adjacent terminals 	<ul style="list-style-type: none"> Allocate minimum core field workers Send vessels to the adjacent terminals Change calling points
Piloting, Port services	<ul style="list-style-type: none"> Secure meals and quarantine dothing 	<ul style="list-style-type: none"> Keep the work after safety measures Minimize contacts by placing minimum core workers, Limit individual activities after work 	<ul style="list-style-type: none"> Reorganize work-shifts Reduce the number of seafarers onboard Allocate minimum number of national recognized pilots and Port operators
Port Security	<ul style="list-style-type: none"> Lower density of population 	<ul style="list-style-type: none"> Allocation of substitute personnel Reorganize work-shifts Closure of entrances (partial), reschedule patrol Minimize entry procedure for disinfection workers 	<ul style="list-style-type: none"> Place security guards in core districts Maximize security equipment
Cruise and Passenger	<ul style="list-style-type: none"> Enhance facilities disinfection Enhance check procedure for the confirmed 	<ul style="list-style-type: none"> Disinfection overhaul facilities Quarantine the contacted 	<ul style="list-style-type: none"> Review the option of stopping cruise ship services Prepare secondary facilities
PORT-MIS (Port Management Information System)	<ul style="list-style-type: none"> Disperse workers Split work-shifts 	<ul style="list-style-type: none"> Return the dispersed personnel Maximize HR operation 	<ul style="list-style-type: none"> Allocate substitute personnel Have consigned workers distantly work

Response to COVID-19 in Port Development & Operation

▶ Re-planning the National Port infrastructure Development Plan

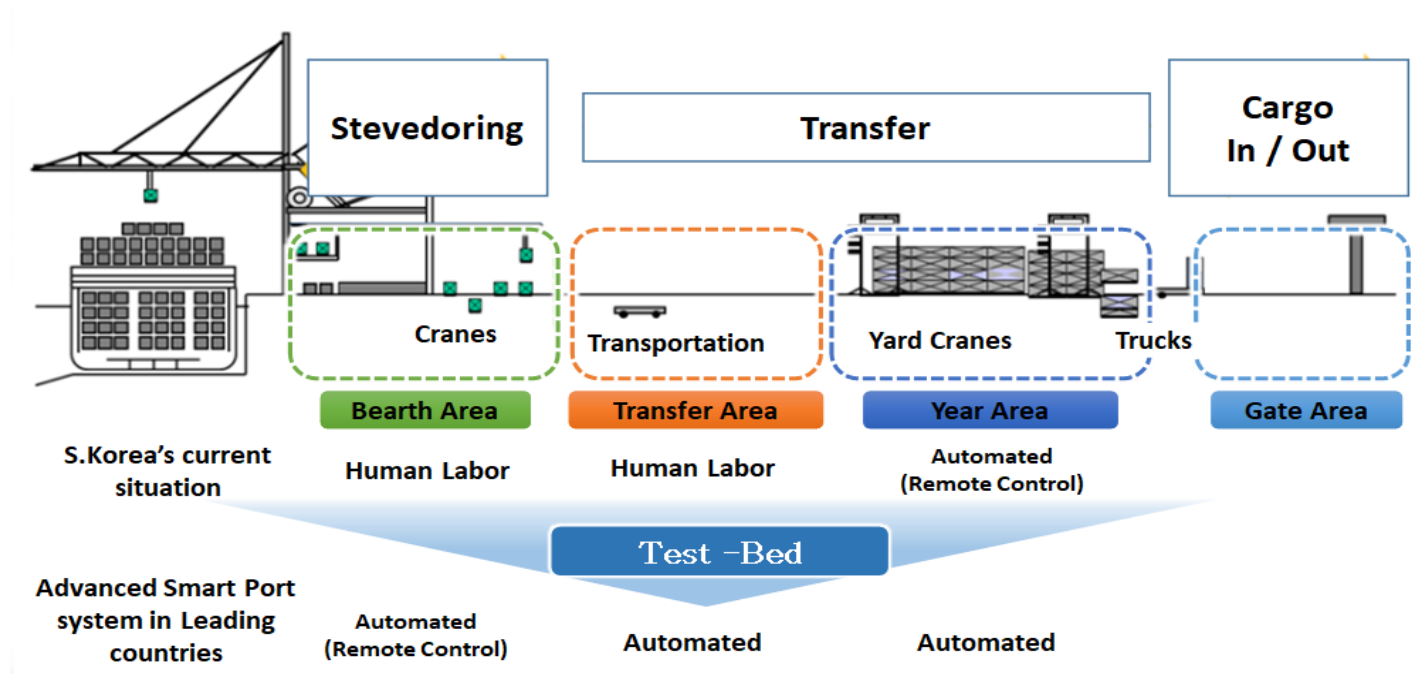
- Increasing necessity to adjust the previously predicted cargo volume by reflecting the throughput changes since COVID-19
- **2020's container throughput volume** is expected to be decreased from the forecasts made at the beginning of 2020.
- Forecasts for 2030 has been also revised downward (-5.0%).

