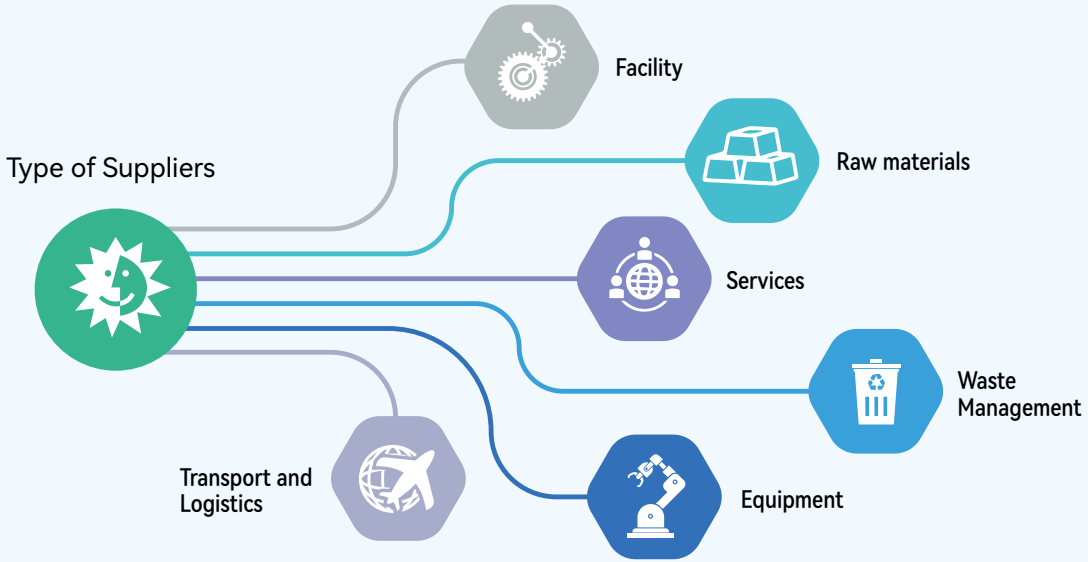
7.1 Supply Chain Overview

As a global leader in semiconductor assembly and testing services as well as a key systems and core technology integrator, ASEH primarily provides assembly, testing and material (ATM) services and electronics manufacturing services (EMS). With an aim to continuously elevate customer trust, we strengthen our service globally by providing manufacture base throughout Taiwan, China, Japan, South Korea, Malaysia, Singapore, Vietnam, the U.S.A. and Mexico. Our procurement is classified into raw materials, equipment, facility, engineering, waste management services, transport, logistics and subcontract services. We require all our suppliers to strictly follow the Supplier Code of Conduct and the company's risk assessment policies.

The supply of raw materials has the most direct impact on ASEH's day-to-day operations and manufacturing. Raw material suppliers are classified into two categories according to their attributes; direct material suppliers (suppliers of materials directly related to manufacturing) and indirect/packaging material suppliers (suppliers of packaging materials or materials indirectly related to manufacturing). To enhance supply chain resilience, we have established different levels of requirements and management policies according to the grade of importance of each operation.



To ensure efficient resource allocation, we place a high level of focus on raw material suppliers that we conduct business with on a regular basis. As such, we classify suppliers where our annual procurement spend is in excess of a certain value and continuous engagement as Tier-1 suppliers[1], and subject them to more extensive management supervision. We also subject suppliers with major infractions or significant incidences that impact operations to a closer level of management supervision and guidance and identify as significant suppliers[2]. Our scope of risk management was also expanded to non Tier-1 suppliers. There are currently over 760 non Tier-1 suppliers which accounted for 46.3% of Tier-1 supplier's total procurement amount.

Initial risk assessments were conducted on non Tier-1 suppliers by geographic locations as well as material type. Together with the analysis of the business relationship with Tier-1 suppliers, major incident records, and potential risk impacts, 259 non Tier-1 significant suppliers[3] were identified. ASEH shall continue to monitor our suppliers' performance closely, and pursue greater risk control measures.

[1] The definition of Tier-1 supplier as follow: Annual procurement spend of over US$0.2 million with 2 consecutive years of business with ASEH. In 2023, there are a total of 818 Tier-1 suppliers
[2] The definition of significant supplier as follow: Includes critical supplier (i) Top 85% of direct material purchasing amount, (ii) Indirect material suppliers refer to those with a purchasing spending over US$2 million with ATM; purchasing spending over US$1 million with EMS, (iii) Single source or non-substitutable suppliers or high-risk suppliers (1) Major incidents or violations, (2) Potential ESG risk impacts. In 2023, there are a total of 215 significant suppliers which accounted for 86.6% of total purchasing amount in ASEH
[3] The definition of non Tier-1 significant supplier as follow: (1) Supply to Tier-1 significant suppliers, (2) Supply to Tier-1 direct materials suppliers who ASE spend over 10 million USD/year, (3) Major incidents or violations, (4) Potential ESG risk impacts. In 2023, there are a total of 259 non Tier-1 significant suppliers

Tier-1 Significant Supplier

Critical Supplier

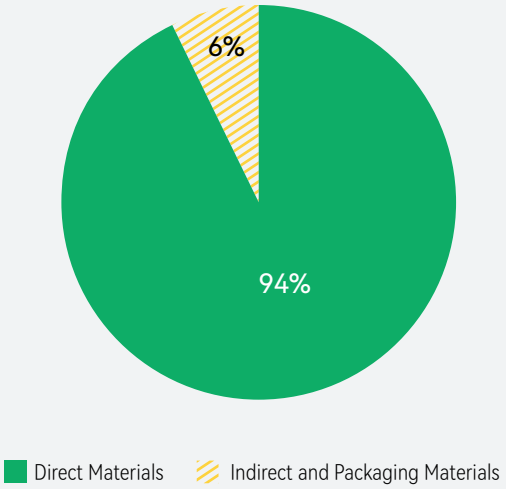
(1) Top 85% of direct material purchasing amount
(2) Indirect material suppliers refer to those with a purchasing spending over US$2 million with ATM; purchasing spending over US$1 million with EMS
(3) Single source or non-substitutable suppliers

+

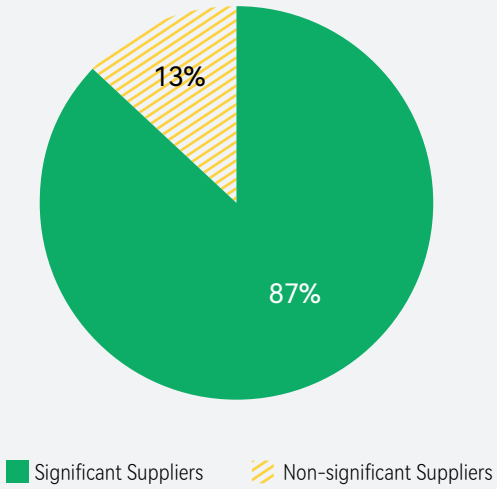
High-Risk Supplier

(1) Major incidents or violation record
(2) Potential ESG risk impacts (Environmental: hazardous substance management; Social: child labor, forced labor; Governance: corruption, bribery or supply disruption risk)

