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Three Indexes

The MCHC Group vigorously pursues sustainability, and as such has developed three Management of Sustainability (MOS) Indexes—Sustainability (Green), Health, and Comfort—the decision criteria for its corporate activities.

MOS (Management of Sustainability)

Toward the realization of *KAITEKI*, we have developed MOS Indexes in order to visualize MOS as we aim to improve sustainability for people, society, and the Earth and monitor progress and results.

MOS Indexes

MOS Indexes include elements based on the decision criteria for MCHC corporate activities—sustainability (green), health, and comfort—chosen for their importance to the Group as a whole and their contribution to sustainability. They cover such issues as reduction of environmental impact, sustainable use of resources, reduction of energy usage, promotion of good health, and contribution to more comfortable lives.

Sustainability (Green) Index	S-1 Contribute to reducing environmental impact through products and services
	S-1-1 Reduce environmental impact by 30% from fiscal 2005 levels
	S-1-2 Generate reduction of CO ₂ emissions by 3.5 megatons through products
	S-2 Take actions against the depletion of natural resources and implement energy-saving initiatives
	S-2-1 Procure reusable materials equivalent to 10,000 t/y of heavy oil
	S-2-2 Reduce cumulative rare metal usage by 1,200 tons through improving processes and innovating products
	S-2-3 Generate resources and power savings of ¥8.8 billion
	S-2-4 Provide 900 million tons of reusable water through our products
	S-3 Contribute to solving social and environmental issues through supply chain management
	S-3-1 Achieve 80% of purchased items surveyed for toxic substances
	S-3-2 Achieve 90% purchasing of raw materials and packaging according to CSR guidelines
Health Index	H-1 Contribute to medical treatment
	H-1 Increase the index performance derived by the degree of difficulty to treat diseases multiplied by the number of administered patients by 50% (compared with fiscal 2009)
	H-2 Contribute to improvements of QOL
	H-2 Increase contribution to QOL improvements by 70% (compared with fiscal 2009)
	H-3 Contribute to early detection and prevention of diseases
	H-3-1 Increase the index of vaccine treatment by 17% (compared with fiscal 2009)
	H-3-2 Increase the number of people taking diagnostic tests by 26% (compared with fiscal 2009)
Comfort Index	C-1 Deliver products (development and manufacturing) for comfortable lifestyle
	C-1-1 Increase sales of comfort-oriented products by ¥400 billion (compared with fiscal 2010)
	C-1-2 Increase the new product ratio from 16% to 30%
	C-2 Improve stakeholder satisfaction
	C-2-1 Improve third-party corporate assessments
	C-2-2 Improve employee-related indexes
	C-2-3 Improve customer satisfaction
	C-3 Earn recognition of corporate trust
	C-3-1 Reduce safety accidents
	C-3-2 Reduce environmental accidents
	C-3-3 Reduce product claims
	C-3-4 Reduce the lost time injuries frequency rate
	C-3-5 Confirm product safety according to GPS for 70% of products
Objective to be achieved	Achieve zero occurrences of material accidents and compliance violations

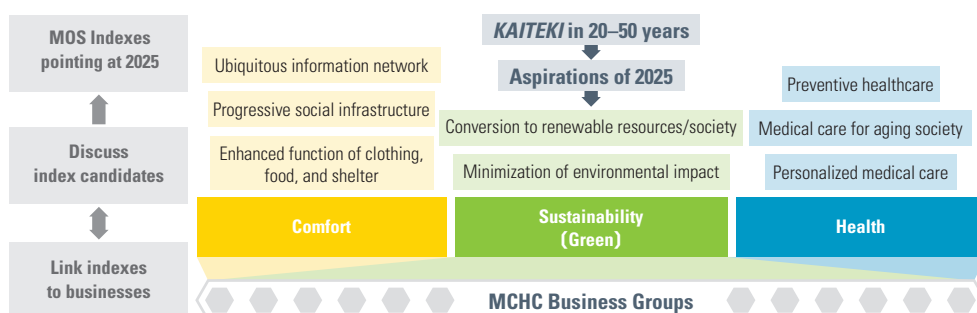
Developing the MOS Indexes

For the implementation of *KAITEKI* Management, it is necessary for us to have criteria for Management of Sustainability (MOS), aiming to improve sustainability for people, society, and the earth in addition to the existing management criteria for Management of Economics (MOE), which focuses on capital efficiency using financial indexes, and Management of Technology (MOT), which pursues the creation of innovation.

When creating the MOS Indexes, we started by identifying index candidates while considering how we could contribute to solving such environmental and social issues as climate change and an aging society. At the same time, we conducted a close survey of the Group's 69 business units and organized the results into a business group map.

