

Environmental targets for 2024

Environmental Vision 2050		Environmental targets for 2024	evaluation 2024	Results in 2024
<p><b>2050 Targets</b> Our decarbonization</p> <p>•Take on the challenge of net-zero GHG emissions</p>	<p><b>2030 Interim milestones</b> Our low-carbonization</p> <p>CO2 emission efficiency improved by 50% compared to 2008</p>	<p>&lt;Reinforcement of measures to improve operational efficiency (fuel efficiency)&gt;</p> <ul style="list-style-type: none"> <li>•Reduce CO2 emissions through slow steaming</li> <li>•Improvement of ship operation management through performance analysis using AI technology</li> </ul> <p>&lt;Study the introduction of low-carbon and decarbonized fuels&gt;</p> <ul style="list-style-type: none"> <li>•Study introduction of LNG, ammonia, and other fuel vessels</li> <li>•Use of carbon neutral fuels such as biofuels</li> </ul> <p>&lt;Contribution to the demonstration and diffusion of the Seawing automatic kite system&gt;</p> <ul style="list-style-type: none"> <li>•Development and implementation of the introduction of the "Seawing" wind power propulsion auxiliary system</li> </ul> <p>&lt;Consideration and introduction of other new technologies&gt;</p> <ul style="list-style-type: none"> <li>•Consider adopting energy-saving equipment and add-ons (water-emission boilers, inverters, etc.) in the new shipbuilding plan.</li> <li>•Verify the effectiveness of UWC (Under Water Cleaning), paint performance, and energy-saving add-ons using AI analysis technology.</li> <li>•Consider specifications to control methane slip and N2O emissions.</li> <li>•Study on-board CO2 capture technology.</li> </ul> <p>&lt;Onshore Initiatives&gt;</p> <ul style="list-style-type: none"> <li>•Reduce total electricity consumption and GHG emissions associated with electricity consumption at onshore facilities to below target. (previous year's level: first half 200,000kWh&lt;88.2t-CO2&gt;, 2nd half 201,000kWh&lt;88.8t-CO2&gt;)</li> <li>•Promote the introduction of electricity derived from renewable energy sources</li> <li>•Reduction of CO2 emissions by hybridization of cargo handling equipment at the company's terminals</li> </ul>	<p>○</p>	<p>•Actively used deceleration or Super Slow Steaming.</p> <p>•Continued verification of the accuracy of the ship navigation support system.</p> <p>•Continue to promote the ammonia fueled ship project</p> <p>•Continued the biofuel trial.</p> <p>•Considered and adopted of energy-saving equipment and additional devices for new ship construction.</p> <p>•We provide technical support using AI analysis, such as verifying the fuel efficiency improvement effect of implementing UWC while using the Aging percentage as an indicator of AI analysis.</p>
<p><b>Support for social Zero CO2 emissions improvement</b></p> <p>•Becoming a player in new energy transportation and supply that supports social decarbonization</p>	<p><b>Support for social low CO2 emissions improvement</b></p> <p>Strengthen activities to promote new energy transportation and supply for social low-carbonization</p>	<p>&lt;Development and expansion of new businesses that contribute to the low-carbon society&gt;</p> <ul style="list-style-type: none"> <li>•Contribute to supply chain development as a transportation company through membership in domestic and international organizations related to the utilization of hydrogen and ammonia.</li> <li>•Participated in a commercial demonstration project using a large liquefied hydrogen carrier, and worked toward the commercial use of hydrogen in society.</li> <li>•Engage in the business development and participation in demonstration projects related to renewable energy such as offshore wind power generation and OCUS (liquefied CO2 transport)</li> <li>•Promote efforts to realize CNP (Carbon Neutral Port), participate in CNP study groups at each port, and study projects.</li> <li>•Continuation of LNG fuel supply business for ships and consideration of ammonia fuel supply ships</li> </ul>	<p>○</p>	<p>• promoted various projects related to hydrogen and ammonia.</p> <p>•started collaborative discussions towards establishing standard specifications and standard ship types for liquefied CO2 transport vessels (August 2024).</p> <p>•Initiatives related to offshore wind power generation business Wind tunnel testing will be conducted in May 2024.</p> <p>•Feasibility verification of large floating vertical axis wind turbines, selected for NEDO's "Next-generation Technology Development Commission Project for Floating Offshore Wind Power Generation" (September 2024)</p> <p>•provided information to the Tokyo Port Bureau and the Aichi Port Bureau.</p> <p>•In order to realize large-scale international maritime transport of liquefied CO2 after 2028, a joint study will be started to establish standard specifications and ship sizes for liquefied CO2 transport ships (August 2024)</p>