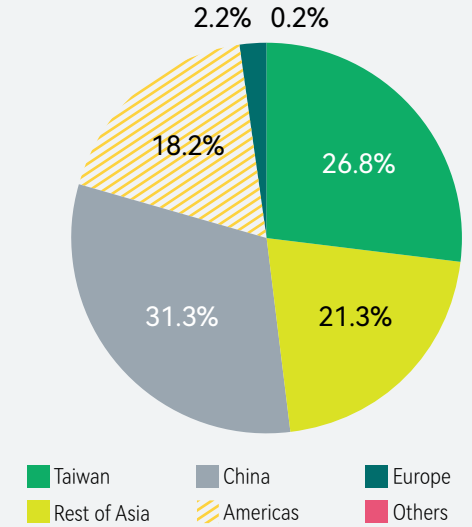
2023 Raw Materials Supplier Category
(by Annual Procurement Amount)



2023 Significant and Non-Significant Supplier Distribution
(by Annual Procurement Amount)



2023 Raw Material Supplier Distribution Area
(by Annual Procurement Amount)



7.2 Supply Chain Management Framework

Supply Chain Management Organization

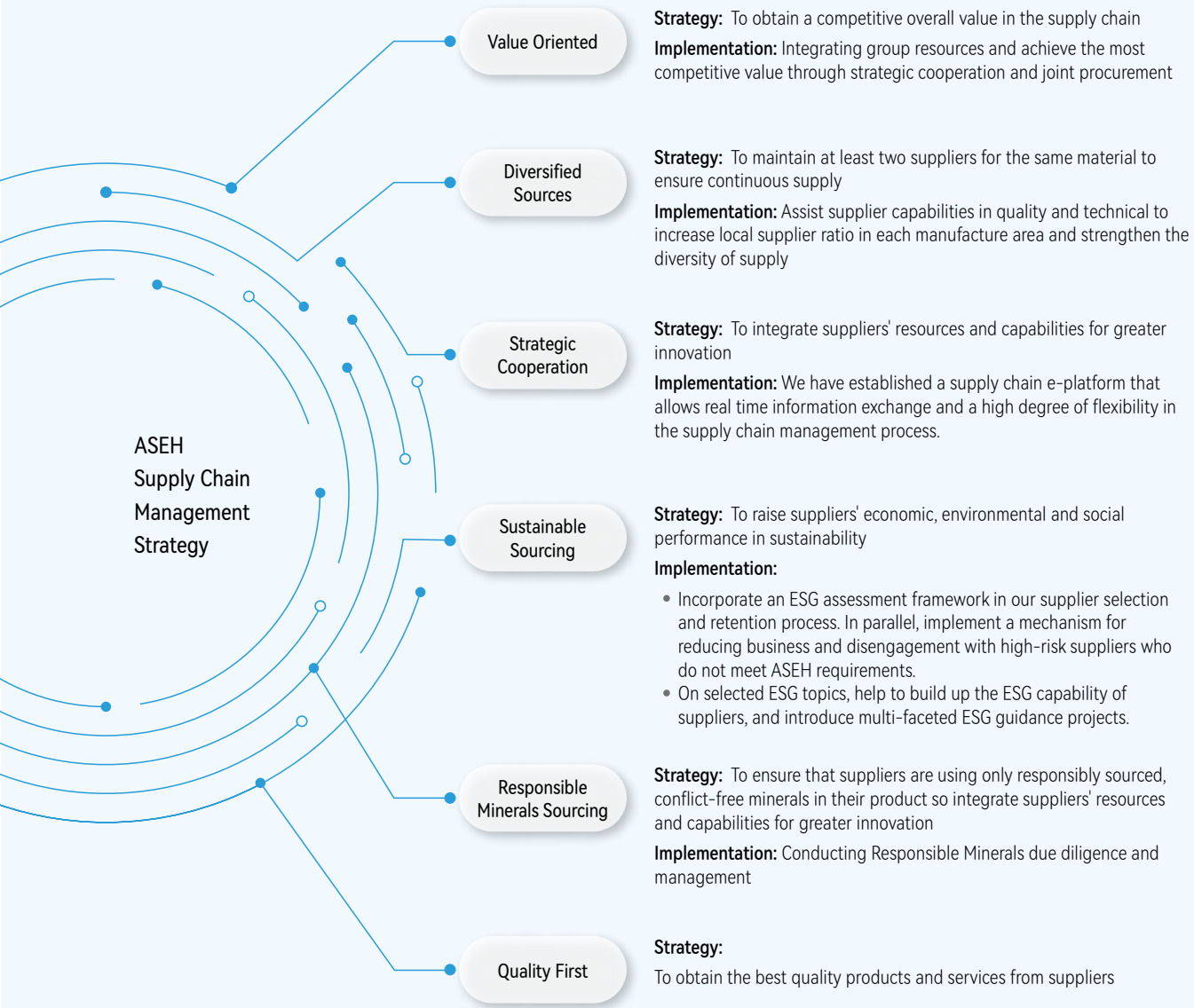
The supply chain plays an indispensable role in ASEH's corporate sustainability development. The ASEH board of directors is the highest decision making body of our supply chain management, and is responsible for endorsing key strategies and execution plans. To further our sustainability goals, the Corporate Sustainability Committee was established to plan and supervise the company's sustainability management, submit progress and status reports to the board of directors, and establish the sustainability management policies and goals of the three subsidiaries. The ASEH board of directors has approved the creation of a chief procurement officer position and appointed Mr. Andrew Tang, a member of the board, to execute the company's supply chain strategies, and oversee the progress and execution of major initiatives. Each of the three major subsidiaries under ASEH has a supply chain team that formulates supply chain sustainability management strategies, set medium- to long-term management goals and action plans, assess ESG issues and risks related to supply chain management, and provide necessary support, advocacy, and training as part of the team's day-to-day management.

Purchasing and Supply Chain Development Policy

The ASEH corporate purchasing and supply chain development policy is published on our official website. We are committed to working closely with our suppliers to innovate and develop sustainable technologies that enable us to offer high-quality products and services to our customers. Please visit: https://www.aseglobal.com/en/pdf/2019_aseth_purchasingandsupplychain developmentpolicy.pdf

Supply Chain Management Strategy

ASEH is committed to building solid supplier relationships and engaging in responsible procurement practices. While cost and quality are primary factors influencing our procurement decisions, we place an equally high emphasis on the overall sustainable value provided by the supply chain. We actively address emerging sustainability issues and risks in the supply chain, develop detailed management strategies, implement them through realistic action plans, and conduct dynamic and timely risk and opportunity assessments. In recent years, we have designed innovative programs that encourage supplier collaboration on sustainability topics. This further strengthens supplier resilience and collaboration for a win-win ecosystem.



Strategy: To obtain a competitive overall value in the supply chain

Implementation: Integrating group resources and achieve the most competitive value through strategic cooperation and joint procurement

Strategy: To maintain at least two suppliers for the same material to ensure continuous supply

Implementation: Assist supplier capabilities in quality and technical to increase local supplier ratio in each manufacture area and strengthen the diversity of supply

Strategy: To integrate suppliers' resources and capabilities for greater innovation

Implementation: We have established a supply chain e-platform that allows real time information exchange and a high degree of flexibility in the supply chain management process.

