SUSTAINABLE GOVERNANCE

2.1 Organization and Structure

The Corporate Sustainability Committee (CSC) was formed by the company to serve as the highest level of authority in the planning and supervision of sustainability-related strategies, and facilitating the accomplishment of sustainability management policies and goals of the 3 member companies of ASEH. The CSC comprises ASEH's directors and is headed by the chairman, who oversees the committee's performance and reports the progress to the board of directors. While the management continues to set the company on a growth trajectory, it remains equally focused on creating positive social and environmental impacts. At least once a year, the Corporate Sustainability Committee reports to the Board of Directors on the following areas: (1) current policy guidelines and organizational structure; (2) status on the progress towards sustainable development; and (3) management policies, goals, and future plans on major sustainability issues. The Board of Directors oversees and reviews implementation outcomes.

The Corporate CSR Division was established to serve as the executive secretariat of the CSC. The Corporate CSR Division supports the resource integration and site expertise across all 3 member companies to formulate top-down and horizontal promotional strategies. At the same time, each member company - ASE, SPIL and USI, has a (Corporate) Sustainability Committee established at the group level with multiple taskforces. The committee, headed by a senior level executive, is tasked with identifying key issues for discussion, annual presentation of performance and results, and reviewing the progress of meeting various short, medium and long-term sustainability objectives.

In the 2023 CSC annual meeting, the CSC formulated short, medium and long-term goals that helps the company better respond to the evolving industry landscape and global developments in sustainability trends. For more information, please refer to the relevant chapters.

Board of Directors

- Identify corporate-wide sustainability mission or vision
- Declare policies, systems or relevant management guidelines

[Executive Secretariat] Corporate CSR Division

- Promote the execution of sustainability action plans
- Assess sustainability performance
- Disclose information on sustainability performance

ASEH Corporate Sustainability Committee

- Develop and establish corporate-wide sustainability vision, policies, and targets
- Identify risks and opportunities related to sustainability issues and determine responsive strategies and investments
- Supervise the planning and implementation of sustainability strategies
- Oversee sustainability performance and information disclosure

- **Chairperson:**
  Jason C.S. Chang ASEH Chairman
- **Vice Chairperson:**
  Joseph Tung ASEH Group CFO
- **Members:**
  Tien Wu ASE General Manager and CEO
  Chi-Wen Tsai SPIL Chairman and General Manager
  Jeffrey Chen USI Chairman

ASE Corporate Sustainability Committee

Chairperson: Tien Wu General Manager and CEO

- Corporate Governance
- Environment & Green Innovation
- Supply Chain Management
- Employee Care & Development
- Social Involvement

SPIL Sustainability Committee

Chairperson: Chi-Wen Tsai Chairman and General Manager

- Risk Management 1
- Risk Management 2
- Environmental Innovation
- Employee & Social Involvement
- Corporate Governance

USI Sustainability Committee

Chairperson: C.Y. Wei President

- Corporate Governance
- Green Product & Innovation
- Value Chain Management
- Employee & Society Well-being Engagement
- Environmental Protection & Occupational Safety

Taskforces

- Develop and execute action plans
- Monitor implementation progress and performance of the action plans
- Provide expertise support and experience sharing

2023 Key Sustainability Projects

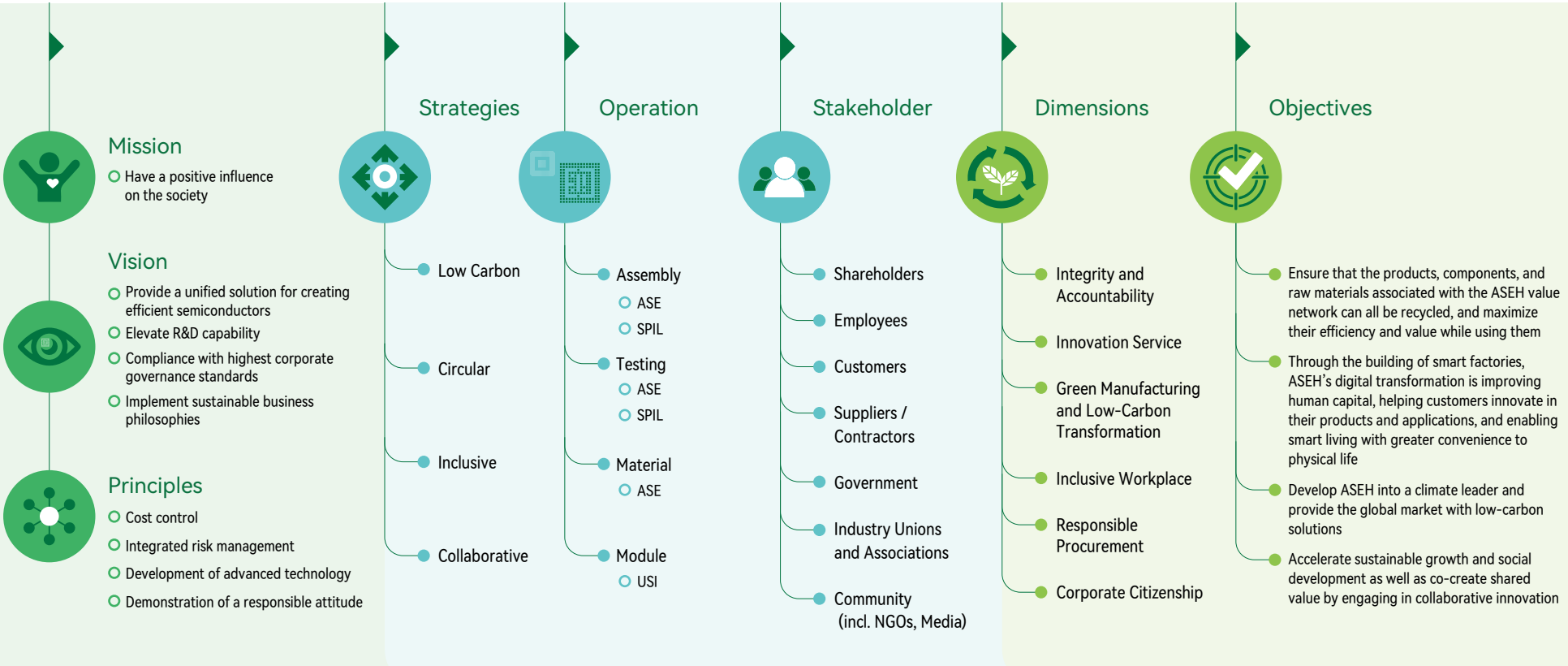
Dimensions	Key Projects	Partners	Positive Changes
Environmental	Net Zero Emission	• Government • External Consultants	• Structural Transformation of Energy and Lower Operational Risks • Mitigation of Extreme Climate Change
	Climate and Environmental Report	• External Consultants	• Strengthening Global Climate Risk Management • Responding to Stakeholders' Concerns
	Biodiversity Conservation and Restoration	• Government • External Consultants	• Mitigating or Compensating the Impact of Operations on Nature • Slowing Down Biodiversity Loss
	Circular Economy within Our Value Chain	• Academic and Research Institutions • Suppliers	• Waste Recycling and Reusing • Increasing the Circular of Energy Resource and the Eco-efficiency
	Expanding the Scope of Implementation of Innovative Technologies	• External Consultants • Customers • Academic and Research Institutions	• Improving the Positive Impact of Value Chain Activities
Social	ASEH Ocean Guardian Project	• Government • External Professional Institutions • Non-profit Organizations	• Cleaning the Coast and Marine Environment • Conservation of Marine Ecology and Biodiversity
	2023 ASEH Social Innovation Competition	• Government • External Consultants • Academic and Research Institution	• Support Social Innovation and Promote the Development of Sustainable Ecological Industries • Implement Environmental Protection and Create Sustainable Impact Together
	Assistance Program for Disadvantaged Students	• Academic and Research Institutions	• Improving Learning Environment • Increasing the Willingness of and Opportunities for Disadvantaged Students to Learn
	Employee Engagement Survey	• External consultants	• Strengthen Talent Attraction, Retention, and Cultivation • Enhance Employees' Approval of and Alignment with the Company
	Systems for Key Talent Retention	NA	• Strengthen Talent Attraction and Retention
Governance	ASEH Supplier Sustainability Awards	• External Consultants • Auditing Organizations • Suppliers • External Experts and Scholars	• Promoting Sustainable Collaboration and Cultivating Sustainable Suppliers
	Supplier Guidance on Carbon Inventory	• External Consultants • Auditing Organizations • Suppliers	• Developing Supplier Capabilities to Perform Carbon Inventory
	Conflict Minerals Management	• External Auditing Organizations • Authorities	• Implement Responsible Procurement
	Corporate Governance Evaluation System	• Authorities	• Enhancement of Corporate Governance Mechanisms
	Performance Evaluations for the Board of Directors and Its Subordinate Functional Committees	• Authorities	• Enhancing the Functions of the Board of Directors
	Information Security Management	• External Professional Consultants and Institutions • Suppliers	• Improving Information Security Capacity • Minimizing Operating Risks

Sustainable Management Framework

We have established our sustainable management framework in accordance with our Sustainable Development Best Practice Principles and Corporate Sustainability and Citizenship Policy. We have also identified sustainable development opportunities through risk identification and close collaboration with our partners and stakeholders. ASEH works with external parties to implement its goals and targets in sustainable development, strengthen the company's business decision-making process, and create a sustainable business model.

ASEH Sustainable Management Framework

Sustainable Development Best Practice Principles
Corporate Sustainability and Citizenship Policy



Enriching and Promoting Sustainable Culture

Sustainability is integral to corporate culture and drives broad transformation in companies. At ASEH, we continue to rigorously fulfil our corporate social responsibilities in tandem with maintaining our competitive edge. We have developed a diverse range of programs to ensure that sustainability is firmly ensconced at the core of ASEH's corporate DNA. To that end, we aim to extend the culture from our employees to external stakeholders, further demonstrating the company's intangible value. Our resolute focus on surpassing ourselves and giving back to society has allowed us to achieve corporate social responsibility and build an inclusive society. Together with the integration of resources from all disciplines, the company is on track to creating positive social impacts.