Following that, we compared our index candidates against our operations and produced proposals. We extensively discussed what we should emphasize and ways of monitoring, incorporating external opinions into the discussion. We then gathered data for our proposed indexes, revising them based on repeated simulations before receiving approval for what are our current MOS Indexes at the MCHC Management Committee.

In our medium-term management plan, *APTSIS 15*, which started in April 2011 and will run until March 2016, these MOS Indexes were incorporated into management targets.

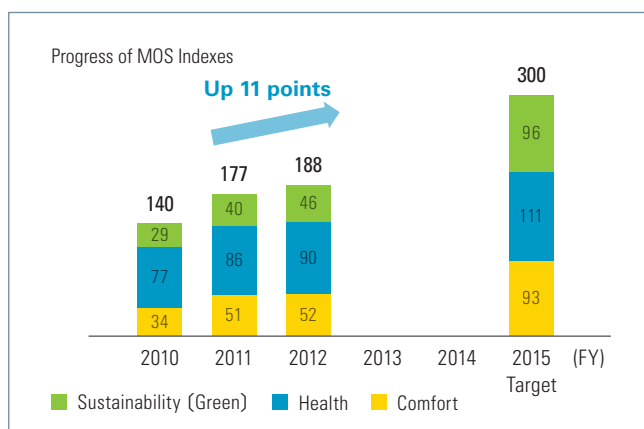


MOS Progress

In 2011, MCHC started its medium-term management plan, *APTSIS 15*, in which the MOS Indexes have been used as important management indexes to monitor progress with *KAITEKI* activities of the Group as a whole. In *APTSIS 15* Step 2 review, the MOS Indexes were revised and advanced. Specifically, some of the targets were adjusted to meet changes in the business environment and new items were added related to improving customer satisfaction and other issues, to better reflect social trends and stakeholder expectations. (For more details, please see "MOS Progress at a Glance" on pages 30–31.) We set our goal of achieving a total of 300 points—comprising 96 points for the Sustainability (Green) Index, 111 points for the Health Index, and 93 points for the Comfort Index—as a target for fiscal 2015 and a means of assessing progress. The results feed back into improvements of the next fiscal year's activities.

Since fiscal 2011 we have assessed each year's progress, publicly announcing the targets and the results as the total score. Although progress varied by index in fiscal 2012, we reached a total score of 188. This shows that the Group is making steady progress.

We continue to work towards our fiscal 2015 goal and the realization of *KAITEKI*.