Strategy: To raise suppliers' economic, environmental and social performance in sustainability

Implementation:

- Incorporate an ESG assessment framework in our supplier selection and retention process. In parallel, implement a mechanism for reducing business and disengagement with high-risk suppliers who do not meet ASEH requirements.
- On selected ESG topics, help to build up the ESG capability of suppliers, and introduce multi-faceted ESG guidance projects.

Strategy: To ensure that suppliers are using only responsibly sourced, conflict-free minerals in their product so integrate suppliers' resources and capabilities for greater innovation

Implementation: Conducting Responsible Minerals due diligence and management

Strategy:

To obtain the best quality products and services from suppliers

Enhancing Sustainability in Procurement through Education and Training

To improve the skillsets of our procurement teams at each subsidiary, we conduct systematic training that aims to increase the teams' sustainability awareness. This ensures that the teams have a deeper understanding of the company's yearly supply chain sustainability goals as well as effectively execute ASEH's procurement and supply chain development policies and strategies. The internal trainings instill the importance of sustainability in corporate procurement, and team interactions allow procurement teams from different entities to exchange ideas and foster a corporate culture of sustainability.

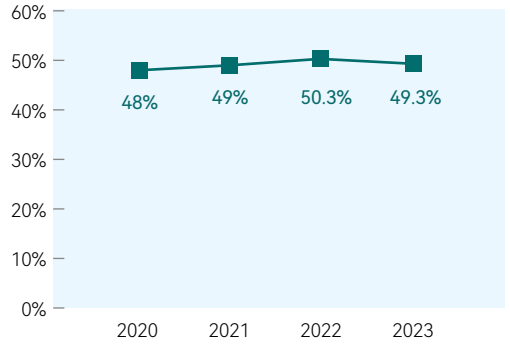
2023 procurement education and training focus:

- Sustainable supply chain management procedure
- Sustainable supply chain management: objectives and performance
- ASEH's net-zero commitment and supply chain engagement strategy
- Conflict minerals management system

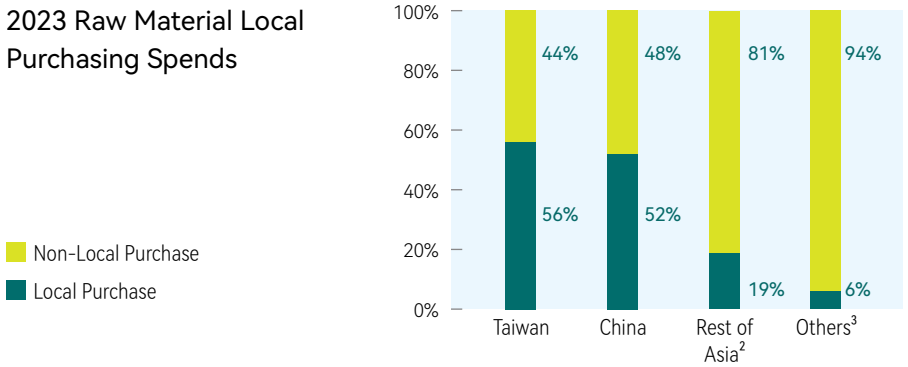
Supporting Local Suppliers[1]

In 2023, procurement from local suppliers is accounted for approximately 49.3% of our total procurement amount while local procurement is account for 56% in main operation base, Taiwan. The close collaboration between ASEH and its local suppliers help to boost product quality and technological capabilities. Besides lowering carbon emissions and creating more job opportunities within the domestic market, local procurement also provides cost advantages and a shorter cycle time. Overall, a robust local procurement strategy contributes to the advancement of a highly efficient and competitive semiconductor industry chain.

Local Purchasing Spends (%)



2023 Raw Material Local Purchasing Spends



[1] Local supplier refers to the supplier's register location is located at the same country where our manufacturing facility is located. For example, if the supplier's factory is registered in Taiwan, it is regarded as local procurement for ASEH's Taiwan

[2] Rest of Asia: Japan, South Korea, Malaysia, Singapore and Vietnam

[3] Others: America and Mexico

7.3 Supply Chain Sustainability Management

ASEH is committed to become an advocator and an action maker with regard to corporate sustainability issues. Since 2015, ASEH has joined RBA and proactively participated in relevant conferences and training courses. ASEH adopts the RBA Code of Conduct in the management of labor, environment and ethics. ASEH also applies the code to its supply chain management to ensure the provision of a safe work environment, respect for workers, environmental protection, ethical conduct and actively applied to sustainability management in supply chain.

Supplier Code of Conduct

To ensure ASEH's core sustainability value can be extended throughout our supply chain. ASEH's suppliers are expected to comply with our Supplier Code of Conduct which requires them to comply with local laws and regulations where they operate, and conduct business in a manner that meets labor, health and safety, environment, business ethics, management and various corporate compliance standards. The suppliers are required to drive their suppliers to meet such standards and oversee their compliance status. ASEH also applies the code to its supply chain management to ensure the provision of a safe work environment, respect for workers, environmental protection and ethical conduct. ASEH forbids the use of child labor or forced labor by its suppliers, and shall terminate its relationship with suppliers involved in serious violations although no such instances were found in 2023. Please visit: https://www.aseglobal.com/en/pdf/aseh-supplier-coc-en.pdf

Supplier Sustainability Management Approach

As part of the ASEH Procurement and Supply Chain Development Policy and Commitment, we established a four-stage sustainability supply chain management process that is run repeatedly to ensure supplier compliance and enhance their sustainability performance. We have also established a series of supplier programs that aim to guide, and help build up our suppliers' ESG capabilities, so as to create a more sustainable supply chain together. We have also formulated mechanisms to closely monitor ESG performance for rewarding or disengaging with suppliers.

Sustainability Requirement	ESG Risk Screening	Sustainablity Assessment and Validation	Improvement and Capacity Build-up
Suppliers are required to comply with ASEH's Supplier Code of Conduct and sign the "ASEH Supplier Code of Conduct Commitment Letter".	(1) **Active Survey:** Conduct preliminary assessment and grade risk level according to type of supplier business relationship, category of product, location and potential ESG risk. (2) **Self-Assessment:** Identify high-risk suppliers by the result of "Supplier Sustainability Assessment Questionnaire" and further analysis by our procurement and sustainability team. [Qualified Suppliers] Qualified supplier are required to sign Supplier Code of Conduct Commitment Letter and pass our environmental and social risk assessment	(1) **Desk Assessment:** Complete desk assessment through reviewing relevant supporting information in SAQ (2) **On-site Assessment:** Risk level will be graded and analyzed by sustainability assessment (including labor, health and safety, environment, ethics, and management system aspects) which conducted by ASEH procurement and sustainability team (3) **Sustainability Assessment:** Incorporate ESG evaluation framework into major material and significant supplier business review, to ensure supplier's ESG performance besides product quality, cost, delivery and technology.	(1) Request suppliers to make improvements according to audit reports while suggestion and guidance will be provided by ASEH during the audit process. To lower risk, follow-up actions and secondary audits will be conducted. (2) Disengage Mechanism: (i) Suppliers whose improvement still incompliant with ASEH requirements are graded as significant suppliers, in the first year and subjected to lower procurement following by consultation. ASEH will conduct physical audit in the next year. (ii) Supplier incompliant with ASEH requirement for 2 consecutive years will be disqualified and terminated business

Supplier Sustainability Requirement

We require all suppliers to abide by the ASEH Supplier Code of Conduct. The ASEH Supplier Code of Conduct and Sustainability Assessment Questionnaire (SAQ) have been formulated based on the standards and guidelines of the RBA, OECD Guidelines for Multinational Enterprises, UN Guiding Principles on Business and Human Rights, UN Universal Declaration of Human Rights, ILO Declaration of Fundamental Principles and Rights at Work, ILO Fundamental Conventions and SA8000, etc. New suppliers are required to sign the Supplier Code of Conduct before any business engagement, and the relevant policies will also be stated clearly in our purchase orders and supplier e-platforms, to ensure full compliance. Compliance with the Code of Conduct is key to our procurement decision with any supplier. In parallel, we require approved suppliers to acquire certifications in ISO 9001, IATF 16949, ISO14001, ISO 45001, while major suppliers are encouraged to acquire ISO 14064-1 and ISO 14067 certifications for continuous sustainability improvements and raising their competitiveness.