2023 Activities to Cultivate Sustainable Culture at ASEH

Dimensions	Activities	Effects of building a sustainable culture
Environmental	ASEH has pledged to achieve net-zero emissions by 2050 by setting clear short, mid and long-term goals, guided by its five major principles. Concurrently, ASEH is actively involved in climate change initiatives across various sectors, including government, academia, and non-profit organizations. ASEH is a member of the SEMI Semiconductor Climate Consortium (SCC), Taiwan Net Zero Emissions Association, and the Taiwan Carbon Capture Storage and Utilization Association. We have also submitted our net-zero initiatives to the SBTi. We aim to leverage our influence on a global scale to foster a resilient, transformative and progressive semiconductor supply chain.	• Expand the influence of net zero initiatives • Promote low-carbon transformation in the supply chain • Drive low-carbon manufacturing innovatively
Social	ASEH and the CommonWealth Magazine have jointly organized the selection of outstanding "Smiling Taiwan Creative Lesson Plan" for nine consecutive years. This initiative aligns with the United Nations' sustainable development goals (SDGs) and encourages teachers from senior and vocational high schools, junior high schools, and elementary schools to leverage local resources and design unique learning curriculum. By encouraging students to work together as a team, students will gain more insights into local cultures and their environments. The program also aims to raise awareness of global sustainability trends through education and engagement. At the ASE Environmental Education Award in 2023, the winning lesson plans for the "junior, senior, and vocational high school category" and "elementary school category" were "Golden Elegance and Sustainability" designed by the Taipei Municipal Jinhua Junior High School and "Maritime Beauty" designed by the Taitung County Ningbu Elementary School, respectively. "Golden Elegance and Sustainability" integrated concepts of biodiversity, green buildings, and carbon footprint, enabling students to adopt sustainable practices in everyday life. "Maritime Beauty" combined traditional elder stories with modern coastal ecological observation methods, promoting an innovative program for marine protection education.	• Improve environmental literacy • Raise sustainability-related awareness • Promote social participation
Economic	In 2023, ASEH held its second Supplier Sustainability Award, introducing new themes of "Inclusive" and "Collaborative" while expanding its supplier categories to include transportation and logistics suppliers. These efforts demonstrated ASEH's steadfast commitment to developing a sustainable supply chain. During the supplier selection process, meetings were convened with related departments across all major ASEH business locations. By including key operational units in the supplier selection process, ASEH aims to enhance employees' and suppliers' understanding of its sustainable strategies and actions; thereby strengthening the company's connection with its suppliers, facilitating the circular economy, and improving the industry's carbon reduction-related capabilities.	• Incentivize suppliers to engage in sustainability-related endeavors • Construct a circular economic industrial chain • Reduce the social costs of carbon emissions

ASE Tree Protection Activity

SPIL Beach Cleanup Activity

USI Sustainability Committee Annual Meeting and Forum

Average RBA SAQ score **91**

Percentage of RBA VAP-certified facilities globally **92%**[1]

Availability of audit reports to customers via the RBA-Online platform **100%**

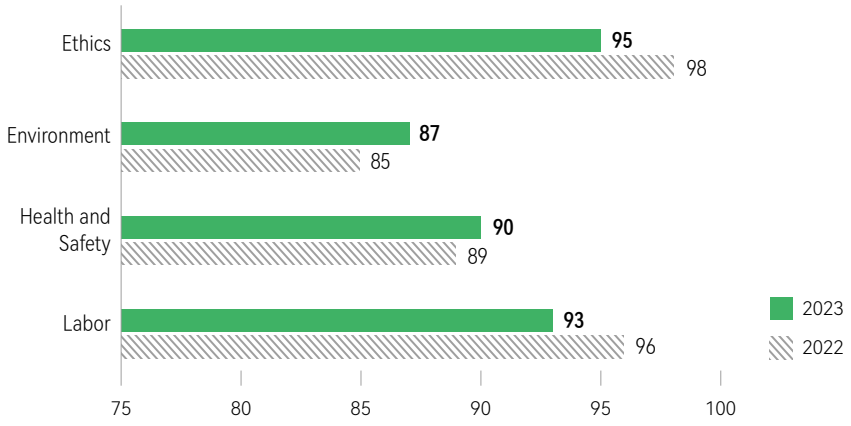
As a global leader in semiconductor packaging and testing, and system integration, ASEH is committed to environmental protection and compliance to the highest ethical standards. As a member of the RBA (Responsible Business Alliance), all our manufacturing facilities participate in the annual RBA Self-Assessment Questionnaire (SAQ) to evaluate specific inherent risk areas in labor, health and safety, environment, and ethics. 2023 our manufacturing facilities scored over 91 points on average.

The RBA VAP (Validated Assessment Process) was initiated by the ASEH Corporate Sustainability Committee (CSC) since 2017, and was implemented across all our manufacturing facilities. Audits were conducted by independent third-party firms to identify risks and drive improvements and robust management systems for labor, ethics, health, safety, and environmental conditions in the supply chain.

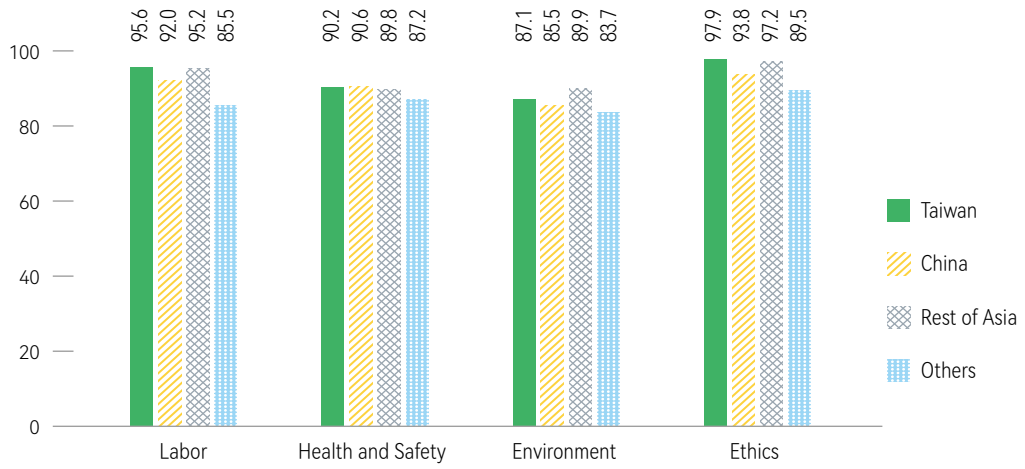
Our global locations include Taiwan, China, Japan, South Korea, Singapore, Malaysia, Vietnam, the United States and Mexico. As of 2023, 23 of our facilities have completed the RBA VAP. Customers can request the completed audit reports via the "RBA-Online" platform.

[1] ASE Shanghai (Material) and ISE Labs China do not complete RBA VAP

Average SAQ scores (by category)

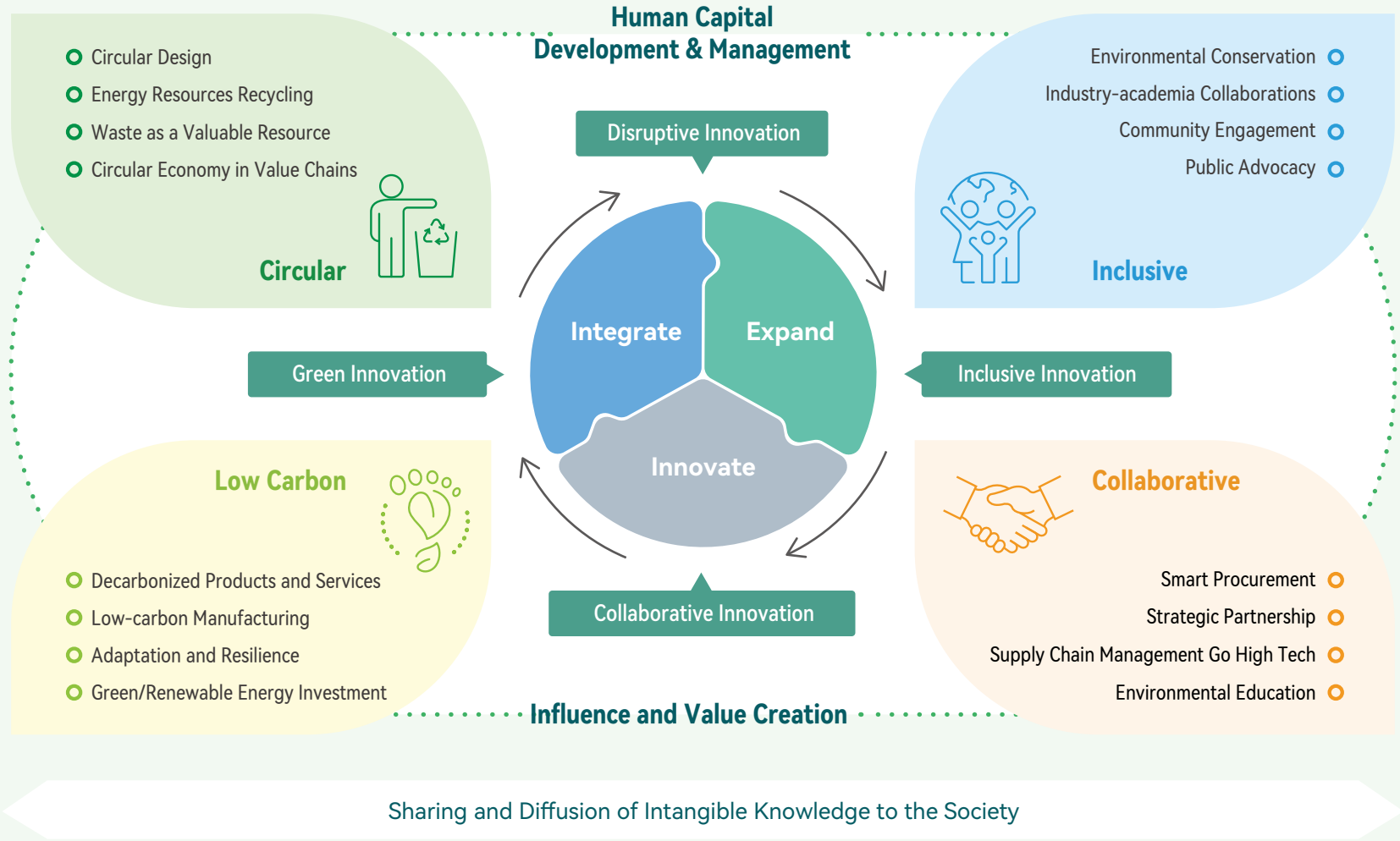


Average SAQ scores in 2023 (by region)



2.2 Sustainability Strategies

Strategy-setting is the key to achieving long-term sustainability targets that tackle global climate challenges, uncertainties in the energy supply, and risks related to supply shortages of water, raw materials and other resources faced by businesses. To that end, ASEH has established four strategic sustainability pillars: Low Carbon, Circular, Inclusive and Collaborative, to help identify opportunities and growth drivers. We are committed to the creation of sustainable value and, to extending our strategic influence through external stakeholder communication and joint efforts with various interest groups to achieve a virtuous cycle of sustainability.



Sustainability Vision

In our annual CSC Meeting, we review the achievement rates of our sustainability goals, and disclose the progress toward goals and the status of projects, providing visibility to employees, partners, customers and the general public. In 2023, we established our long-term sustainability targets for 2030 based on major sustainability topics and their relative importance to our business operations. These targets serve to strengthen the correlation between the SDGs and our sustainability strategies, leading to the ultimate fulfillment of ASEH's commitment to corporate social responsibility.