MOS Progress at a Glance

MOS Indexes by Type		PLAN	Do
		Fiscal 2015 targets (original)	Results and major activities for fiscal 2012
Objective to be achieved		Achieve zero occurrences of material accidents and compliance violations	No material accidents or compliance violations
Sustainability (Green) Index	S-1 Contribute to reducing environmental impact through products and services	S-1-1 Reduce environmental impact by 30% from fiscal 2005 levels	27% reduction • Reduced CO ₂ emissions due to process optimization and various energy-saving initiatives → MPI • Reduced substances of concern emissions including VOC emissions through → MCC implementation of environmental countermeasures • Significant worsening of CO ₂ emission coefficient in purchased power
		S-1-2 Generate reduction of CO ₂ emissions by 4 megatons through products	0.28-megaton reduction • Expanded sales of fluorescent materials for LEDs • Delay in growth of demand for materials for automobile batteries and stagnant demand for materials for wind power generation in Europe and the United States
	S-2 Take actions against the depletion of natural resources and implement energy-saving initiatives	S-2-1 Procure reusable materials equivalent to 6,000 t/y of heavy oil	Equivalent to 150 tons of heavy oil • Slowing sales expansion of existing bio-based plastic products
		S-2-2 Reduce cumulative rare metal usage by 800 tons through improving processes and innovating products	170-ton reduction • Expanded sales of battery materials with reduced cobalt content • Discontinued fluorescent materials with high rare earth metal content • Implemented recycling of rare earth metal catalysts when plants undergo periodic maintenance
		S-2-3 Generate resources and power savings of ¥13 billion	¥6.2 billion equivalent • Improved unit consumption by increasing yield ratio • Reduced resource usage through process rationalization • Introduced energy-saving equipment and facilities
		S-2-4 —	—
	S-3 Contribute to solving social and environmental issues through supply chain management	S-3-1 Achieve 80% of purchased items surveyed for toxic substances	73% surveyed • Carried out surveys to determine whether or not toxic substances are included (constructed and implemented survey systems, managed operations based on proprietary green procurement survey system, and performed other activities) → MRC
		S-3-2 Achieve 90% purchasing of raw materials and packaging according to CSR guidelines	87% rate • Requested cooperation of all departments and suppliers
Health Index	H-1 Contribute to medical treatment	H-1 Increase the index performance derived by the degree of difficulty to treat diseases multiplied by the number of administered patients by 30% (compared with fiscal 2009)	11% increase • Popularization of Crohn's disease and RA treatment agent <i>Remicade</i> and RA treatment agent <i>Simponi</i> in Japan and MS treatment agent <i>Gilenya</i> in Europe and the United States → MTPC
	H-2 Contribute to improvements of QOL	H-2 Increase contribution to QOL improvements by 64% (compared with fiscal 2009)	61% increase • Launched new diabetes treatment agent <i>Tenelia</i> and had additional indications and formations approved for existing products → MTPC
	H-3 Contribute to early detection and prevention of diseases	H-3-1 Increase the index of vaccine treatment by 40% (compared with fiscal 2009)	49% increase • Launched 4-in-1 vaccine <i>Tetrabik</i> → MTPC
		H-3-2 Increase the number of people taking diagnostic tests by 17% (compared with fiscal 2009)	5% increase • Expanded sales through marketing activities
Comfort Index	C-1 Deliver products (development and manufacturing) for comfortable lifestyle	C-1-1 Increase sales of comfort-oriented products by ¥600 billion (compared with fiscal 2010)	¥6.8 billion increase (year on year) • Expanded sales of food ingredients, specialty chemicals, and film for flat panel displays • Popularization of OD tablets <i>Talion</i> and <i>Ceredist</i> • Reduced sales due to business slowdown mainly in Europe and yen appreciation
		C-1-2 Increase the new product ratio from 16% to 35%	New product ratio of 22% • Expanded sales of films for touch panels → MPI • Launched <i>Tenelia</i> and growth of <i>Gilenya</i>
	C-2 Improve stakeholder satisfaction	C-2-1 Improve third-party corporate assessments	• Identified necessary policies and activities to improve assessment based on gap analysis of responses to external questionnaires
		C-2-2 Improve employee-related indexes	• Conducted employee survey • Implemented policies to encourage diversification of workforce and realize work-life balance → MCC → MRC • Implemented policies supporting personal development and social contribution
		C-2-3 —	—
	C-3 Earn recognition of corporate trust	C-3-1 Reduce safety accidents	21% reduction (compared with base year*) • Implemented Responsible Care activities • Implemented key measures against the deterioration of facilities
		C-3-2 Reduce environmental accidents	83% reduction (compared with base year*) • Bolstered prevention through enhanced risk management → MTPC • Made drastic improvements in sites where environmental accidents occurred → MRC
		C-3-3 Reduce product claims	40% reduction (compared with base year*) • Analyzed causes of claims that were made, and implemented corrective measures and activities including audits and training to prevent reoccurrence
		C-3-4 Reduce the lost time injuries frequency rate	29% reduction (compared with base year*) • Established culture of safety built on Sengen Shugi, a way of thinking where problems are solved through understanding of real situations based on observation of what happens on site, rather than through abstract theory → MPI • Bolstered 4M (man, machine, material, method) change management
		C-3-5 Confirm product safety according to GPS for 70% of products	Confirmed for 41% • Completed second year of five-year plan according to schedule → MCC

* For each company, the year with the most accidents from fiscal 2008, 2009, and 2010 has been taken as the base year.

Based on progress targets for fiscal 2012 on the way to original fiscal 2015 targets

 Achieved good results
  Progress was a little slow and more active engagement is necessary
  Progress was very slow and a review of activities is necessary