Supplier ESG Risk Screening

To better manage supplier risks, we established a 2-phase screening process that evaluates any underlying ESG risks at our suppliers. For suppliers that exhibit high levels of ESG risks, ASEH will closely monitor and supervise them through periodic audits and guidance to mitigate and control the risks effectively.

Phase I: Active Assessment – All suppliers

Base on type of business relation between ASEH and supplier, and the procurement value, we then assess the procurement category (eg. raw material, facility, equipment, contract services) and potential ESG risks.

Category	Assessment Methodology
Business Closeness	Conduct preliminary assessment by reviewing purchase amount and category of supplier (including material, facility, equipment supplier and service contractor)
Environment	(1) Major incidents or governmental, environmental, and social violation record (2) Potential negative impact (Environmental: hazardous substance management; Social: child labor, forced labor; Governance: corruption, bribery or supply disruption risk)
Social	
Governance	
Location/Country	Employ localized and high-risk regional controls at the supplier location. Identify risks according to geopolitics, regional conflicts and high-risk country factors.
Sector-specific	Identify industry specific risks by designing different types of sustainability assessment questionnaires focusing on specific risk topics
Commodity-specific	Screen key materials containing hazardous substances by material properties.

Phase II: Self-Assessment – Tier-1 suppliers

To cater for a diverse and complex supplier base, we have customized our sustainability self-assessment questionnaire (SAQ) according to the type of industry, and ESG risk assessments for different categories of suppliers.

Supplier Category and Sustainability Assessment Aspects

- **Raw Material and Equipment Supplier:** Labor, Health and Safety, Environmental Protection, Sustainable Governance and Risk Management, and Supply Chain Management
- **Facility and Waste Management Suppliers:** Labor, Health and Safety, Environmental Protection, Ethics, and Sustainable Management System
- **Service Providers:** Labor, Health and safety, Ethics, and Sustainable Management System

2023 Supplier Sustainability Risk Gap

Category	Risk Gap Description	
Governance and Economic	Risk and Business Continuity Management	Procedures for the identification of regulatory risks affecting business operations have yet to be established
	Personal Data and Privacy Management	Privacy and personal data risk management procedures have yet to be established
	Information Security Management	Lack of regular internal/external information security audits and employee education and training
	Supplier Sustainability Management	Procedures for managing sustainability risks in the supply chain have yet to be established
		Lack of a regular sustainability audit and improvement mechanism for the supply chain
Environment	Climate Change and Carbon Management	Procedure for climate risk evaluation, and mitigation and adaptation measures have yet to be established
		Mechanisms to measure GHG inventory and reduction targets have yet to be established
	Water Management	Reduction targets and recycling mechanisms in water resource management have yet to be established
Social	Occupational Health and Safety	Risk assessment processes to evaluate employees' health and safety have yet to be established
		Lack of a management and prevention mechanism for emerging infectious diseases
	Human Rights Management	Commitment or policies related to human rights management have yet to be established
	Labor Rights	A system for the assessment of labor-related risks and impact has yet to be established

Supplier Assessment and Evaluation

Phase I: Desk Assessment – Tier-1 supplier

We've conducted sustainability assessment questionnaire to all Tier-1 material suppliers. Suppliers are required to self-assess risk and provide corresponding supporting document in accordance with their responses to the question. To improve the completeness and response rate of the supplier sustainability risk assessment questionnaire, we've launched an E-platform which build up a sharing and analyzing sustainability information database for ASEH subsidiaries. With the E-platform, the progress of the questionnaire can be effectively managed and tracked. The response rate for the supplier sustainability assessment questionnaire is exceeded 79% in 2023 with a number of 645 suppliers.

Equipment, facility, and waste management suppliers, as well as service contractors are required to carry out annual sustainability risk assessments according to the respective procurement amounts and type of business relationship. In addition to integrating biodiversity and science-based reduction targets for raw material suppliers in 2022, we have included plastic management topics in 2023 to better manage supplier compliance and strengthen supply chain resilience. Establishing risk assessments will help us better manage our relationship with suppliers and build a more resilient and sustainable supply chain.

Phase II: On-Site Assessment[1] – Significant supplier

We define significant suppliers by high-risk supplier that identified by SAQ survey result and its business closeness with ASEH. Then we conduct physical assessment and provide counselling to ensure supplier's risk circumstance and continually reduce risk level. In 2023, we conducted sustainability assessments (on-site/ remote audit and RBA VAP) on 201 suppliers, including 85 suppliers with potential ESG risks.

[1] On-Site Assessment: 2nd and 3rd party assessment and supplier assessments with industry initiative

Supplier Sustainability Risk Assessment ("RA") Targets and Procedures

RA1: Active Risk Assessment Targets: All suppliers	Conduct preliminary risk assessments on the procurement spending, type of business relationship, type of industry, and ESG performance of all supplier
RA2: SAQ Targets: All Tier-1 suppliers	Identify significant suppliers based on supplier location, commodity-specific risks and SAQ result
RA3: Counseling and On-site Assessment Targets: Significant suppliers	Conduct on site audits and guidance programs for significant suppliers to mitigate risks

Sustainability Risk Assessment Factors

Sustainability Assessment

For our key raw material and critical suppliers, in our evaluation of major raw materials and key suppliers, ESG indicators are integral factors influencing our selection in addition to quality, cost, delivery time, and technology. We drive our suppliers diligently to adopt sustainable practices through proactive management strategies. Suppliers with the best ESG performance are recognized at our annual supplier day, and invited to share their expertise in sustainability development with other suppliers at the annual supplier forum. Outstanding suppliers also receive priority in our procurement selection policy.