Strategic Approach and Goals of Key Issues

On Schedule Room for Improvement

Dimensions	Key Issues	Business Impact on ASEH	Strategic Approach	2030 Target	Progress/ Status
Integrity and Accountability	Regulatory Compliance	Ensuring corporate compliance with all applicable laws is an important aspect of sustainability management. Operational and financial risks can be mitigated through a robust system of preventive measures.	**Implementing effective regulatory compliance system:** Strengthen the process for identification of regulatory requirements and reinforcing education to increase employee awareness of regulatory requirements.	• Cases involving violations by ASEH: 0 • Major cases involving violations by ASEH subsidiaries: 0	
	Business Ethics	Establishing norms of business conduct and ethics, and creating an honest and responsible culture are key to our long-term business success.	**Implement business conduct and ethics-related policies and regulations:** Continue to promote education and training, commit to comply with ethical standards in all ASEH business activities, and ensure the effectiveness of reporting systems by audit.	• Employee training coverage: 100% • Subsidiary roll-out coverage: 100%	
	Information Security Management	Ensure the confidentiality, integrity and reliability of the company's information assets and compliance with relevant laws and regulations in order to further gain customers' trust, elevate the company's competitive advantage and maintain the stability of sustainable business operations.	**Enhance information security governance:** Identify internal and external information security management risks, prevent or mitigate the business impact of information security incidents, provide regular employee education and training, and raise employee awareness to improve the security of business operations.	• Major information security incidents: 0 • NIST CSF information security maturity assessment coverage rate: 100% • Percentage of employees receiving information security education and training: 100%	
Innovation Service	Innovation Management and Sustainable Manufacturing	Continuous innovation of technologies lower costs, improve efficiency, thereby reducing resource consumption and energy consumption. At the same time, business model innovation on the value chain can increase ASEH's core competitiveness and enable expansion capacity.	• Set up a patent reward program to encourage patent applications, that will strengthen the company's operations and IP portfolio. • Establish patent applications as the Key Performance Indicator of the Annual Objective Deployment (AOD).	• 9,000 patents granted[1] • Scope of product Life Cycle Assessment (LCA): 50%	
	Customer Relationship Management	Good customer relationship management helps to improve our customers' satisfaction and loyalty, thereby increasing our profit and core competitiveness.	**Continuously enhance customer communication:** Providing diverse communications channels to enable instant interaction and communication with customers; enhance information security management to ensure the confidentiality and integrity of customer proprietary information.	• Customer satisfaction: 90%	

[1] The number of approved patents includes the number of abandoned patents and expired patents

Dimensions	Key Issues	Business Impact on ASEH	Strategic Approach	2030 Target	Progress/ Status
Green Manufacturing and Low-carbon Transformation	Energy Management	Use of low carbon and diverse energy sources and smart energy management will increase energy efficiency, reduce GHG emissions, and lower operational risks.	• Increase the use of clean/renewable energy. • Continue to improve energy management: Establish standardized management systems through ISO 50001 to improve energy efficiency, and build smart energy management systems to facilitate precise control and lower standby mode energy consumption.	• Adopting an energy saving plan to decrease annual power consumption by more than 2% • Renewable energy to account for 42% of total energy consumption • ISO 50001 coverage in manufacturing facilities: 100%	
	Climate Strategy	Climate change is a major global environmental issue. As ASEH continues to expand, the company becomes increasingly energy-dependent and faces growing pressure from customers, government and other stakeholders to increase its use of renewable energy.	**Reduce GHG emissions & provide green manufacturing services:** • Green facilities (efficient building designs) • Efficient use of energy resources • Purchase and use of clean/renewable energy and RECs • Green product designs	• GHG emissions inventory coverage of the manufacturing facilities: 100% • GHG intensity (GHG emissions per revenue): achieve 15% reduction compared with 2015 • Absolute GHG emissions reduction target: Reduce Scopes 1 and 2 emissions by 35% with 2016 as baseline and Scope 3 emission by 15% with 2020 as baseline	
	Water Resource Management	Efficient management and use of water resources to alleviate local water stress, increase corporate sustainable operation resilience and boost the company's competitive strength.	**Establish a Sustainable Water Efficiency Management System:** Establish a systematic management model based on ISO 46001, conduct water review and set management goals and indicators, use reduction, replacement or reuse methods to continuously optimize water efficiency, reduce operating costs and protect global water resources.	• Day(s) of production shutdown in Taiwan facilities due to phase 3 water rationing (30% volume reduction of water supply): 0 • Water use intensity (water use per revenue): achieve 52%[1] reduction compared with 2015	
	Waste and Circular	Improving material utilization rate to reduce waste production and lessen the environmental impact of the company's operations.	**Enhancing source reduction in waste management:** Identify recyclable raw materials and moving towards minimizing waste through a circular model.	• General waste recycling rate: > 90% • Hazardous-waste intensity (hazardous waste generated per revenue): achieve 61%[2] reduction compared with 2015	

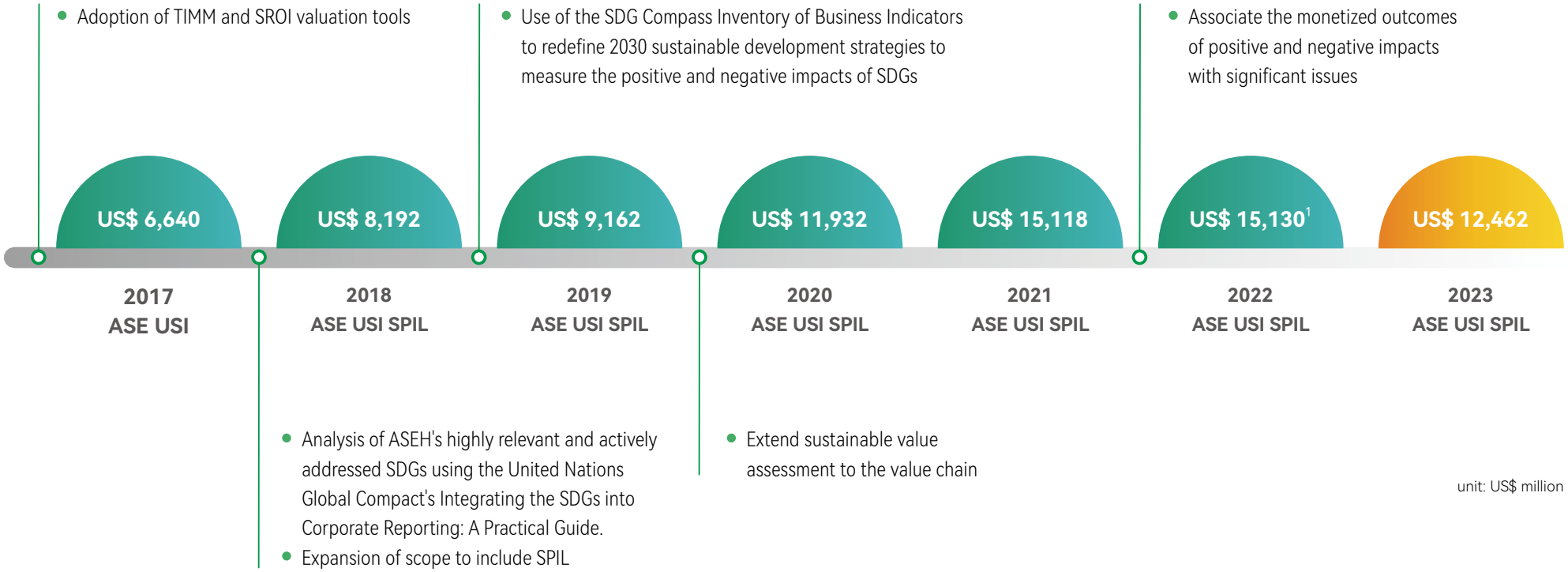
[1] In 2023, water withdrawal intensity decreased by 46% compared to 2015, surpassing the long-term goal of a 15% reduction by 2030. Therefore, the long-term goal has been increased from 15% to 52%
[2] In 2023, Hazardous-waste intensity decreased by 58% compared to 2015, surpassing the long-term goal of a 15% reduction by 2030. Therefore, the long-term goal has been increased from 15% to 61%

Dimensions	Key Issues	Business Impact on ASEH	Strategic Approach	2030 Target	Progress/ Status
Inclusive Workplace	Talent Attraction and Retention	Positive labor relations can promote organizational harmony, increase employee identification with the company, support the company's global competitiveness, and maintain its competitive advantages.	**Implement employee engagement survey and feedback mechanisms:** Besides encouraging employees to be proactive in company activities, we understand employees' opinions by using employee engagement surveys, and offer competitive compensation and benefit programs.	• Deployment of employee engagement survey every 2 years: ➤ Result of employee engagement survey: >85% ➤ Employee coverage: >95% • Overall turnover rate: <20%	
	Talent Development	Good training and development programs help attract and retain talents, and create a pleasant working environment, thereby increasing corporate productivity and innovation, and supporting the company's requirements and capabilities for long-term business growth.	**Enhance talent development and training effectiveness:** Provide challenging and valuable career development opportunities for employees by offering better training plans and promotion opportunities within the company.	• Percentage of management vacancies filled through internal promotion: >75% • Rate of Open Positions Filled by Internal Candidates: >50%	
	Diversity and Inclusion	Establishing a diversified, equal, inclusive, and friendly workplace that respects the differences and uniqueness of employees to generate positive impacts on the company's operations.	**Building a diversified and open workplace:** Promoting long-term plans for training and cultivating female managers and enhancing the technology competence of female employees as well as their knowledge in science, technology, engineering, and mathematics (STEM). Establishing a diversified, equal, inclusive, and friendly workplace that respects employees' uniqueness and differences.	• Female employee in top management positions: 15%	
	Human Rights	Upholding fundamental rights of employees as well as creating an environment that guarantees human rights are essential for a sustainable business.	**Protection of human rights:** Prohibition of forced labor, child labor, discrimination and harassment; ensuring rights of freedom of association and privacy; provision of reasonable working hours and appropriate compensation and benefits.	• Major regulatory violations: 0	
	Occupational Health and Safety	Having an advanced and proactive health and safety management system is conducive to reducing absenteeism and improving productivity and quality.	**Continuously improve health and safety management system:** Make all reasonable efforts to prevent accidents and promote the physical and mental health of employees by shaping a corporate safety culture where the safety and health of all employees are safeguarded.	• Disabling Frequency Rate (F.R.): <0.5 • Disabling Severity Rate (S.R.): <9 • Major injury and occupational disease: 0 case • Employee absenteeism rate: <2.3%	
Responsible Procurement	Sustainable Supply Chain	Establishing a sustainable supply chain is a win-win strategy that strengthens the protection of our suppliers' employees and assets and indirectly improves our competitiveness.	**Ensure supply chain's sustainable development:** Establish partnerships with our suppliers to ensure that they have their own sustainable development plans, which include providing a safe working environment, treating employees with respect and dignity, and maintaining ethical standards and environmental responsibility.	• Signing of Code of Conduct Agreement and completion of sustainability risk self-assessment: ➤ 100% for new suppliers • Completion of sustainability risk survey: ➤ 100% for all Tier-1 suppliers ➤ Over 50% for non Tier-1 suppliers • Completion of sustainability audits conducted: ➤ 100 Tier-1 suppliers ➤ 100% for high-risk Tier-1 suppliers	
Corporate Citizenship	Social Involvement	Active community development through strategic charitable and educational programs, and social work helps to build positive and constructive relationships at the local level, strengthen our social license to operate and create a well-educated workforce for future recruitment.	**Social involvement strategies:** Environmental Conservation, Industry-academia Collaborations, Community Engagement and Public Advocacy.	• Over 150 industry-academia collaboration projects on environmental technology • Organizing semiconductor courses for 2,000+ students • Over 2,000 disadvantaged students attending the after school program • Offering financial aid to 95,000+ school children from underprivileged families • Advocating 25+ semiconductor industry-related regulatory initiatives	

2.3 UN Sustainable Development Goals and Sustainable Values Assessment

ASEH is building upon its technology leadership to steer the semiconductor industry towards greater sustainability. Since 2017, we have adopted the Total Impact Measurement and Management (TIMM) framework and Social Return on Investment (SROI) analysis to assess the social impacts and operational risks of the company's business activities using monetary valuation tools. In 2018, we began referencing the United Nation's "Integrating the SDGs into Corporate Reporting: A Practical Guide" to map out sustainable development goals (SDGs) and sub-targets that need to be actively addressed. In 2019, we used the SDG Compass Inventory of Business Indicators to examine the positive and negative impacts of our four major SDGs and the outcomes of our actions. In 2020, we further applied sustainable value assessment used internally to the value chain so as to understand and analyze the impact of value chain activities on the environment and society. In 2022, we associate the monetized outcomes of positive and negative impacts with significant issues. This information will then be provided to the CSC to serve as references for the performing of weighing and comparisons in the value creation decision-making process. By examining and analyzing the sustainability outcomes of actions by ASEH subsidiaries, we have been able to develop action plans and policies for improvements and reduce the impact of potential risks. As such, we are able to fulfill our vision of promoting the United Nations' 2030 SDGs via our own core competencies.