(Unit : 1,000TEU)

National Container Throughput		Total	Ex/Import	Transitment	Coastal
Estimation for 2030	As Planned before	41,810	24,009	17,512	289
	Reflecting COVID-19 Impact	39,716	22,142	17,300	274
	Difference	-2,094	-1,867	-212	-15

- If significant reduction in cargo volume continues, National Port development plan will be revised accordingly.
i.e.) adjusting budget plan, Decrease the number of berths, etc.

Response to COVID-19 in Port Development & Operation



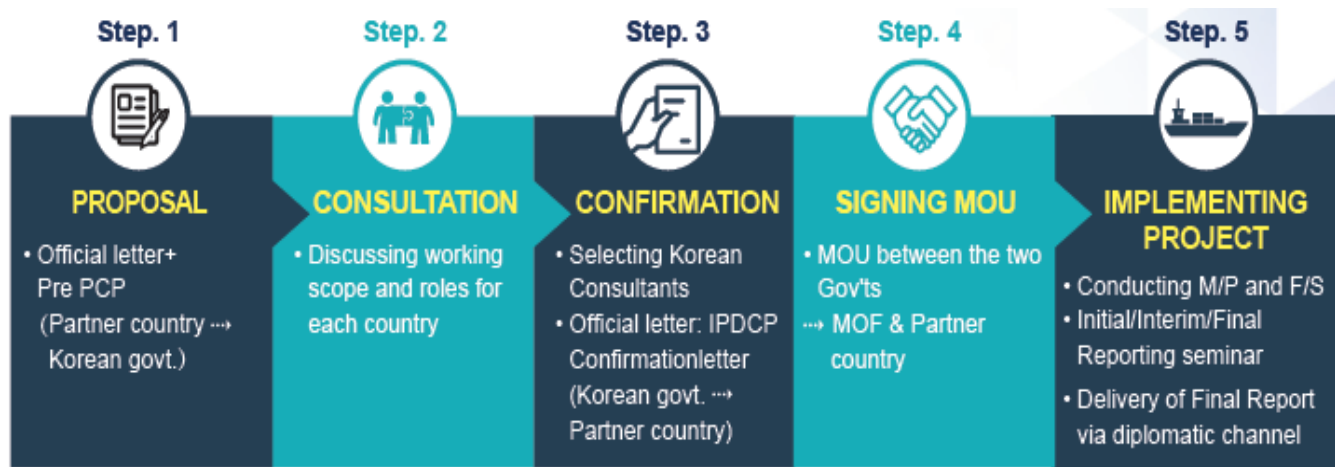
► Adoption of 4th industrial revolution technologies

- Implementation of a **Smart Port** by using AI, IoT, 5G technologies
- Build **Smart Port test-bed** by 2026 to secure relevant technology application and actual operation experiences
- After test, actual smart ports will be built in major ports such as Busan

IPDCP, KCSC

▶ IPDCP, International Port Development Cooperation Program

: Building cooperative relationships between governments by establishing a port master plan or supporting port development feasibility studies and operating invited training programs.



▶ KCSC, Korea Cooperative Supporting Center for Overseas Port Development

: To assist and act for MOF to establish win-win partnership in the field of port development between RO K and partner countries

- ① Coordinating related parties
- ② Developing new cooperative port project
- ③ Managing cooperative projects,
- ④ Organizing invited Port Expert Seminar



Thank You.
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