Sustainability Assessment Item
Carbon Management: Greenhouse Gas Emission, Product Carbon Footprints, Carbon Reduction Target, Renewable Energy Target
Environmental and Occupational Health Safety
Responsible Minerals Management
Penalty Record

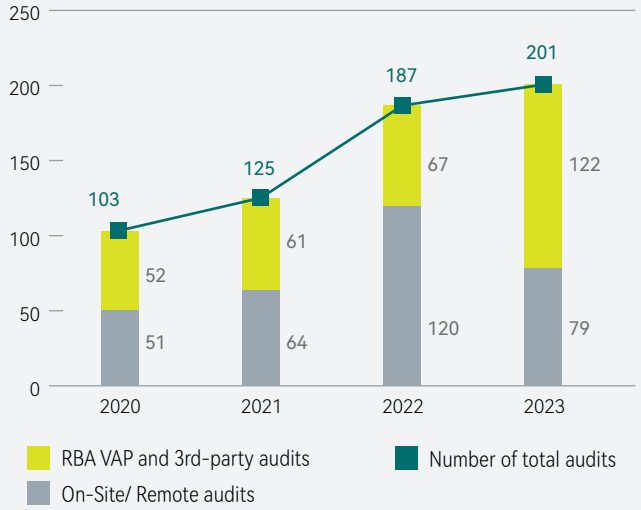
Supplier Performance Improvement Program[1]

ASEH has implemented on- site or remote support to help suppliers develop actionable plans on completion of correction and improvements within a specified timeframe. Then, we will follow up with a second audit to track the progress of corrective actions and ensure all identified deficiencies have been effectively addressed and resolved. For suppliers who continue to fall short of compliance despite counselling, we will still offer guidance in the first year and potentially reduce our procurement volume with them. To fulfill our commitment to sustainability, suppliers will be removed from our qualified supplier list if they fail to meet expectations in the second year, and all dealings with them will be suspended. In 2023, all of the audited suppliers have taken corrective actions and completed supplier improvements. No supplier was terminated for non-compliance.

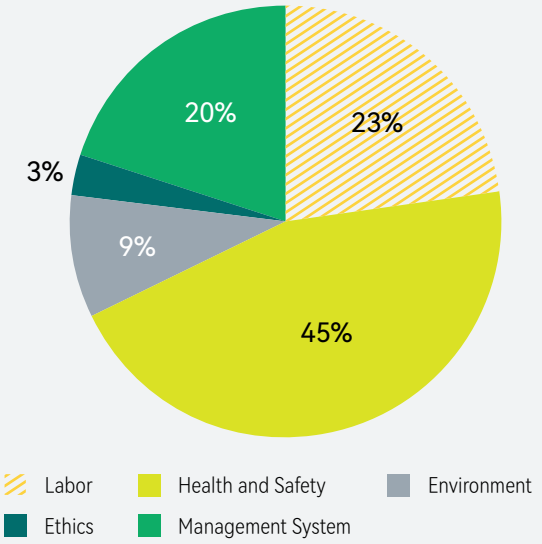
To further reduce supply chain risks, ASEH has begun to implement sustainability risk management for non Tier-1 suppliers. In 2023, we conducted sustainability surveys on 22% of our non Tier-1 suppliers, of which 8% had undergone on-site/remote audits or RBA VAPs. We will continue to expand the integration of our sustainability risk management processes for non Tier-1 suppliers so that we can achieve a more robust and resilient supply chain.

[1] 2023 supplier corrective action target is 100% completion of implementation by audited significant suppliers

Number of Supplier Sustainability Audit



Supplier Sustainability Audit Findings by Category in 2023



Supplier Audit Results and Corrective Actions in 2023

Category	RBA Code of Conduct	Major Findings	Improvement Actions
Labor	Working Hours	• Exceeding 60-hour work week • Continuous work for 7 days	• Plan in advance the appropriate number of personnel and overtime work in accordance with production demands to prevent excessive overtime due to manpower shortages • Establish a tracking mechanism to manage overtime and to day off for every seven working days
	Freedom of Choice of Employment	• New employees paying for medical examination and documentation fees, contravening ASEH's zero-fee policy • Employment agreements not provided in native languages for foreign employees	• Ensure the signing of proper labor contracts and the provision of the original contract to foreign employees
Health and Safety	Emergency Preparedness	• Firefighting equipment not regularly inspected • Emergency exits and fire safety facilities blocked	• Conduct regular inspections to ensure proper functioning of firefighting equipment and unblocked emergency exits
	Industrial Hygiene	• Personnel not wearing personal protective gear in hazardous work areas	• Enhance safety training and internal inspections to ensure proper usage of protective equipment
Environment	Hazardous Substances	• Improper classification and labeling of hazardous substances/waste	• Set up hazardous substance storage areas and establish a daily inspection mechanism
Ethics	No Improper Benefits	• Incomplete business ethics policy (lacking provisions on bribery or influence peddling)	• Develop a complete business ethics policy with clearly defined guidelines and rules demonstrating commitment to preventing bribery and improper conduct
	Protection of Identity and No Retaliation	• Lack of an anonymous reporting and complaint mechanism	• Establish internal and external anonymous reporting mechanisms and channels
Management Systems	Legal and Customer Requirements	• Lack of a comprehensive procedure for identifying regulatory and customer requirements	• Establish identification procedures to include regulatory and customer requirements
	Supplier Responsibility	• Lack of supplier ESG risk assessment procedures and audit systems	• Establish supplier ESG risk assessment procedures and audit systems

Sustainable Supply Chain Development Program

ASEH believes that proactively assisting suppliers in enhancing their capabilities is critical to the prosperity of the supply chain and progress toward a sustainable future. As part of our supply chain growth strategy, we have formulated a wide range of programs that provide suppliers a variety of resources and information, such as the annual sustainability forums, sustainability enhancement programs, and ESG workshops and educational training. These programs aim to drive stronger partnerships, allowing us to respond quickly to changing environments.

Annual Sustainability Forum

In 2023, USI hosted the Annual Sustainability Forum, bringing in a total number of 500 participants from suppliers

USI	• Communicate USI Corporation's requirements for supplier sustainability risk management • Promote USI Corporation's green products, conflict minerals policy and management requirements, and explain its main focuses in the annual audits of green products and conflict minerals • Sharing ESG Experiences by Outstanding Suppliers • Featured Topic – Net Zero and the Challenges of Scope 3 Emissions across the Supply Chain

Sustainable Capacity Building Program

Greenhouse Gas Inventory Guidance Program	Target: Raw material, Equipment and Waste management supplier

Addressing Scope 3 emissions is key to ASEH's pathway to Net Zero. As such, we have allocated resources across our supply chain to provide guidance and support to suppliers in establishing GHG and product carbon footprint management that comply with regulatory requirements. Since 2022, we have been working with external consultants on a medium- to long-term carbon inventory guidance project for the supply chain. Our on-site and online guidance programs aim to help suppliers develop GHG and product carbon footprint inventory capabilities and obtain external certification such as ISO 14064-1:2018 and ISO 14067. By the end of 2023, 19 suppliers have obtained external certification as a result of ASEH's support. By working closely with our suppliers, we can help identify carbon emission hotspots in their operations and drive emission reduction plans that strengthen their carbon management capabilities. At our annual supplier conference, we acknowledge and present certificates to the suppliers who have completed the verifications. These initiatives amplify ASEH's influence and encourage knowledge sharing and competition among peers that lead to the integration of carbon management into the suppliers' operations.

Renewable Energy Development Project	Target: Raw material, Equipment and Logistics supplier

In response to the challenges of climate change, SPIL has partnered with customers since 2021 to promote the "Green Energy and Low-Carbon Environment Program" which encourages the development of renewable energy within the supply chain. SPIL also collaborated with 10 suppliers to support the development of infrastructure for renewable energy. Participating partners include those supplying materials and logistics services. The program has helped suppliers to enhance the operational efficiency of their renewable energy infrastructure, maximizing energy recovery. In 2023, the project achieved a total annual energy savings of 2.27 million kWh and a carbon emission reduction of approximately 1,338 tons.