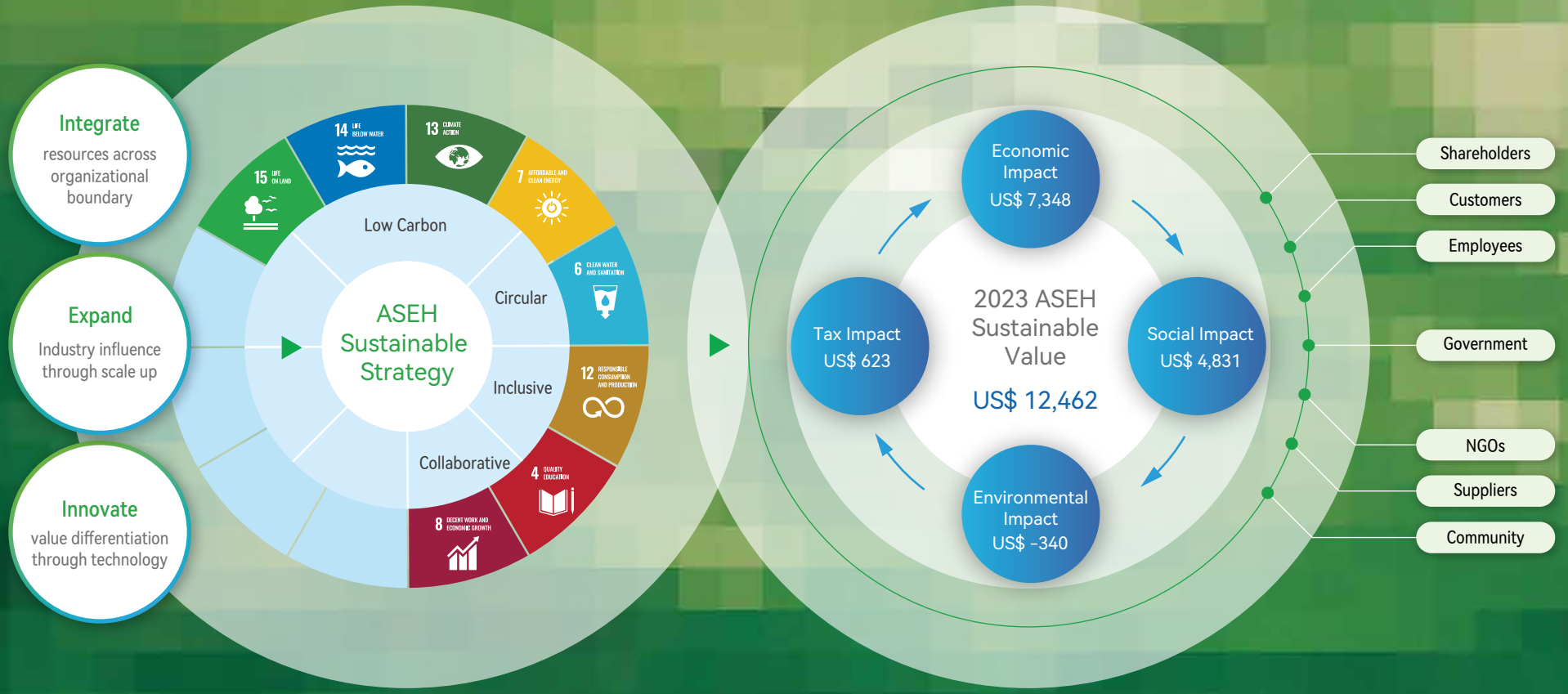
Major ASEH Valuation Milestones



unit: US$ million

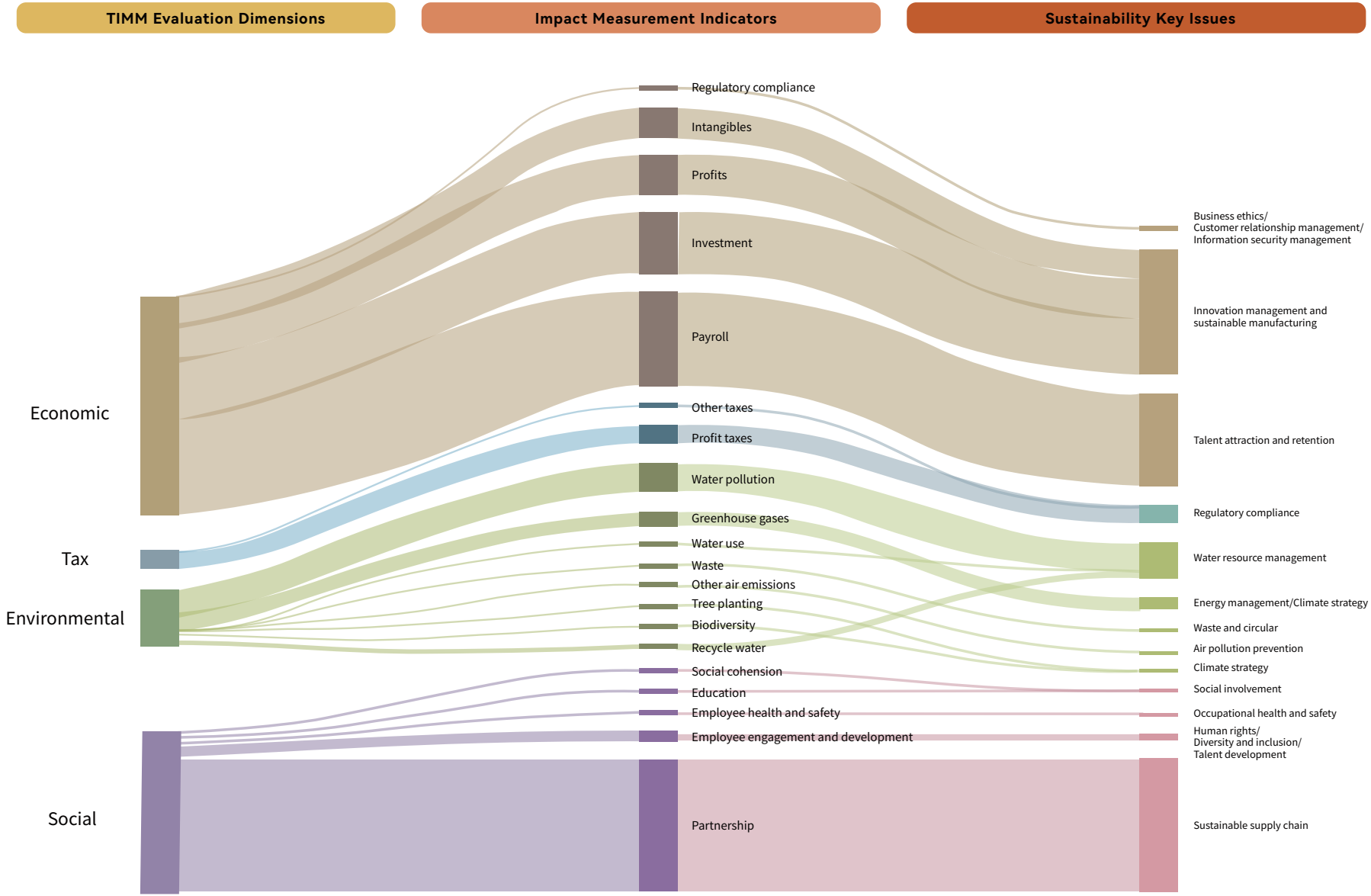
[1] Due to changes in the assessment basis of environmental indicators, the impact value for the year 2022 had been recalculated to facilitate comparison between the two years

ASEH Valuation Model



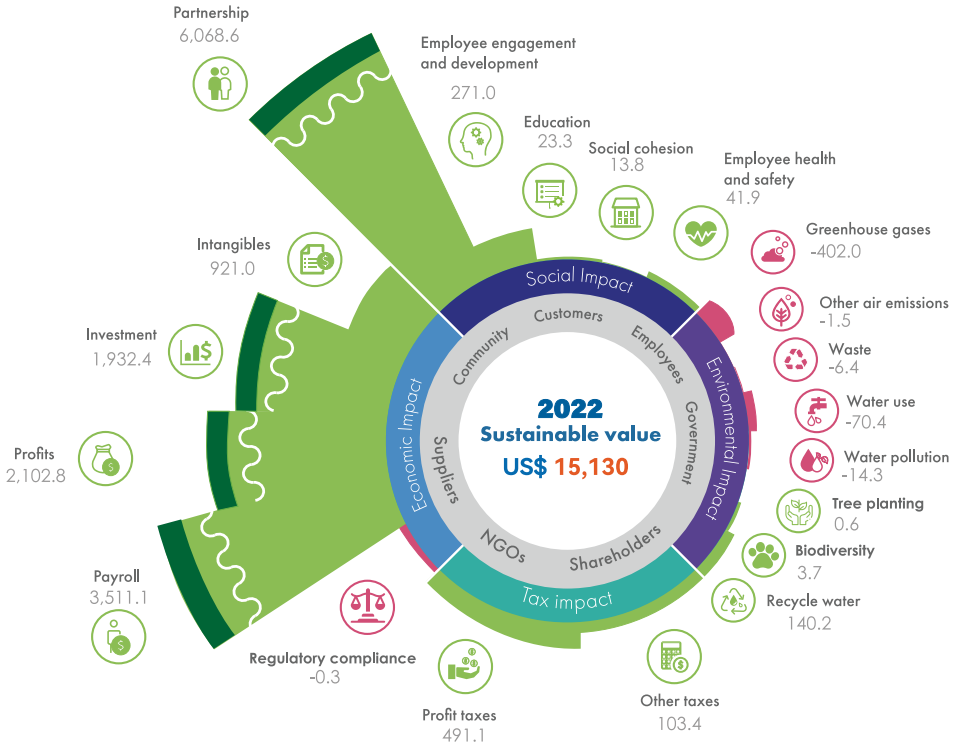
unit: US$ million

The relationship diagram of ASEH value impact and significant issue



Contributions to Global SDGs

We adopted sustainability management measures for prioritized SDGs to generate more positive impacts and contributions. In 2023, our business activities help boost GDP and local economies while at the same time, our business returns are invested into employee benefits, social welfare, renewable energy and biodiversity to give back to society, therefore, can result in positive impact on the SDGs of Decent Work and Economic Growth, Quality Education, Responsible Consumption and Production, Life below Water and Life on Land in terms of sustainable management. Demands on environmental resources in our business operations can result in negative impacts on the SDGs of Affordable and Clean Energy, Climate Action, and Clean Water and Sanitation. We have therefore committed ourselves to mitigating these impacts by focusing on sustainability programs through our Low Carbon and Circular strategies. In 2023, we are refining our goals for 2030 based on our four major sustainability strategies, so as to fulfill our commitment toward realizing these SDGs.



unit: US$ million

unit: US$ million

[1] Includes corporate volunteer cost of US$95,165

Sustainability Value and Impacts

ASEH adopted the TIMM framework for sustainability valuation to quantify the sustainable value of the company's impacts in the economic, tax, environmental and social dimensions. In 2023, ASEH generated US$12,462 million worth of sustainable value for stakeholders.

