

# Outline of Environment and Safety Activities

In order to advance its medium-term environment and safety policies, the UBE Group strives to improve its environment and safety activities through the use of the PDCA cycle.












Fiscal 2020 evaluation: Plans were mostly achieved.

	FY2020 Action Plans	FY2020 Results
<b>Common to All</b>	<p><b>Cultivate a culture of safety</b></p> <ol style="list-style-type: none"> <li>Cultivate a culture of safety               <ol style="list-style-type: none"> <li>Systematically undertake activities based on headquarters assessment results</li> <li>Ensure that everyone makes safety the top priority</li> </ol> </li> </ol>	<ol style="list-style-type: none"> <li>Cultivated a culture of safety               <ol style="list-style-type: none"> <li>Each business site completed and implemented plans to cultivate a culture of safety</li> <li>Undertook initiatives to enhance safety awareness (stepped up basic operational rule implementation and conducted safety calls)</li> </ol> </li> </ol>
<b>Occupational Safety and Health</b>	<p><b>Occupational safety</b></p> <ol style="list-style-type: none"> <li>Eliminate major disasters               <ol style="list-style-type: none"> <li>Continue to implement (improve effectiveness of) measures to reduce serious risks</li> <li>Undertake safety initiatives in cooperation with contractors</li> </ol> </li> </ol> <p><b>Enhance workplace environments</b></p> <ol style="list-style-type: none"> <li>Enhance workplace environments               <ol style="list-style-type: none"> <li>Prevent implementation of three management improvement plans under Industrial Safety and Health Act from becoming dead letter</li> </ol> </li> </ol>	<ol style="list-style-type: none"> <li>Eliminated major disasters               <ol style="list-style-type: none"> <li>Identified risks of grave occupational accidents at each business site and formulated and are implementing inherent safety plans to reduce those risks</li> <li>Included joint patrols with contractors and subcontractors, participation in safety meetings, stronger audits, and other efforts in environmental and safety management plans at each business site to foster integrated safety activities</li> </ol> </li> <li>Enhanced workplace environments               <ol style="list-style-type: none"> <li>Ensured workers wear and recorded usage of protective equipment and considered soundproofing measures</li> </ol> </li> </ol>
<b>Process Safety and Disaster Prevention</b>	<p><b>Strengthen safety management structure</b></p> <ol style="list-style-type: none"> <li>Comprehensive measures to minimize accident risks with aging equipment               <ol style="list-style-type: none"> <li>Review and improve inspection and testing plans</li> <li>Roll out measures to prevent electrical equipment accidents</li> </ol> </li> <li>Enhance safety of high-pressure gas accredited business sites               <ol style="list-style-type: none"> <li>Use self-assessment results to drive improvements</li> </ol> </li> </ol> <p><b>Earthquake and tsunami readiness</b></p> <ol style="list-style-type: none"> <li>Undertake natural disaster countermeasures               <ol style="list-style-type: none"> <li>Implement natural disaster countermeasure action plans</li> </ol> </li> </ol>	<ol style="list-style-type: none"> <li>Comprehensive measures to minimize accident risks with aging equipment               <ol style="list-style-type: none"> <li>Each business chose equipment for inspection and testing, formulated plans, and implemented improvements</li> <li>Each business rolled out measures to prevent electrical equipment accidents from recurring</li> </ol> </li> <li>Enhanced safety of high-pressure gas accredited business sites               <ol style="list-style-type: none"> <li>Each certified office employed Guidelines for Using Security Evaluation Results, a framework for planned improvements, and implemented improvements</li> </ol> </li> <li>Undertook natural disaster countermeasures               <ol style="list-style-type: none"> <li>Each business conducted self-assessments in line with Self-Evaluation Standards for Natural Disaster Countermeasures that headquarters established, selected improvement items from results, and systematically implemented improvements</li> </ol> </li> </ol>