Carbon Reduction and Water Conservation Guidance Project	Target: Raw material supplier

Since 2021, ASE Kaohsiung has provided support to suppliers in reducing GHG and water resource consumption and at the same time, established a 1% reduction target which was achieved in 2022. In 2023, ASE Kaohsiung set a more ambitious target of a 3% reduction for both GHG and water resources. A total of 58 key suppliers committed to this endeavor, and worked with ASE to set reduction targets and action plans. In 2023, we successfully reduced GHG emissions by 227,655 tons of CO_2e across our supply chain, equivalent to 4.3% annual reduction, and reduced water consumption by 3,297,905 tons, equivalent to 4.8% annual water saving. Both reduction outcomes exceeded our established target of 3% for 2023.

To disseminate our company's expectations and requirements in a timely manner, and to align with global sustainability trends, ASE Kaohsiung has established an online sustainability knowledge platform. The platform enhances suppliers' awareness of sustainability by offering training resources created internally by the company's experts on carbon reduction and water saving. This flexible learning approach, unconstrained by time and location, utilizes digital tools to promote low-carbon lifestyles and enhance suppliers' sustainability capabilities.

Information Security Evaluation and Management	Target: Equipment supplier

As a response to the increasing digitalization of the supply chain and cybersecurity threats, we established a supplier information security evaluation system in 2022 to ensure supply chain resilience. Evaluation of key suppliers are conducted in four steps: current status assessment, improvement support, results confirmation, and cyclical review. In 2023, we completed cybersecurity evaluations for 76 equipment suppliers, identifying their cyber risks and weaknesses. A support team, formed by our subsidiaries, provides prioritized improvement suggestions and conducts follow-up site visits the following year to track the improvement results. This comprehensive supply chain cybersecurity management ensures the operational safety of ASEH and enhances the overall cybersecurity resilience of the supply chain.

ESG Workshops and Educational Training

We believe in sharing and communicating with our suppliers to promote our commitment of a sustainable value chain and expectations on sustainability management and ESG performance. In tandem, we hold regular workshops on sustainability topics and training sessions adapted to the different attributes of each supplier category. Establishing effective platforms for dynamic two-way communication with our suppliers help foster continuous cooperation on sustainable development and boost the agility of the supply chain in responding to sustainability trends and risks.

ESG Workshops – Development Trends and Practical Techniques in GHG Inventory	Number of total participants :128
ASE – Kaohsiung **Target: Raw material supplier, Equipment supplier**	• Share international trends in climate issues and future regulatory requirements • Sharing Practical Techniques for Greenhouse Gas and Product Carbon Footprint Inventory

Regular Educational Training	Number of total participants: 4,879
ASE – Kaohsiung, Chungli, ASE Shanghai (Material), Wuxi, Malaysia, and Korea **USI** **Target: Raw material, Facility, and Waste management supplier, Recruitment agency and Service provider**	• Promote health and safety, food safety, and environmental health and safety policies • Disseminate knowledge on fire management, fire rescue, and emergency evacuation procedures • Conduct annual evacuation drills and emergency response exercises for vehicle accidents

ASEH Supplier Sustainability Awards

As part of the company's endeavor to drive sustainable development across the supply chain, ASEH launched the Supplier Sustainability Awards in 2017 to recognize suppliers with outstanding sustainability performance. In 2020, the award program with a new supplier incentive program was jointly organized by all three ASEH subsidiaries. In 2023, we expanded the scope of suppliers and focused on the company's four sustainable strategies- Low Carbon, Circular, Inclusive, and Collaborative. The program encourages suppliers to submit sustainability partnership projects of between 1-2 year duration, for reviewed by ASEH and independent third parties. The submitted projects undergo a rigorous selection process based on the implementation timeframe and efficacy, and selected projects will be funded by the ASE Environmental Protection and Sustainability Foundation.

We are constantly refining our approaches to building a resilient supply chain and strengthening the bond between ASEH and our supply partners. We believe that a creative model with built-in incentives could accelerate the achievement of a circular economy and a low-carbon transition that allows ASEH to increase value and capture business opportunities. Recognizing the efforts of our suppliers through the awards will boost their commitment to sustainable development and encourage more suppliers to be proactive in advancing a sustainable future for the semiconductor industry. Collaborating with our suppliers on the path to sustainability, every two years, we will select and fund unique sustainability projects that have the potential to demonstrate a high degree of positive influence and produce beneficial results.

For the year 2023, we selected one supplier each from the categories of 'Low Carbon' and 'Circular' as winners of the sustainability award. ASEH will subsequently conduct independent on-site audits in 2024 and 2025 to verify the performance and progress of the winning suppliers' projects, and disburse sponsorship fees accordingly.

Sustainable Strategies	Selected Suppliers	Collaboration Project	Expected Benefits
Low Carbon	Hwa Shu Enterprise Co., Ltd.	Introduction of energy-saving electric heating system	• Reducing power consumption • Stabilizing temperatures during the manufacturing process • Enhancing heating and cooling efficiency to increase manufacturing capacity
Circular	Chiu Tze Chemical Co., Ltd.	Waste liquid recycling and reuse	• Increasing waste recovery rate and saving on waste disposal expenses • Increasing the use of recycled packaging materials • Increasing the use of recycled raw materials • Reducing unit material usage

7.4 Responsible Minerals Compliance

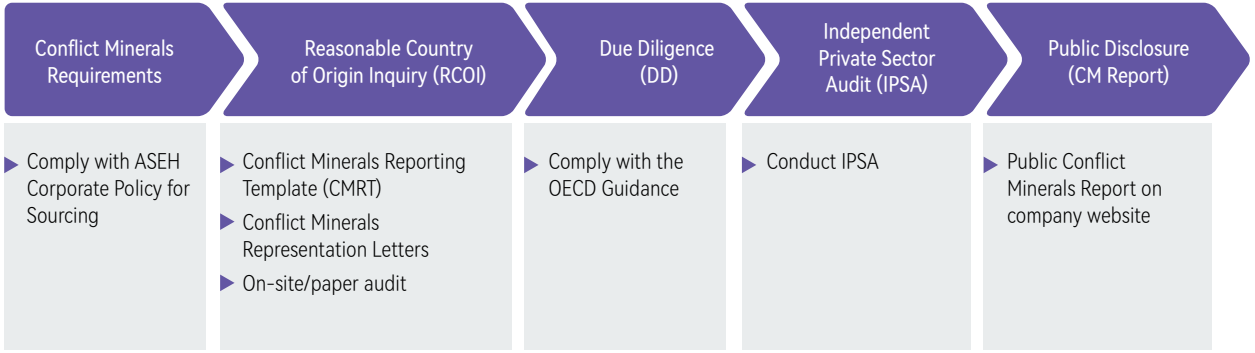
To communicate ASEH's conflict minerals management requirements, the ASEH Corporate Policy for Sourcing Conflict Minerals is posted on our company website, please visit: https://www.aseglobal.com/csr/responsible-procurement/conflict-minerals-compliance/

Responsible Minerals Management

To prevent the unintentional use of any conflict mineral such as tantalum, tin, tungsten and gold (3TG) from the Democratic Republic of the Congo and its neighboring countries, we have established the ASEH Corporate Policy for Sourcing Conflict Minerals, joined the Responsible Minerals Initiative (RMI)[1], and participated in the RMI Mineral Reporting Templates (MRT) Teams and Due Diligence (DD) Practices Team to resolve conflict minerals issues in the supply chain and support responsible sourcing.