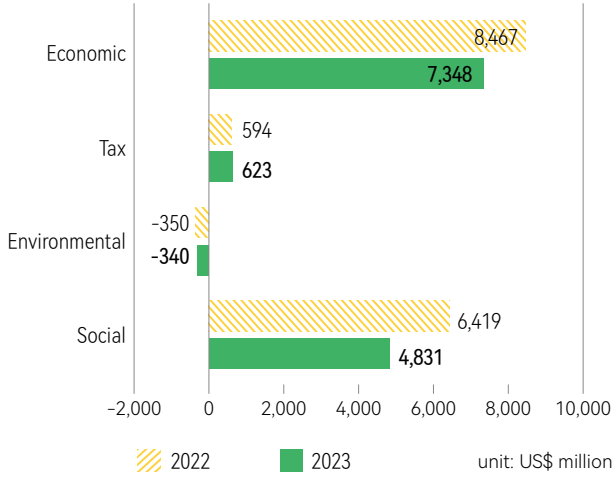
Economic and tax dimensions: In 2023, ASEH recorded a decline in packaging, testing, and EMS revenue due to the softening of the overall semiconductor industry and electronics market performance. This has in turn reduced our profits and the amount of employee bonus payouts. As a result, the overall economic value generated dropped by 13% from the previous year. Notwithstanding the decline in economic value, we expanded our investment in R&D and procurement of capital equipment during the course of the year, to maintain the company's market leadership. These activities generated a 5.3% increase in the value of our economic investments and a 4.3% increase in the value of our intangible assets, demonstrating our determination to improve our performance and product quality despite challenging circumstances. Tax expenditures in 2023 increased by 4.8% over the previous year due to earnings growth in 2022 and tax payments on the disposal of a subsidiary in Korea.

Environmental dimension: Two main sources of environmental impacts were water resource consumption during the production process and greenhouse gasses emitted from the use of electricity. Our renewable energy usage reached 20% of the total electricity consumption in 2023. On the other hand, we adopted the three major strategies of reduction, reuse, and recycling in the consumption of water resources. Investments were made in every plant to improve water recycling, thereby reducing environmental impacts caused by water consumption and increasing economic benefits. Since two manufacturing sites were included in the scope of calculation this year, negative effects of water consumption and wastewater pollution slightly increased by 1% compared to 2022, and the negative environmental impact of our operations increased by 2% compared to 2022. In the future, we will actively invest in environmental protection and fulfill our pledge to use the proceeds raised through our green bonds to construct commercial used green facilities and establish water recycling plants, water treatment plants, and a real-time waste water monitoring system that would mitigate environmental impacts and promote human health. In the meanwhile, we continued to invest in ecological conservation, and therefore the positive impact of ecological conservation in 2023 increased significantly by 48% compared to last year.

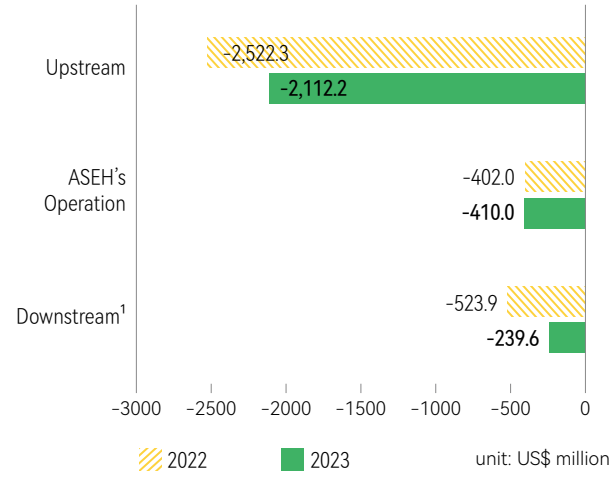
Social dimension: The overall 2023 value of our social impact fell by 24.7% compared with 2022. This was largely caused by a lacklustre economic environment that resulted in a 26% decrease in ASEH's annual local procurement amount. Despite a challenging year, the company continued to increase its investments in social support for the community. Excluding the value of corporate volunteer contributions, investments in social cohesion activities increased by 21.87% in 2023 over the previous year. Our active contribution to social welfare programs help to improve the well-being of the public and the community, as well as protect environmental resources. In addition, we had increased our investments in environmental education and job training by 53%.

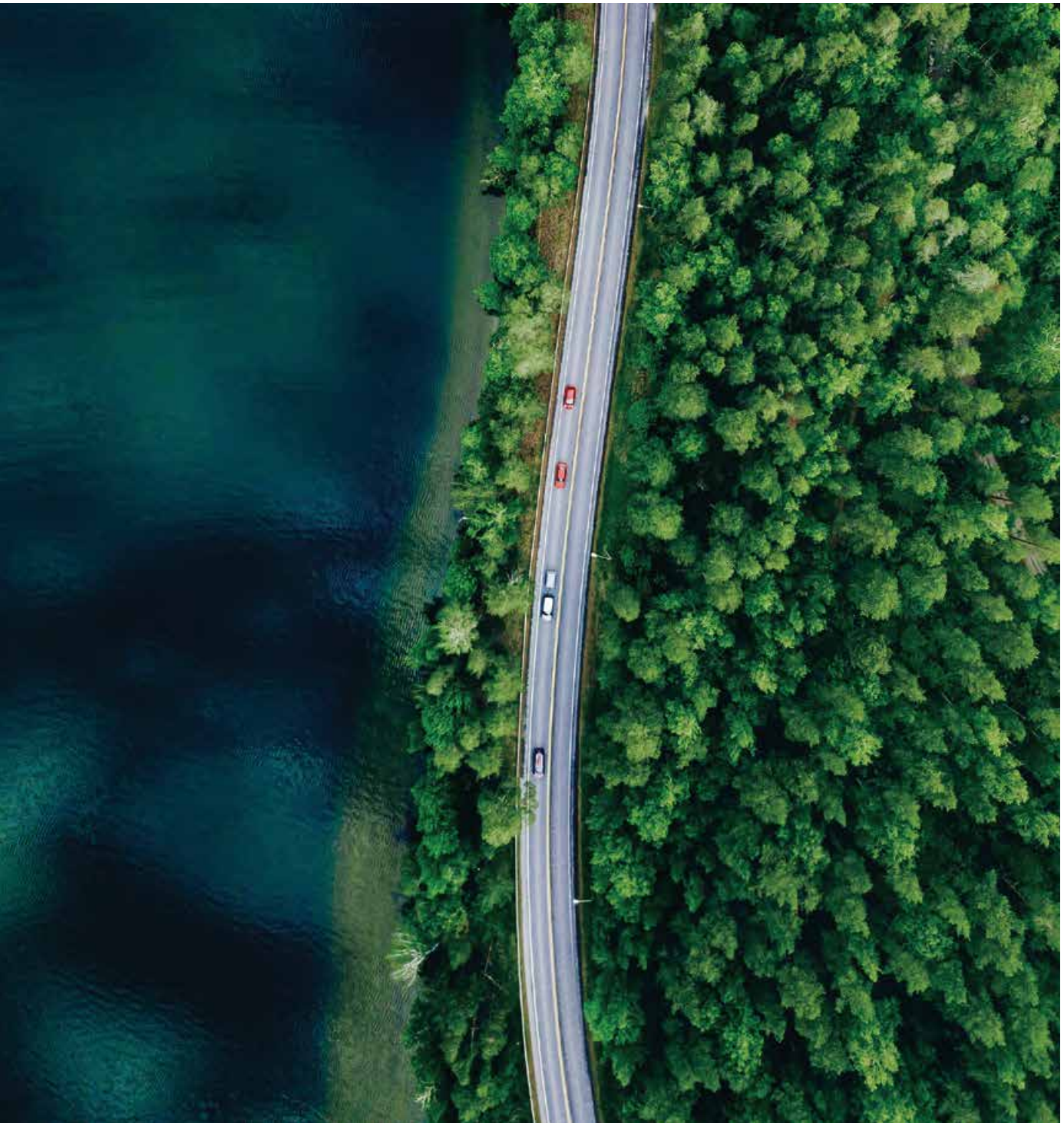
[1] Greenhouse gas emissions from investments in the downstream value chain have been included in calculations since 2022

2022-2023 ASEH Sustainable Values



2022-2023 Greenhouse Gas Value Chain Outcomes





Environmental Impact

In 2023, ASEH's overall environmental impact of US$-340 million is mainly attributed to resource consumption and environmental emissions from its business activities. We have paid close attention to the energy and resource efficiency of our facilities and put in place environmental programs to generate positive impacts and mitigate the external cost on the environment. Although two manufacturing sites were included in the scope of calculation this year, the overall impact (negative and positive) has decreased by 3% compared to US$-350 million in 2022. This reduction is mainly due to the annual operational impact of the industry and our continued efforts in implementing environmental mitigation measures, which have mitigated the negative impact. We recorded significant reductions in negative impacts from other air emissions and water use, further demonstrating our resolution and relative success in renewable energy usage, facilitating air pollution control, increasing water resource efficiency, and circular solutions in resource reduction. In 2023, we applied the SROI framework to quantify the impacts of our business operations and value chain activities on the environment based on SDG14 Life below Water and SDG15 Life on Land. ASEH remains committed to our low carbon mission and sustainability development, and will continuously expand the scope of our environment impact management.

Assessment of environmental impacts in 2023[1]

Input

In response to industry inventory clearance and the impact of inflation, revenue has declined compared to 2022. However, ASEH continues to increase the proportion of renewable energy use. Our manufacturing operations are spread across 9 regions including Taiwan, China, South Korea, Japan, Singapore, Malaysia, United States, Mexico, and Vietnam. The energy resource demands for our manufacturing operations are as follows:

Resource Demand	2022	2023	
Water resource consumption (megaliters)	23,399	21,468	↘
Non-renewable energy (MWh)	3,571,744	3,536,828	↘
Renewable energy (MWh)	819,863	844,044	↗
Resource circulation investments (US$ million)	55.7	36.8	↘

Notes: ↘ decrease ↗ increase

Output

ASEH is committed to sustainable manufacturing by continuously increasing relevant investments in ecology and environment protection, and developing energy management mechanisms and pollution control plans. We aim to maximize energy efficiency and increase product values, while reducing impacts on the environment. The environmental impact of our operations in 2023 is as follows:

Impact Items		2022	2023	
Greenhouse gas emissions	Scope 1 emissions (tCO_2e)	90,993	75,274	↘
	Scope 2 emissions (tCO_2e)	1,671,242	1,649,347	↘
	Scope 3 emissions (tCO_2e)	13,350,245	9,891,845	↘
Air pollutant emissions	Volatile organic compound, sulfur oxide, nitrogen oxide and particulate matter emissions (tons)	364	327	↘
Waste disposal	Hazardous waste disposal (tons)	12,455	9,492	↘
	Non-hazardous waste disposal (tons)	10,728	9,645	↘
Wastewater discharge[2]	Wastewater discharge (megaliters)	17,461	15,386	↘

External Impact

ASEH's overall environmental impact in 2023 totaled US$-340 million. Assessed external impacts include employee and public health, property damage, financial losses, biodiversity, impacts to ecosystems, and natural capital losses and other impact pathways. The major SDGs affected by negative external impacts are SDG 6 Clean Water and Sanitation, SDG 7 Affordable and Clean Energy, SDG 12 Responsible Consumption and Production, SDG 13 Climate Action, SDG 14 Life below Water, and SDG 15 Life on Land.