<p><b>Our zero environmental impact to the utmost on oceans and atmosphere</b></p> <p>•Zero oil pollution accidents</p> <p>•Zero environmental impact to the utmost on oceans and atmosphere in operation</p>	<p><b>Reduction of our environmental impact on oceans and atmosphere</b></p> <p>Reduction of environmental impact on the ocean and atmosphere in ship operations including zero oil pollution accidents</p>	<p>&lt;Promotion of initiatives to eliminate oil pollution accidents&gt;</p> <ul style="list-style-type: none"> <li>•Proper implementation of the Safety Management System (SMS) and zero occurrence of oil leakage from vessels.</li> <li>•Ship inspections for ship quality improvement activities: 170 vessels/year</li> <li>•Remind shipowners of the importance of safe ship operation by sending out the Safe Operation Circular to each shipowner.</li> <li>•Implement safety campaigns (150 vessels per year) based on lessons learned from past oil spill accidents</li> <li>•Implement measures to prevent accidents involving oil spills from shipboard equipment, including consideration of installing equipment and devices to prevent oil spills.</li> <li>•Promoting safe operations through the utilization of technology and cutting-edge techniques.</li> </ul> <p>&lt;Reduction of Environmental Impact of Ship Operations&gt;</p> <p>Measures to minimize impact on the marine environment</p> <ul style="list-style-type: none"> <li>•Minimize the amount of ballast water retained</li> <li>•Installation of optimal ballast water treatment equipment and technical support for each ship type and route, while keeping a close eye on trends in convention and regional regulations</li> <li>•Consider building vessels that have less environmental impact on marine life.</li> <li>•Consider adoption of antifouling paints that have less impact on marine pollution, such as environmentally friendly paints (low-friction paints).</li> </ul> <p>&lt;Reduction of air pollutants generated by ships (black smoke, PM, CO2, SOx, NOx)&gt;</p> <ul style="list-style-type: none"> <li>•Study installation of COLD IRONING in new and existing vessels</li> <li>•Trial exhaust gas recovery at port of entry</li> <li>•Consideration of using storage batteries</li> <li>•Study of equipment to use low-sulfur fuel oil</li> <li>•Study of equipment to control VOC (Volatile Organic Compounds) emissions from newly built tankers</li> </ul> <p>&lt;Minimize resources consumed and minimize waste utilized by vessels.&gt;</p> <ul style="list-style-type: none"> <li>•Promotion of sorting and recycling of waste generated onboard the vessel, including reuse through repair of cargo handling materials onboard the vessel.</li> <li>•Reduce the amount of waste generated from vessels through proper operation of the Garbage Management Plan.</li> </ul> <p>&lt;Reduction of environmental impact on land-based operations&gt;</p> <ul style="list-style-type: none"> <li>•Minimize resource consumption and waste at onshore facilities</li> <li>•Reduction of water consumption per employee at land-based facilities</li> <li>•Reduction of office paper consumption per employee through promotion of paperless operations.(800 in the first half of the year, Second half 700 sheets)</li> <li>•Reduction of waste at land-based business sites: Promotion of sorting of recyclable containers and packaging waste.(Procurement rate 87%)</li> <li>•Promote green procurement: Increase the ratio of eco-friendly products.(Recycling rate 70%)</li> </ul> <p>&lt;Implementation of environmental training and education for crew members/constituents&gt;</p> <ul style="list-style-type: none"> <li>•Conduct various seminars and environmental e-learning education (once a year)</li> <li>•Active participation in internal and external seminars</li> <li>•Education for managers at pre-boarding briefings</li> <li>•Conduct various training programs at Kline Maritime Academy</li> </ul> <p>&lt;Promoting Dialogue with Stakeholders&gt;</p> <ul style="list-style-type: none"> <li>•Enhancement of disclosure and communication of our environmental measures (integrated report, website, etc.) and expansion of opportunities for explanation</li> </ul>	<p>○</p>	<p>•If any problems are found during the ship inspection, we will use the ship inspection results report to request improvements from the ship owner.(conducted inspections on 321 vessels).</p> <p>•Safety campaigns were carried out on 197 vessels.</p> <p>•Continuing activities toward system development and implementation regarding the utilization of AI.</p> <p>•Use of environmentally friendly paint (low friction paint).</p> <p>•We pay close attention to trends in treaties and regional regulations and are equipped with the most suitable equipment for the ship type and route.</p> <p>•Measures to reduce air pollutants from ships were considered.</p> <p>•In Yokohama and Kobe, 39,176 kg of onboard materials are unloaded annually for recycling.</p>
<p><b>Support for social environmental improvement</b></p> <p>•Support for social environmental improvement</p> <p>•Leader in protection of the ecosystem</p>	<p><b>Support for social environmental improvement</b></p> <p>Enhancing dialogue and activities for improving the social environment</p>	<p>&lt;Strengthening Green Ship Recycling&gt;</p> <ul style="list-style-type: none"> <li>•Dismantling at the Green Ship Recycling Yard in accordance with company policy</li> </ul> <p>&lt;Participation in Marine Plastic Waste Collection and Surveys&gt;</p> <ul style="list-style-type: none"> <li>•Conducted survey and collection activities of marine plastic debris in cooperation with Tokyo University of Marine Science and Technology.</li> </ul> <p>&lt;Promotion of Environmental Preservation Volunteer Activities&gt;</p> <ul style="list-style-type: none"> <li>•Conduct "forest conservation activities" or "beach cleanup"</li> </ul>	<p>○</p>	<p>•Conducted information gathering on ship recycling.</p> <p>•Coastal cleaning activities (May) and forest conservation activities (November) were carried out.</p> <p>•Seaweed bed restoration activities carried out (August)</p>