ASEH communicates conflict mineral policies to our suppliers through our website. The suppliers are required to comply with ASEH Corporate Policy for Sourcing Conflict Minerals and establish their own conflict minerals policies and to their own suppliers. We also require our suppliers to actively assess and validate their supply chain, and encourage them to source minerals from Smelters or Refiners (SoRs) that have received "conflict-free" designations by the Responsible Minerals Assurance Process (RMAP), or other independent third-party audit program.

Responsible Minerals Management Approach



Reasonable Country of Origin Inquiry (RCOI)

Each year, ASEH performs RCOI to identify and validate the sources of 3TG in our packaging and material services and electronic manufacturing services and products, and whether they come from conflict affected regions.

Our RCOI includes two steps:

1. Identify sources of 3TG SoRs through CMRT by conducting supplier survey.
2. Suppliers are asked to sign the Representation Letters of compliance with ASEH Corporate Policy for Sourcing Conflict Minerals and to fully reveal the source of the SoRs they sourced from.

Since 2011, we have conducted the supply chain survey to identify the source of SoRs that are used in the processes of our packaging and material services, electronic manufacturing services and products. We identified the minerals and the source of smelters through CMRT. In 2023, we have identified 230 SoRs from more than 389 suppliers. According to the supplier survey we conducted in 2023, 100% of our suppliers are compliant with ASEH's requirement for sourcing DRC conflict-free minerals.

With regard to critical materials, we have expanded our scope of investigation to cover suppliers for cobalt and mica, in addition to 3TG. In 2023, we intensified our efforts to investigate the sources of copper, iron, nickel, aluminum, and other metals, and disclosed smelter sources to customers. In 2023, 185 suppliers used cobalt from 81 smelters, and 1 suppliers used mica from 1 smelters.

[1] ASE took the initiative to join the RMI in 2015 and has continued its participation as ASEH to this day

100%

Conflict Minerals Compliant Suppliers in 2017–2023

Due Diligence (DD)

ASEH designed its DD measures to conform to the Organization for Economic Co-operation and Development Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas (the "OECD Guidance") and we also adopted the OECD Guidance to not only identify/ assess supplier risks and mitigate these identified risks, but also to design a conflict minerals audit form for ASEH's suppliers. We were therefore able to provide guidance through both on-site/remote and off-site audits to help suppliers set up management mechanisms that complied with OECD Guidance.

Independent Private Sector Audit (IPSA) and Public Disclosure

We undertake an IPSA on our Conflict Minerals Report and DD procedure to ensure they are in compliance with the requirements set forth by the U.S. Securities and Exchange Commission (SEC). Each year, the Conflict Minerals Report is also disclosed publicly[1]. Based on our RCOI analysis and DD measures in 2023, we reasonably believe that the identified SoRs used for all of our packaging and materials services products are DRC Conflict-Free. Given the large number of suppliers for our electronic manufacturing services, we developed a sampling program to select material suppliers for the purpose of identifying SoRs. We believe that our due diligence performed based on the sampling program is sufficient and appropriate to provide a reasonable basis for our determination. Therefore, we reasonably believe that such SoRs used for all of our electronic manufacturing services products are DRC Conflict-Free.

Continuous Improvements

Going forward, we will continue to improve in four aspects:

- **Management Mechanism:** be aware of regulatory changes and adjust our policy in a timely manner, improve our validation process and requirements to new suppliers and existing suppliers, optimize internal management systems, and reinforce educational training etc.
- **Due Diligence:** expand the mineral survey's scope, improve the accuracy and completeness of data, assess suppliers' due diligence processes through on-site audits so as to assist suppliers to build up internal management systems, etc.
- **Communication:** hold supplier seminars, actively participate in the RMI and other key industry associations' initiatives, etc.
- **Conflict-Free Label:** evaluate to build up conflict-free label mechanism

[1] For complete file of ASEH SEC Conflict Minerals Filing, please visit our website at https://www.aseglobal.com/csr/responsible-procurement/conflict-minerals-compliance/ or SEC's website at https://www.sec.gov/Archives/edgar/data/1122411/000095010324007485/dp211472_ex0101.htm

CORPORATE CITIZENSHIP

The community has played an important role supporting ASEH's growth. We therefore, have a responsibility to provide support and give back to the community in locations where we operate. An active participant in charitable activities, education programs and social work, ASEH's optimal allocation of resources deliver positive impacts that allow both ASEH and the community to prosper and grow.

As a leading enterprise in the global semiconductor industry, ASEH is fulfilling corporate citizenship by engaging with local communities, environmental NGOs, and stakeholders in the industry, government and academic sectors. The company seeks to establish mutually trusting long-term partnerships and invest in resources to promote overall social development and higher value creation. Externally, we are initiating sustainable development in core business areas to strengthen the value of our sustainable innovations that will result in employee cohesiveness, and higher stakeholder confidence.

2023 Key Performance

NT$ 1,034 Million	NT$ 96 Million	NT$ 230 Million	161,261 units	249 hectares[1]
2014 ~ 2023 Environment Conservation Fund(ECF) Programs	2023 Community Engagement	2023 Industry-Academia Collaboration	2014 ~ 2023 LED Lamps Installation	2013 ~ 2023 Tree Planting

SDGs	Business Actions	2023 Material Aspects	KPI	2023 Target	Status	2023 Performance	2024 Target	2030 Target
13 CLIMATE ACTION	Promote climate conscious behavior and build capacity for climate action	Social Involvement	• Number of industry-academia collaboration projects on environmental technology • Number of energy-saving LED tube lights installed and number of schools with LED tube lights installed • Total area planted with trees (global)	• 10 industry-academia collaboration projects on environmental technology • 10,000 LED light tubes installed at 10 schools • 10 hectares planted with trees	Achieved	• 13 industry-academia collaboration projects on environmental technology • 25,000 LED light tubes installed at 26 schools • 31.68 hectares planted with trees	• 10 industry-academia collaboration projects on environmental technology • 10,000 LED light tubes installed at 10 schools • 10 hectares planted with trees	• Over 150 industry-academia collaboration projects on environmental technology • LED light tubes installed at 170 schools • 250 hectares planted with trees
4 QUALITY EDUCATION	Implement programmes to support higher education and access to free, equitable, and inclusive primary and secondary education		• Number of students attending semiconductor course • Number of disadvantaged students attending after school program	• 100 students attending semiconductor courses • 100 disadvantaged students in the community attending after school program	Achieved	• 453 students attended semiconductor courses • 222 disadvantaged students in the community attended after school program	• 100 students attending semiconductor courses • 100 disadvantaged students in the community attending after school program	• 2,000 students attending semiconductor courses • 2,000 disadvantaged students in the community attending after school program
8 DECENT WORK AND ECONOMIC GROWTH	Drive economic growth and productivity by investing in R&D, upgrading skills, and supporting growing businesses, in a way that is compatible with sustainable development		• Number of innovative industry-academia collaboration projects • Number of legislative or sustainability initiatives	• 30 innovative industry-academia collaboration projects • 2 legislative initiatives for issues related to the semiconductor industry	Achieved	• 81 innovative industry-academia collaboration projects • 6 legislative initiatives for issues related to the semiconductor industry	• 30 innovative industry-academia collaboration projects • 2 legal initiatives for issues related to the semiconductor industry	• 450 innovative industry-academia collaboration projects • 25 legal initiatives for issues related to the semiconductor industry