- The overall positive environmental impact totaled US$162 million, which is 12% higher than that of 2022. The net positive benefits related to water resources have increased by 27%, due to the increased amount of recycled process water and the significantly decreased number of pollutants in the wastewater.
- The value of negative environmental impact amounts to US$502 million, a 2% increase compared to 2022. The main reasons, in addition to inflation, are the addition of two manufacturing sites within the scope, which led to an increase in the pollutant content of water pollution. Through a green manufacturing process, we strive to reduce greenhouse gas emissions, waste, and water pollution. These measures resulted in positive contributions to the SDG 6, SDG 12, and SDG 13.
- ASEH has actively launched biodiversity-related activities this year. Biodiversity conservation is a key focus at ASEH, and the company is taking long-term actions to protect marine habitats and species, and the terrestrial ecosystem through various conservation programs including conservation and restoration of Chinese box turtle, adoption of parks, and tree planting and afforestation projects The company has planted more than 303 thousand trees, creating a positive ecological impact value of US$6.4 million.
- The monetized value of the indirect environmental impact of value chain greenhouse gas emissions amounted to US$-2,352 million, a 23% decrease compared to 2022. The main reason for the reduction is that we used the strategies of purchasing low-carbon raw materials and equipment, building low-carbon factories, and adopting green transportation to reduce impacts caused by product and service procurement.

unit: US$ million

Environmental Impact			2022	2023	
Negative	Greenhouse gas emissions[3]	ASEH operations	-402.0	-410.0	↗
		Products and services	-3,046.2	-2,351.8	↘
	Air pollution		-1.5	-1.4	↘
	Waste		-6.4	-5.4	↘
	Water resource consumption		-70.4	-67.5	↘
	Water pollution		-14.3	-18.0	↗
Positive	Water recycling	Water conservation	132.4	138.8	↗
		Water Pollution Reduction	7.8	17.2	↗
	Ecological conservation	Afforestation	0.6	2.0	↗
		Biodiversity	3.7	4.4	↗

[1] For more information on ASEH's sustainable values, please refer to ASEH's Total Impact Measurement and Management Report 2023 at https://www.aseglobal.com/download/
[2] Waste water pollutants include phenols, oils (extracted with n-hexane), cadmium, lead, total chromium, hexavalent chromium, copper, zinc, nickel, arsenic, silver and orthophosphate
[3] The source for GHG assessment methodology in 2022 and 2023 is Report on the Social Cost of Greenhouse Gases: Estimates Incorporating Recent Scientific Advances, USEPA

Social Impact

Social impact assessment allows ASEH to manage the sustainability values generated in areas including supplier partnerships, employee engagement and development, employee and contractor health and safety, and education and community cohesion. In 2023, ASEH's overall social impact totaled US$4,831 million, with US$4,808 million directly resulting from the company's operations[1]. The value is mainly attributable to supplier partnerships development and support.

Assessment of social impacts in 2023

Input	Output	External Impact
Direct operations: Inputs directly related to the operations of ASEH and its subsidiaries include: • We established a two-way communication mechanism with our suppliers, and we hold Annual Sustainability Forums, medium- and long-term sustainability capacity-building programs, sustainability workshops, and regular education and training for them in order to promote sustainable cooperation and strengthen their resilience and ability to respond to sustainability trends and risks. • Sustainability audits of 201 raw materials suppliers[2] • Procurement of 49.3% of raw materials from local suppliers[3] • Supplier Sustainability Awards • Comprehensive employee engagement survey • Regular risk assessment and continuous improvement of occupational health and safety • Investment of approximately US$3.3 million in employee health checkups • Investment of approximately US$6.5 million in industry-academia occupational training	Supplier partnerships: • Supplier audit results showed that 45% of nonconformities were related to occupational health and safety, 23% were related to labor, 20% were related to management systems, 9% were related to environment, and 3% were related to ethics • A total of over 5,500 attendees participated in Annual Sustainability Forums and supplier educational training • Invested a total of US$0.1 million into the Supplier Sustainability Award Employee engagement and development: • Employee engagement surveys showed an engagement rate of 77% with an employee response rate of 95% Employee and contractor health and safety: • 129 occupational injuries and 28 occupational diseases to employees and contractors • 59,949 employees participated in health checkups Education: • Conducted a total of 64 industry-academia projects on innovative semiconductor research and development	Social impact resulting directly from operations totaled US$4,808 million. • **Supplier partnerships:** We used the cost approach valuation and contingent valuation methods to assess that the value generated totaled US$4,492 million. Although the overall factor dropped by 26% compared with 2022, one of the indicators, supplier education and training, has increased by 68% in value compared with 2022 due to the increase in the number of suppliers participating in major education and training such as carbon inventory and sustainability forums. • **Employee engagement and development:** Survey results showed that investment in human capital builds sense of achievement, belonging in the workforce, psychological health, managerial ability, and cohesion of employees. Based on the degree of these outcomes, it was estimated that the social value generated was US$240 million. • **Employee and contractor health and safety:** We used the cost approach valuation to assess the positive and negative impacts of healthier work environments and occupational injury incidents. Positive impacts included the increased chance of disease recovery and reduced financial stress from medical costs due to employee health checkups and health insurance, which were assessed at a value of US$45 million. Negative impacts included harm to employees' and contractors physical, mental, and spiritual well-being to occupational injury incidents, which were assessed at a value US$-0.5 million • **Education:** We used the value transfer method to assess the social value of industry academia occupational training related to business activities, which totaled US$31.1 million. The major outcome was that industry- academia cooperation will give talented graduates the opportunity to work at ASEH and also bring new talent into ASEH to improve the competitiveness of our talent pool.
Indirect operations: • To promote social cohesion, ASEH and its subsidiaries organized public welfare activities and invested a total of approximately US$4.5 million in six categories: community development, community care, care for disadvantaged families, healthcare sponsorships, arts and culture sponsorships, and sports sponsorships • Investment of US$1.2 million in education, including environmental education. Investment of US$0.6 million in other education	• A total of 182 outputs in social cohesion activities, including 27 in public development, 50 in community care, 62 in care for disadvantaged families, 3 in healthcare sponsorships, 29 in arts and culture sponsorships, and 11 in sports sponsorships • A total of 66 outputs in education, including 42 in environmental education and 24 in occupational education	• We used the value transfer method to assess the social value of public welfare activities (excludes corporate volunteer) that promote social cohesion, which totaled US$15.7 million. Of these activities, care for disadvantaged families accounted for the largest percentage at 35%, and arts and culture sponsorships accounts for 34%. The third is the care for community, which accounts for 16%. The three major outcomes were as follows: increased self-identity of disadvantaged children, enhanced learning performance of disadvantaged children, and improvement in public knowledge about art, which improved the well-being of neighboring residents and the general public on the whole. • We used the value transfer method to assess the social value of environmental and other education, which was estimated to be US$7.2 million. The major outcome was improved environmental awareness in the general public and their ability to incorporate eco-friendly actions and behavior into everyday activities.

[1] The value of social impacts resulting directly from the company's operations is calculated by monetizing social impacts. The calculations therefore excluded public welfare activities and non-industry-academia educational projects
[2] Please refer to Chapter 7.3 of this report (Supply Chain Sustainability Management)
[3] Please refer to Chapter 7.2 of this report (Supply Chain Management Framework)

2.4 Materiality Assessments and Stakeholder Communication

Every year, ASEH develops a materiality execution framework that identifies major sustainability issues and develops economic, environmental, and social impact assessment methodologies by referencing major standards organizations like the 2021 GRI Universal Standards' GRI3: Material Topics, the AA 1000 Stakeholder Engagement Standard (SES), the Value Balancing Alliance (VBA), the Harvard Business School's Impact-Weighted Accounts research project, the London Benchmarking Group (LBG), and incorporating the concept of Double Materiality proposed by the European Financial Reporting Advisory Group (EFRAG). Applying the ERM approach to integrate risks and materiality allows the assessment of the company's organizational resilience. In addition, based on the major issues identified through the preceding process, we are able to develop long-term sustainable goals and strategies.

During the preparation of our 2023 Corporate Sustainability Report, we collected feedback from 2,298 stakeholders to understand the degree of concern on sustainability at ASEH. Led by the company's senior management, a total of 175 colleagues from the Corporate Sustainability Committee (CSC) of the subsidiary companies participated in identifying the degree of impact of each sustainability issue on the operations of the company. The CSC members, the supervisors of functional units, and the responsible personnel of our other subsidiary companies worked together to identify the impact of our operations on the sustainable development of the economy, environment and society (people and human rights). The company referenced the material issues identified in the previous year, and reported to the Board of directors on the final 16 issues selected as the basis for our long-term sustainability goals from now to 2030. The overall materiality assessment process is detailed below:

1

Step 1: Inclusivity

To identify the relevance and importance of various issues, we referenced international standards and regulations as well as sustainable investment ratings and communicated with our global semiconductor industry peers and stakeholders. We compiled a list of 21 sustainability issues that were related to our company. This year, we added "Risk and Crisis Management issues" to the list, changed "Climate Change" to "Climate Strategies" and dropped "Work from home."

- **International standards and regulations:** GRI Standards, Sustainability Accounting Standards Board (SASB), SDGs, RBA, Task Force on Climate-related Financial Disclosures (TCFD), and Task Force on Nature-related Financial Disclosures (TNFD)
- **Sustainability investment assessments:** Dow Jones Sustainability Indices (DJSI), Climate Disclosure Project (CDP), MSCI ESG Index, and FTSE4Good Emerging Index
- **Global semiconductor industry:** Benchmarking sustainability policies and practices from semiconductor companies listed on the DJSI.
- **Stakeholder engagement:** Analyses of online media reports and regular/occasional stakeholder communication to evaluate stakeholders' perceptions of sustainability issues.

2

Step 2: Materiality

We comply with the GRI Standards and base the materiality of issues on their importance to stakeholders, impact on the company's operations, and impact on the external environment. We collect our stakeholders' feedback through daily communication and questionnaires to help senior managers determine the impact of various issues on company operations. Functional unit supervisors are invited to identify sustainability-related impact and determine the materiality and relevance of issues.

2,904 Stakeholders concerns

The degree of concern from stakeholders is a key factor in the process of determining the significance of our material issues, and the process is an important channel for us to communicate with our external stakeholders. This year, we designed a questionnaire on stakeholders' degree of concern about sustainability issues that drew a total of 2,904 stakeholder responses. The respondents included employees (1,589), customers (105), shareholders (31), suppliers/contractors (889) and members of the government (53), industry unions/ associations (32), NGOs (36), media (31), and communities (138).

175 Participants in the operational impact survey

Integrating care for the environment, society, and governance (ESG) into core operations is a key driver of corporate sustainability. Therefore, we had a 175-member team of senior managers and CSC members participate in evaluating the impact of each sustainability issue on our revenue, risks, customer satisfaction, and employees' organizational identification, and ranking the level of each issue's importance according to its impact.

38 Participants in the sustainable development impact survey

We integrated the economic, environmental, and social impact assessment methodologies developed by the VBA, the Impact-Weighted Accounts research project of the Harvard Business School, and the LBG to identify 5 external economic impact, 6 external environmental impact, and 10 social impact external impact related to our company. Additionally, we formed a team made up of 38 supervisors from functional units and the core sustainability team that identified 11 material external impact related to our company.