<b>Environmental Conservation</b>	<p><b>Reduce environmental risks</b></p> <ol style="list-style-type: none"> <li>Reduce environmental risks               <ol style="list-style-type: none"> <li>Push ahead with improvement plans of Environmental Accident Measures Council</li> </ol> </li> </ol> <p><b>Keep reducing environmental impact</b></p> <ol style="list-style-type: none"> <li>Deploy environmental impact reduction plans               <ol style="list-style-type: none"> <li>Reduce emissions of 20 voluntarily selected chemical substances<sup>2</sup> <ul style="list-style-type: none"> <li>Push ahead with improvement plans to reach fiscal 2021 target</li> </ul> </li> <li>Reduce volume of industrial waste for external final disposal                   <ul style="list-style-type: none"> <li>Push ahead with improvement plans to reach fiscal 2021 target</li> </ul> </li> </ol> </li> </ol>	<ol style="list-style-type: none"> <li>Reduced environmental risks               <ol style="list-style-type: none"> <li>Each site installed additional environmental meters and set up temporary storage tanks for possible leakages</li> </ol> </li> <li>Deployed environmental impact reduction plans               <ol style="list-style-type: none"> <li>Reduced emissions of 20 voluntarily selected chemical substances by 29% from fiscal 2010 level</li> <li>Reduced volume of industrial waste for external final disposal by 81% from fiscal 2000 level</li> </ol> </li> </ol>
<b>Environmental Issues</b>	<p><b>Low-carbon economy contributions and responses</b></p> <ol style="list-style-type: none"> <li>Explore specific measures to reach targets for fiscal 2022 and beyond</li> <li>Increase employee awareness of global warming               <ol style="list-style-type: none"> <li>Identify and disseminate information about medium- and long-term climate change trends and link information to efforts to strengthen initiatives and create new businesses</li> <li>Properly inform internal and external stakeholders about UBE's initiatives</li> </ol> </li> </ol>	<ol style="list-style-type: none"> <li>Explored specific measures to reach targets for fiscal 2022 and beyond               <ol style="list-style-type: none"> <li>Collaborate with NEDO and other external organizations in R&amp;D and conserve energy</li> <li>Greenhouse gas (GHG) emissions in fiscal 2020 totaled 11.27 million metric tons</li> <li>Environmentally friendly products accounted for 30% of net sales in fiscal 2020</li> <li>Defined measures to address global warming, marine plastic waste, biodiversity, and water resources as environmental issues and set targets</li> </ol> </li> <li>Increased employee awareness of global warming               <ol style="list-style-type: none"> <li>Informed and educated at Energy Management Committee and other entities (with support from parent Environment &amp; Safety Department)</li> <li>Informed external parties through Carbon Disclosure Project (D→B evaluation), FTSE4Good, and other vehicles, integrated report, and company questionnaires</li> <li>Engaged in ESG discussions and collected information from institutional investors (in collaboration with Finance &amp; Investor Relations Department)</li> <li>Scrutinized disclosure contents to improve assessments (in collaboration with headquarters departments)</li> <li>Announced support for recommendations of Task Force on Climate-related Financial Disclosures (TCFD)</li> <li>Had third-party verify Scope 1 and Scope 2 energy-derived CO<sub>2</sub> emissions and reviewed Scope 3 calculations</li> </ol> </li> </ol>
<b>Environment and Safety Audits and Inspections</b>	<ol style="list-style-type: none"> <li>Implement environment and safety audits and inspections</li> </ol>	<ol style="list-style-type: none"> <li>Implemented environment and safety audits and inspections               <ol style="list-style-type: none"> <li>Headquarters and divisions implemented environmental and safety audits at 7 parent sites and Group companies</li> <li>Implemented environmental safety inspections at 10 parent sites and 3 Group companies</li> </ol> </li> </ol>
<b>Dialogue with Communities</b>	<ol style="list-style-type: none"> <li>Promote dialogue with communities</li> </ol>	<ol style="list-style-type: none"> <li>Held RC Regional Dialogue Meetings<sup>*3</sup> with community stakeholders               <ol style="list-style-type: none"> <li>Held on paper 13th RC Regional Dialogue Meeting in Chiba region:                   <ul style="list-style-type: none"> <li>Featured messages for the publication of 13th RC Regional Dialogue Meeting in Chiba Region District Regional Dialogue (mayors of Sodegaura and Ichihara), Chiba Petrochemical Complex Disaster Prevention Plan (Chiba Prefecture Disaster Prevention and Crisis Management Division) and corporate initiatives</li> </ul> </li> <li>Held 16th RC Dialogue Forum online in Ube district:                   <ul style="list-style-type: none"> <li>Featured a Japan Chemical Industry Association lecture on Responsible Care activities and related communications, an Ube Environmental Community explanation about PRTR, and presentations on corporate initiatives and theme discussions</li> </ul> </li> </ol> </li> </ol>