	Check	Action	PLAN
	Self-Assessment	Activity plans for fiscal 2013	Fiscal 2015 Step 2 Targets
		<ul style="list-style-type: none"> Refine activities and continue to have no material accidents or violations 	Achieve zero occurrences of material accidents and compliance violations
		<ul style="list-style-type: none"> Reduce CO₂ emissions through process optimization and various energy-saving initiatives (including saving power through replacement of refrigerators and visualization of CO₂ reduction) Reduce substances of concern emissions including VOC emissions through implementation of environmental countermeasures 	S-1-1 Reduce environmental impact by 30% from fiscal 2005 levels
		<ul style="list-style-type: none"> Implement sales plans for products that reduce CO₂ emissions, including LED materials and materials for automobile batteries, photovoltaic modules, wind turbine generators, and flat panel displays to meet fiscal 2015 Step 2 targets 	S-1-2 Generate reduction of CO ₂ emissions by 3.5 megatons through products
		<ul style="list-style-type: none"> Expand applications for <i>DURABIO</i>, leveraging its optical properties and weather and impact resistance Expand applications for polybutylene succinate (PBS) made from bio-succinic acid Expand applications for polylactide film sheet <i>ECOLOJU</i> and shrinkwrap <i>PLABIO</i>, leveraging their low environmental impact 	S-2-1 Procure reusable materials equivalent to 10,000 t/y of heavy oil
		<ul style="list-style-type: none"> Expand application of low-cobalt battery materials to automobile batteries Expand implementation of recycling processes for rare earth metal catalysts 	S-2-2 Reduce cumulative rare metal usage by 1,200 tons through improving processes and innovating products
		<ul style="list-style-type: none"> Improve unit consumption by increasing yield ratio Reduce resource usage through process rationalization Introduce energy-saving equipment and facilities 	S-2-3 Generate resources and power savings of ¥8.8 billion
	—	<ul style="list-style-type: none"> Expand industrial wastewater business treatment mainly in China 	S-2-4 Provide 900 million tons of reusable water through our products
		<ul style="list-style-type: none"> Carry out surveys to determine whether or not toxic substances are included (activities including improving survey response through new format) Increase implementation rate of surveys 	S-3-1 Achieve 80% of purchased items surveyed for toxic substances
		<ul style="list-style-type: none"> Increase CSR guideline-based procurement Implement supplier questionnaire feedback 	S-3-2 Achieve 90% purchasing of raw materials and packaging according to CSR guidelines
		<ul style="list-style-type: none"> Popularize <i>Remicade</i>, <i>Simponi</i> and new products 	H-1 Increase the index performance derived by the degree of difficulty to treat diseases multiplied by the number of administered patients by 50% (compared with fiscal 2009)
		<ul style="list-style-type: none"> Launch <i>BindRen</i> hyperphosphatemia treatment agent in Germany and Austria 	H-2 Increase contribution to QOL improvements by 70% (compared with fiscal 2009)
		<ul style="list-style-type: none"> Popularize <i>Tetrabik</i> 	H-3-1 Increase the index of vaccine treatment by 17% (compared with fiscal 2009)
		<ul style="list-style-type: none"> Continue to focus on marketing activities 	H-3-2 Increase the number of people taking diagnostic tests by 26% (compared with fiscal 2009)
		<ul style="list-style-type: none"> Expand sales to meet fiscal 2015 Step 2 targets for the following products (including LED materials, food ingredients, specialty chemicals, engineering plastic products, films for flat panel displays, OD tablets, pre-filled syringes, and other products) 	C-1-1 Increase sales of comfort-oriented products by ¥400 billion (compared with fiscal 2010)
		<ul style="list-style-type: none"> Expand timely sales of new products Develop new products based on customer needs Rapidly commercialize Growth Driver Business areas 	C-1-2 Increase the new product ratio from 16% to 30%
		<ul style="list-style-type: none"> Progressively implement measures and activities deemed necessary from assessments 	C-2-1 Improve third-party corporate assessments
	—	<ul style="list-style-type: none"> Carry out employee survey and apply results to operations Carry out activities to promote diversity and realize work-life balance Encourage use of systems supporting personal development and social contribution activities 	C-2-2 Improve employee-related indexes
	—	<ul style="list-style-type: none"> Conduct customer satisfaction survey Consider customer satisfaction indexes and targets 	C-2-3 Improve customer satisfaction
		<ul style="list-style-type: none"> Implement Responsible Care activities Reinforce comprehensive checks of facilities and change management 	C-3-1 Reduce safety accidents
		<ul style="list-style-type: none"> Bolster prevention through enhanced risk management Bolster prevention through sharing of case studies throughout the Group Make drastic improvements in sites where environmental accidents have occurred 	C-3-2 Reduce environmental accidents
		<ul style="list-style-type: none"> Analyze causes of claims that were made, and implement corrective measures and activities to prevent recurrence Enhance quality control training 	C-3-3 Reduce product claims
		<ul style="list-style-type: none"> Promote safety activities by increasing sensitivity of all employees and organizational capability Establish culture of safety built on Sangen Shugi, a way of thinking where problems are solved through understanding of real situations based on observation of what happens on site, rather than through abstract theory Bolster 4M (man, machine, material, method) change management 	C-3-4 Reduce the lost time injuries frequency rate
		<ul style="list-style-type: none"> Ensure safety of products based on five-year plan 	C-3-5 Confirm product safety according to GPS for 70% of products