3

Step 3: Responsiveness

Based on the results of the materiality assessments and using the GRI indicators, we fulfilled the disclosure requirements of our stakeholders regarding sustainability-related information. We continue to increase transparency with regard to our sustainability issues and efforts across various communication platforms such as our Sustainability reports, annual reports, TNFD report, TCFD report and website, covering aspects such as our policies, organization, practices, performance, and goals.

16 Material topics

The CSC initially identified 16 material topics that were of importance to stakeholders and impact the company's sustainable development and/or the external environment. After further deliberation, the assessment ultimately yielded 16 material issues. The CSC later confirmed these issues as material issues. Consequently, the issues formed the basis for the disclosures in our 2023 Sustainability Report and for formulating internal sustainable management goals.

23 Sub-issues

We derived 23 additional sub-issues (21 GRI-specific and 2 ASE Holdings-specific issues) for disclosure from the 16 material issues. Other issues with lower priority were also disclosed in the report.

4

Step 4: Impact

Commitment, actions, and goals are key factors through which we demonstrate our impact. We monitor and track the achievement rates of our goals, tying sustainability-related performance to the remuneration of our senior managers. We view corporate sustainability as one of our core operational factors, and strive for a corporate culture that values and practices sustainability from the top down.

41 Long-term goals

To elevate the impact of corporate sustainability, we have made commitments regarding various material issues and formulated 41 long-term sustainability goals for 2030. In addition, we promote and implement sustainability efforts at our factories worldwide every year.

4 Committees

Every year, the CSC tracks the progress of its goal completion via progress reports presented by colleagues from the relevant business units. Our three major subsidiary companies also organize internal CSCs on a regular basis to manage and track their progress and sustainability trends.

ASEH Impact Assessment–Monetary Valuation（TIMM）

Dimensions	Impacts	Impact Attributes	Impact Causes	Targets/Areas	Activities/Outputs	Values (US$ million)	Impacted Sustainability Issues
Tax	Profit Taxes	Positive	Operation	Society	Profit Taxes	505.4	Financial Performance
	Other Taxes	Positive	Operation	Society	Other Taxes	118.0	Financial Performance
Economic	Payroll	Positive	Operation	Internal Employees	Salary Benefits	3,314.6	Talent Attraction and Retention
	Profits	Positive	Operation	Internal Employees	Profit Distribution	1,218.4	Innovation Management and Sustainable Manufacturing
	Investment	Positive	Operation	Suppliers	Capital Expenditures	2,034.4	Innovation Management and Sustainable Manufacturing
	Intangibles	Positive	Operation	Supply Chain / Employees / Customers	R&D Activities and Intellectual Property Purchases	960.3	Innovation Management and Sustainable Climate Strategy
Environmental	Greenhouse Gases	Negative	Operation	Environment	Greenhouse Gas Emissions	-410.0	Climate Strategy / Energy Management
	Other Air Emissions	Negative	Operation	Environment	Air Pollutant Emissions	-1.4	Air Pollution Prevention
	Waste	Negative	Operation	Environment	Hazardous and Non-hazardous Waste	-5.4	Waste and Circular
	Water Use	Negative	Operation	Environment	Water Use	-67.5	Water Resource Management
	Water Pollution	Negative	Operation	Environment	Controlled Pollutants and Nutrient Salt (Phosphorus)	-18.0	Water Resource Management
	Recycle Water	Positive	Operation	Environment	Recycle Water	156.0	Water Resource Management
Social	Employee Engagement and Development	Positive	Operation	Internal Employees	Result of Employee Engagement Survey	239.8	Talent Development
	Education	Positive	Operation	Society	Amount Invested in Educational Activities	38.3	Social Involvement
	Social Cohesion	Positive	Operation	Employees / Community	Amount Invested in Public Welfare Activities	15.8	Social Involvement
	Employee Health and Safety	Positive	Operation	Internal and External Employees	Disability Benefit Amount / Cost of Health Screening and Insurance	45.0	Occupational Health and Safety
	Partnership	Positive	Supply Chain	Society / External Employees	Procurement Amount / Educational Training for Suppliers	4,492.3	Sustainable Supply Chain

ASEH Impact Assessment: Demonetization Model

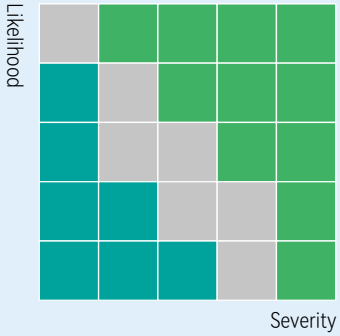
Define positive and negative impact

21 impact

Impact	Positive	Negative
Economy	4	1
Environment	2	4
People/ human rights	7	3

Definition of impact obtained from:
(1) The VBA
(2) The Impact-Weighted Accounts of the Harvard Business School
(3) The LBG
(4) ASE Holdings

Major impact analysis



Severity = (1)+(2)+(3)
(1) Degree
(2) Scope
(3) Irreparability

11 significant impact

- \+ Assists industrial technology development
- \+ Creates output value for upstream vendors
- \+ Increases investors' financial capital
- \+ Generates tax revenue
- \+ Green products
- \+ Renewable energy
- \+ Affordable products
- \- Resource consumption
- \- Natural resources depletion
- \- GHG emissions
- \- Creates procurement-induced environmental impact

Economic impact	+ Positive impact - Negative impact
Environmental impact	
Impact on people/human rights	

Sustainability issues with significant impact

Degree of impact	Sustainability issues
Extremely high	Sustainable Supply Chain
	Innovation Management and Sustainable Manufacturing
	Climate Strategy
	Energy Management
	Waste and Circular
High	Customer Relationship Management
	Air Pollution Prevention
	Risk and Crisis Management
	Social Involvement
	Regulatory Compliance
	Business Ethics
	Water Resource Management
Significant	Information Security Management
	Biodiversity
	Talent Attraction and Retention
	Human Rights
	Diversity and Inclusion

ASEH Double Materiality

Doubly material issues		Operational impact				Impact on the economy, environment, and people/human rights										
		Revenue	Risks	Customer satisfaction	Employees' organizational identification	Assists industrial development (positive)	Creates output value for upstream vendors (positive)	Generates tax revenue (positive)	Increases investors' financial capital (positive)	Green products (positive)	Renewable energy (positive)	Affordable products (positive)	Resource consumption (negative)	Natural resources depletion (negative)	GHG emissions (negative)	Creates procurement-induced environmental impact (negative)
Economic	Regulatory Compliance		0					0							0	
	Business Ethics							0	0							
	Customer Relationship Management	0		0		0	0		0	0						
	Sustainable Supply Chain	0		0		0	0		0	0	0	0		0		0
	Innovation Management and Sustainable Manufacturing	0		0		0	0		0	0		0		0		0
	Information Security Management		0	0		0										
Environmental	Water Resource Management										0		0			
	Climate Strategy							0			0		0		0	0
	Energy Management									0	0		0	0	0	
	Waste and Circular									0	0		0	0		0
Social	Occupational Health and Safety		0		0											
	Talent Attraction and Retention				0							0				
	Talent Development				0											
	Human Rights				0							0				
	Diversity and Inclusion				0							0				
	Social Involvement							0	0			0				

* "O" means that the major issue in the left column impacts company operations and has sustainability-related impact on the external environment.

ASEH Material Issue Rankings

ESG material issues	Rank[1]	Impact on company operations[2]	Degree of concern from stakeholders[2]	Impact on sustainable development[2]
Sustainable Supply Chain	1	**	**	***
Innovation Management and Sustainable Manufacturing	2	**	**	***
Human Rights	3	*	***	*
Customer Relationship Management	4	**	**	**
Talent Attraction and Retention	5	*	**	*
Diversity and Inclusion	6	*	*	*
Waste and Circular	7		***	***
Occupational Health and Safety	8	**	***	
Energy Management	9		**	***
Social Involvement	9		***	**
Climate Strategies	11		*	***
Talent Development	12	*	**	
Regulatory Compliance	13	*		**
Business Ethics	13		*	**
Information Security Management	13	**		*
Water Resource Management	13		*	**

[1] Principles for ranking issues: 1) Whether the impact on company operations, degree of concern from stakeholders, and impact on sustainable development of an issue intersect each other; 2) The total number of times that the issue was ranked in the top 5 in terms of impact on company operations, degree of concern from stakeholders, and impact on sustainable development; 3) the total number of asterisks (*) (total of the impact levels)

[2] ***Extremely high impact/extremely high degree of concern; ** high impact/high degree of concern; *moderate impact/ moderate degree of concern

ASEH Material Issues and Enterprise Risk Management (ERM)

Material Issues	Potential Risks	Risk Level[1]	Risk Mitigation and Response Measures[2]
Regulatory Compliance	The uncertainty of regulatory changes in water pollution control measures.	Medium	Enhancing the education and training on the prevention and management of water pollution.
	Emerging environmental topics and requirements - compliance with the schedules of environmental regulations and the assessment of carbon fees.	Medium	Ensuring that greenhouse gas inventory disclosures are complete and accurate, and continuing to monitor regulatory requirements and developing response measures.
Business Ethics	Fraudulent behaviors and inadequate resources for investigating ethical violations.	Medium/Low	Establishing channels for reporting employee grievances and unlawful behaviors, and reinforcing the internal audit system.
Customer Relationship Management	Failure to promptly address the demands of customers and the market.	Medium	Reviewing the company's operating policies and product strategies on a regular basis, and strengthening the management of quality control to secure customer orders.
Sustainable Supply Chain	Inability to identify alternative raw materials.	Medium	Negotiating with respective customers on excess material orders.
	Supply chain disruptions caused by geopolitical developments.	Low	Diversifying risks through the establishment of alternative suppliers, and ensuring that suppliers develop robust plans to prevent supply disruptions.
	Over-reliance on a single supplier.	Medium	Continuing to assess alternative replacements for indirect material and chemicals.
Innovation Management and Sustainable Manufacturing	Patent deployment is not in line with the company's business goals.	Medium	Establishing annual targets for R&D patent output that are consistent with the company's business goals and intellectual property management.
	The inability to launch new products timely to meet global market requirements.	Medium	Aligning technology roadmaps and conducting quarterly technical meetings (QTR) with customers who are leading market players. Developing ASE roadmaps according to customer requirements. Conducting monthly application workshops between Central Engineering Integration (CEI) and Business Management teams to assess market trends and explore customer potential, formulate supplier strategies, and review the latest technical information from suppliers.
Information Security Management	Inadequate information security management.	Medium	Conducting routine review of security level access protocols. Ensuring the functionality of the centralized security information and event management (SIEM) and security operations center (SOC). Improving the capabilities of key stakeholders and users in working together to respond to cybersecurity threats. Conducting annual cybersecurity simulation exercises.
	Unauthorized disclosure of confidential information.	Medium	Implementing software and hardware updates and improvements, organizing cyber security education and training, obtaining ISO 27001 RC certification, and conducting annual cyber security desktop exercises.
Water Resource Management	The need to increase the percentage of recycled water.	Medium	Implementing robust wastewater recycling.