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Self-Evaluation

★★★: Achieved   ★★: Mostly achieved   ★: Not achieved

Self-Evaluation	FY2021 Action Plans	SDGs	RC*1 Code
★★	<ol style="list-style-type: none"> <li>Cultivate a culture of safety                             <ul style="list-style-type: none"> <li>Systematically undertake activities based on headquarters assessment results</li> </ul> </li> <li>Strengthen UBE Group environmental safety governance structure                             <ul style="list-style-type: none"> <li>Apportion functions between headquarters and business units and implement</li> </ul> </li> </ol>	—	—
★★	<ol style="list-style-type: none"> <li>Eliminate major disasters                             <ol style="list-style-type: none"> <li>Continue implementing measures (and ensuring implementation) to address significant risks</li> <li>Undertake safety activities (and enhance their effectiveness) with contractors</li> <li>Educate and train personnel to enhance safety awareness</li> </ol> </li> </ol>		<b>Occupational Safety and Health</b>
★★	<ol style="list-style-type: none"> <li>Enhance workplace environments                             <ol style="list-style-type: none"> <li>Reduce workplace noise and implement three management improvement plans under Industrial Safety and Health Act</li> </ol> </li> </ol>		
★★	<ol style="list-style-type: none"> <li>Comprehensive measures to minimize accident risks with aging equipment                             <ol style="list-style-type: none"> <li>Review, add, and improve priorities for inspection and testing and confirm results</li> <li>Prevent recurrences of similar incidents</li> </ol> </li> <li>Enhance safety of high-pressure gas accredited business sites                             <ol style="list-style-type: none"> <li>Establish usage (framework) for results of security evaluations and confirm effectiveness</li> </ol> </li> </ol>		<b>Process Safety and Disaster Prevention</b>
★★	<ol style="list-style-type: none"> <li>Undertake natural disaster countermeasures                             <ol style="list-style-type: none"> <li>Establish and confirm effectiveness of natural disaster countermeasure action plans</li> </ol> </li> </ol>		
★★	<ol style="list-style-type: none"> <li>Reduce environmental risks                             <ol style="list-style-type: none"> <li>Implement and confirm effectiveness of measures to reduce environmental risks</li> <li>Roll out at other business sites</li> </ol> </li> </ol>	  	
★★	<ol style="list-style-type: none"> <li>Deploy environmental impact reduction plans                             <ol style="list-style-type: none"> <li>Reduce emissions of 20 voluntarily selected chemical substances by 37% compared with fiscal 2010</li> <li>Reduce volume of industrial waste for external final disposal by 83% from fiscal 2000 level</li> </ol> </li> </ol>		
★★★	<ol style="list-style-type: none"> <li>Explore specific measures to reach environmental issues targets</li> <li>Streamline data collection</li> <li>Increase employee awareness of environmental issues and distribute information</li> </ol>	    	<b>Environmental Conservation</b>
★★★	<ol style="list-style-type: none"> <li>Implement environment and safety audits and inspections</li> </ol>	—	<b>Management System</b>
★★★	<ol style="list-style-type: none"> <li>Promote dialogue with communities</li> </ol>		<b>Dialogue with Communities</b>

Glossary

\*1 Responsible Care (RC): Under RC, corporations that handle chemical substances voluntarily preserve the environment, safety, and health throughout product life cycles, from the development of chemicals through their manufacture, distribution, use, and final consumption to disposal and/or recycling, and communicate and engage with society by disclosing activity outcomes.

\*2 20 chemicals selected independently: methyl alcohol, butyl alcohol, toluene, epsilon-caprolactam, styrene, ammonia, cyclohexane, cyclohexanone, oxalic acid, vinyl acetate, xylene, n-hexane, ethylbenzene, chloromethane, benzene, dimethyl phthalate, N, N-dimethylacetamide, boric acid compound, phenol, 2-hexanone

\*3 Responsible Care (RC) Regional Dialogue Meetings: Local members of the RC Committee of the Japan Chemical Industry Association are encouraged to engage with residents, civic groups, government officials, and other local stakeholders and convene meetings regarding RC implementation items (environmental conservation, safety and disaster prevention, etc.). A dialogue meeting is held in each district to deepen mutual understanding of initiatives.