[1] High: the impact on the company's finance/business continuity management/reputation is high, and the probability of occurrence is likely
Medium: the impact on the company's finance/business continuity management/reputation is medium, and the probability of occurrence is possible
Low: the impact on the company's finance/business continuity management/reputation is low, and the probability of occurrence is unlikely

[2] For more information, please see relevant chapters and sections of this report

Material Issues	Potential Risks	Risk Level[1]	Risk Mitigation and Response Measures[2]
Climate Strategy	Supplier strategy and capabilities in sustainable development are inadequate.	Medium	Close examination of supplier qualifications should be conducted to ensure alignment of procurement objectives. Supplier contracts should be drafted in consideration of the company's interest.
	Uncertainties surrounding extreme weather, water risks, and carbon-related laws and regulations.	Medium	Completing carbon inventories and implementing energy-saving and carbon-reduction initiatives in accordance with prevailing laws and regulations, and within the timeframe stipulated.
	Absence of investments in the development of low-carbon materials and source reduction technologies are obstacles to achieving Net Zero goals.	Medium	Promoting the adoption of the circular economy, and organizing company seminars to facilitate the exchange of innovative environmental technologies.
Energy Management	Abnormal operation of power systems.	High	Establishing schedules and feasible manufacturing procedures in accordance with the specifications and requirements.
	Abnormal power supply and power rationing from external units caused power supply interruptions.	High	Monitoring Taipower's efforts to improve irregularities through the regional water and electricity team.
	Failure to implement energy-saving measures.	Medium	Implementing internal energy management protocols.
	Uncertainty concerning the procurement of renewable energy.	Medium	Implementing energy-saving programs and setting a power savings target of 2% or higher.
Waste and Circular	Waste management vendors are not well-equipped with the necessary resources to meet the increasingly stricter waste regulations.	Low	Conducting routine audits, promoting waste recycling initiatives, and improving the self-processing capabilities of factories.
Occupational Health and Safety	Absence of independent evacuation routes in the production and office areas violate building safety codes.	Medium	Improvements had been completed with the reconfiguration of the fire safety zones in the offices and production lines on each floor, along with the installation of fire doors and separate passageways.
	Citations issued and/or suspensions imposed due to occupational safety and health lapses in the construction of new factories.	Medium	Conducting regular improvement reviews with the construction department responsible for the the safety at new construction sites.
	Penalties and/or suspensions imposed due to incidents of severe occupational injuries at the factory.	Medium	Conducting periodic reviews of contractors, and mandating the implementation of safety protocols.
	Occupational injuries sustained by employees.	Medium	Conducting regular building inspections and on-site visits, conducting daily on the ground inspections of factories, promoting work safety campaigns regularly, adopting the Bypass safety control protocol, and developing source management of automated transport equipment.
Talent Attraction and Retention	Shortage of manufacturing manpower.	Medium	Implementing strategies to enhance departmental retention rate. Introducing incentive programs for critical talents and improving the conditions of personnel working long hours.
	External poaching of critical talents and AI experts.	Medium	Implementing critical talent programs and establishing a staff back-up system. Establishing an AI academy, offering incentives for the successful initiation of AI projects and expediting the promotion of AI talents, implementing robotic process automation (RPA) to reduce the workload of engineers, and conducting large-scale external training courses to assist IT personnel in acquiring new knowledge and technologies.
Human Rights	Potential risks associated with employees handling irregular workloads, and labor disputes among contracted personnel.	High/Low	Conducting audits of vendors and requesting for improvements.

Material Issues, Corresponding GRI Topics, and Degree of Involvement with the Impact

Material issues		GRI topics	Where the impact occurs			Our involvement with the impact		
			Procurement	Manufacturing facilities	Communities	Direct	Indirect	Business
Economic	Regulatory Compliance	Environmental Compliance (307) and Socioeconomic Compliance (419)	v	v		o		
	Business Ethics	Anti-corruption (205) and Anti-competitive Behavior (206)	v	v		o		
	Customer Relationship Management	Customer Privacy (418)		v				o
	Sustainable Supply Chain	Procurement Practices (204), Supplier Environmental Assessment (308) and Supplier Social Assessment (414)	v					o
	Innovation Management and Sustainable Manufacturing	Topics formulated by ASE Holdings itself		v		o		
	Information Security Management	Topics formulated by ASE Holdings itself		v		o		
Environmental	Water Resource Management	Water and Effluents (303)		v	v	o		
	Climate Strategy	Economic Performance (201) and Energy (302)		v	v	o		
	Energy Management	Energy (302)		v		o		
	Waste and Circular	Waste (306) and Materials (301)		v		o		
Social	Occupational Health and Safety	Occupational Health and Safety (403)		v		o		
	Talent Attraction and Retention	Employment (401) and Labor/Management Relations (402)		v		o		
	Human Rights	Forced or Compulsory Labor (409) and Supplier Social Assessment (414)	v	v		o		o
	Diversity and Inclusion	Diversity and Equal Opportunity (405)		v		o		
	Social Involvement	Topics formulated by ASE Holdings itself			v		o	

Stakeholder Communication Table

Stakeholder	Communication Mechanisms[1]	Responsible Units	2023 Issues of Concern[2]	2023 Key Communication Outcomes[3]
Customers	• Customer quarterly business review meetings • Customer audits • Customer service platforms • Technical forums	• COO Office • Sales Offices	• Customer Relationship Management • Sustainable Supply Chain • Data and Privacy • Information Security Management • Innovation Management and Sustainable Manufacturing	• We achieved a customer satisfaction rating of 92%in 2023, which met our target of 90%.
Employees	• GM/plant manager's mailbox • Intranet websites/bulletin boards/ display walls • Seminars/employee forums • Employee engagement surveys • Service/complaint hotlines	• CAO Office • HR Departments	• Human Rights • Talent Attraction and Retention • Occupational Health and Safety • Talent Development • Diversity and Inclusion	• In 2023, more than 1,700 seminars/employee forums were held, including 220 sessions for new employees, 533 sessions for foreign workers, 78 instances of regular labor-management negotiations and 927 sessions for regular employees. • The number of internal employee complaints totaled 778, all of which were closed satisfactorily. • In 2023, 95.1% of our employees participated in the employee engagement survey, and 77% of the subjects responded to the sustainability engagement survey. The next survey will be conducted in 2025.
Shareholders	• Annual and quarterly financial reports • Quarterly earnings conferences • Annual shareholders' meetings • Quarterly institutional investors' conferences	• Company spokesperson • Investor Relations Department, CFO Office	• Innovation Management and Sustainable Manufacturing • Water Resource Management • Talent Attraction and Retention • Occupational Health and Safety • Energy Management	• In 2023, we held an annual shareholders meeting and 4 quarterly earnings conferences, and attended 15 institutional investor conferences to communicate economic, environmental, and social issues to our shareholders. • In 2023, our consolidated operating revenue was NT$581.9 billion, a decrease of approximately NT$89 billion or 13.3% compared with 2022.
Suppliers / Contractors	• Supplier questionnaire surveys • Supplier on-site audits • Annual supplier forums/supplier sustainability awards • Supplier capacity-building activities • Supplier information security evaluation	• Corporate CSR Division • Group Procurement Department • IT Departments	• Occupational Health and Safety • Sustainable Supply Chain • Business Ethics • Customer Relationship Management • Data and Privacy	• More than 600 suppliers completed the survey, while 201 suppliers underwent onsite/remote audits or RBA VAP. • More than 5,500 suppliers participated in sustainability forums/training workshops. • We completed third year annual on-site audits for our first year Supplier Sustainability Award winners (one for each of the 3 suppliers). • For the second year Supplier Sustainability Awards, we selected one supplier for the Low Carbon category and one for the Circular category. • We completed written information security evaluations of 76 suppliers.

[1] We communicate with each stakeholder at irregular intervals unless otherwise indicated
[2] Issues of concerns were selected from the results of our survey and other forms of communication
[3] For more information, please see relevant chapters and sections of this report

Stakeholder	Communication Mechanisms[1]	Responsible Units	2023 Issues of Concern[2]	2023 Key Communication Outcomes[3]
Government	• Communication meetings/forums/seminars or conferences held by government authorities • Proactive dialogue with government authorities • Reporting through government portals	• Public Affairs Division, CFO Office • CAO Office	• Occupational Health and Safety • Social Involvement • Business Ethics • Water Resource Management • Air Pollution Prevention	• The Environmental Safety and Health (ESH) Committee-Assembly and Test Working Group was formed by our company together with our industry peers to address industrial safety and environmental issues pertaining to the semiconductor industry in Taiwan. The group analyzes trends and developments in international law to provide references for government agencies to formulate policy and regulatory amendments related to the semiconductor assembly and testing industry, and to assist the competent authorities in formulating regulatory proposals that align with current and future industry developments.
Community (incl. NGOs and media)	• Community perception surveys and needs assessments • Communication meetings/forums/seminars held by NGOs • Volunteer activity cooperation with NGOs • Press releases • Spokesperson interviews • Company website	• Public Affairs Division, CFO Office • CAO Office • HR Department	• Waste and Circular • Social Involvement • Air Pollution Prevention • Water Resource Management • Climate Strategy	• We held a press event for the media and non-profit foundations, and organized forums and facility visits for concerned professionals to learn about the technologies behind semiconductor manufacturing and our achievements in environmental protection. • We contributed approximately US$1.86 million in support of environmental conservation programs, charitable activities, and cultural and educational programs through collaboration with 60 NGOs.
Industry Unions/ Associations	• Organizational member conference • Technology forums held by industry unions/ associations	• CAO Office • Subsidiaries	• Energy Management • Occupational Health and Safety • Customer Relationship Management • Innovation Management and Sustainable Manufacturing • Data and Privacy	• We engaged over 140 industry unions, associations and organizations, and international industry alliances, and contributed approximately US$0.9 million to public policy and industrial development. • Our executive serves as the vice chair of the SEMI Global Board of Directors, and the company is a founding member of SEMI [the Semiconductor Climate Consortium (SCC)]. In 2023, we worked with our member partners to promote the SCC Energy Collaborative (SCC-EC), which is committed to assisting the Asia-Pacific region in accelerating its development of low-carbon energy and working with the semiconductor industry chain to accelerate the implementation of the net-zero goal through methods such as low carbon processes, renewable energy, and circular economy.





INTEGRITY AND ACCOUNTABILITY

ASEH commits to constructing sound corporate governance, conducting business ethically and complying with all laws and applicable regulations where we operate.

ASEH strives to establish an organizational culture of integrity and accountability, maintain high standards of ethics, effective corporate governance and accountability mechanisms in every aspect of its business, as well as conduct business based on the principle of social responsibility and business ethics to serve both the company's and shareholders' long-term interests.

Performance Assessment of the Board and the Functional Committees

Continued listing on the TWSE Corporate Governance 100 Index (TWSE CG100 Index)

Continuous education for the Board members: 96 hours[1]

2023 Key Performance

ASEH proactively reviews its corporate governance practices and effectiveness in implementation using the Corporate Governance Evaluation System launched by the Financial Supervisory Commission ("FSC"). A self-assessment process increases top management executives' awareness in strengthening corporate governance policies, and will help raise the standards of ASEH's corporate governance. In 2023, ASEH was among the top 20% best performing listed companies with better ratings in the categories of "Enhancing Board Composition and Operation" and "Promoting Sustainable Development". In 2023, ASEH was again selected to be a constituent stock of the "TWSE Corporate Governance 100 Index (TWSE CG100 Index)" based on the 2022 assessment of our corporate governance, liquidity tests and financial indicators. To achieve good corporate governance, we will continue to focus on increasing information transparency, protecting the rights and ensuring fair treatment of shareholders, and incorporating sustainable practices into corporate governance.

[1] Total training hours = course duration x number of people