[1] In 2023, we conducted a comprehensive assessment of the afforestation performance of all of ASEH's subsidiaries, and corporate foundations, updating the afforestation years and hectares, as well as statistical methodology

Corporate Social Involvement Focus, Benefits, and KPIs

Focus	SDGs Alignment	Business Drivers	Business Benefits & KPIs	Social/Environmental Benefits & KPIs	Impacts
Environmental Conservation		ASE is raising awareness in climate change mitigation and adaptation, impact reduction and early warnings through education, and intensifying R&D in environmental technologies and improvements in production efficiency to reduce environmental impacts. The primary factors driving the company's core operations are: • Increasing production efficiency; changing volatile organic compound treatment methods; reducing treatment costs; ensuring competitive pricing • Promotion of green products and services and implementation of community environmental education programs to encourage green consumer behavior and improve climate literacy **2030 Targets:** • Over 150 collaborative academic research projects on environmental technology • US$6.5 million reduction in outsourced waste management costs	**Improvements to environmental technology R&D and production efficiency in 2023:** • 13 research projects on environmental technology in collaboration with academic, research institutes and suppliers • Our wastewater recycling technology reduces concentrated wastewater discharge by 30%, saving us approximately US$391,900 in water bills • Our organic water recycling technology increases our water recovery rate from the manufacturing process, saving us approximately US$228,600 in water treatment costs • We have developed a tracking and alert system for air pollution and odor that uses big data and a systematic approach to accurately determine odor distribution hotspots, effectively preventing and reducing the occurrence of odor incidents 2015-2023 • 104 research projects on environmental technology in collaboration with academic, research institutes and suppliers; resulted in a total cost reduction of US$11.05 million * More information refer to appendix(Social Data - O. Social Involvement Key Performance)	**Reducing environmental impact, improving quality of life, and raising environmental awareness in 2023:** • 25,000 LED light tubes installed at 26 schools reduced energy use by approximately 540,000 kWh and carbon emissions by approximately 267 tCO_2e • Newly afforested areas totaled 31.68 hectares, resulting in the sequestration of 158.14 tCO_2e • Organized 84 coastal and beach cleaning events with a total of 1,945 participants, resulting in the removal of 313.97 tons of garbage • We continue to promote the concept of sustainable food and agriculture by supporting the operation and maintenance of Da Gang Elementary School's green energy aquaponics farm, developing aquaponics food and agriculture courses for all grade levels and organizing aquaponics experience activities for seniors • Implemented 264 environmental education courses; 11,460 students participated; 53 promotional videos on environmental education were produced • Transferring environmental research projects from industry-academia cooperation to 22 other semiconductor businesses 2013-2023 • From 2014 to 2023, replacing and installing 161,261 energy-saving LED tube lights in 155 schools, saving approximately 16,531,800 kWh in electricity and reducing about 8,465 tCO_2e • From 2013 to 2023, a total of 249.27 hectares of land were newly afforested, resulting in the sequestration of 2,528.83 tCO_2e in 2023, for a cumulative total carbon sequestration amount of 9,370.52 tCO_2e[1] * More information refer to 8.2 Environmental Conservation	• **Improving environmental awareness:** Increasing employee and supply chain awareness in environmental protection and carbon reduction • **Adopting green production processes:** Using recyclable materials and green production processes in the development of new products, and improving waste disposal methods to minimize impacts on the environment • **Expanding adoption of green technology:** A total of 62 companies in the semiconductor industry and social organizations have drawn on the experiences of ASE's industry-academia collaborations to improve manufacturing eco-efficiency and fulfill environmental goals

[1] ASEH follows the 2006 IPCC Guidelines for National Greenhouse Gas Inventories to determine the carbon sequestration from afforestation

Focus	SDGs Alignment	Business Drivers	Business Benefits & KPIs	Social/Environmental Benefits & KPIs	Impacts
Industry-Academia Collaboration		The semiconductor industry is a high-tech industry that requires a large pool of talent in technological research and interdisciplinary R&D. We should leverage on the multiple professional and recruitment opportunities to attract talent and increase youth employability, by nurturing and equipping future employees with the relevant knowledge and professional skills to enhance the value of our human capital. The primary factors driving the company's core operations are: • Training potential talent (employees) for the future so as to enhance the value of the company's human capital • Developing next-generation semiconductor technologies and materials **2030 Targets** • Participate in over 450 collaborative academic projects on semiconductor materials and advanced technologies • Recruit over 6,000 interns	**Fostering semiconductor talents to promote technological innovation and development in the semiconductor industry in 2023:** • 81 industry-academia projects were conducted, covering research topics such as advanced packaging technologies, manufacturing process optimization, smart technologies, and information security • 453 students participated in the semiconductor courses **2015-2023** • Participated in 416 industry-academia projects involving semiconductor assembly, advanced materials, manufacturing automation technologies, etc. • 2,538 students participated in the semiconductor courses * More information refer to appendix(Social Data - O. Social Involvement Key Performance)	**Talent development via cooperative education, internship, and technological collaborations in 2023:** • Recruited 502 interns • 141 students participated in collaborative academic research projects • Awarded scholarships to 127 students • Collaborated with over 87 schools **2015-2023** • Recruited 5,306 interns * More information refer to appendix(Social Data - O. Social Involvement Key Performance)	• **Promoting innovative research and development of semiconductor technologies:** Working with top universities to establish the ASE Semiconductor Industry Institute, covering semiconductor assembly and testing, smart factories, and artificial intelligence; and continuing to promote industry-academia cooperation projects to induce the research and development of new technologies and propel industry development • **Improving the employability of young persons:** Enhancing the employability and competitiveness of young persons, cultivating relevant talent and strengthening the semiconductor industry talent pool
Community Engagement		ASEH is committed to bridge the economic, social and environmental development gaps between urban and rural areas in the communities where we operate. We are fostering stronger community bonds at each location through high levels of engagement in community development and caring for the disadvantaged. The primary factors driving the company's core operations are: • Ability to operate in a stable social environment • Enhanced corporate image and employee engagement **2030 Targets** • Reach 30,000 volunteers • Afterschool care for over 2,000 students from disadvantaged households • Providing over 95,000 subsidies to students from disadvantaged households	**Improving the centripetal force to the company through employees' participation in public welfare activities in 2023:** • 11,300 volunteer service hours • 3,660 volunteers **2015-2023** • 82,660 volunteer service hours • 24,330 volunteers * More information refer to appendix(Social Data - O. Social Involvement Key Performance)	**Corporate citizenship programs to improve mutual development with the local community in 2023:** • Participated in afterschool care for 222 students from disadvantaged households • Provided support for 73 charities • Provided financial aid for 9,393 students from disadvantaged households **2015-2023** • Participated in afterschool care for 1,731 students from disadvantaged households • Provided financial aid for 71,916 students from disadvantaged households * More information refer to 8.4 Community Engagement	• **Long-term care for the elderly:** Our Smart Mobile Clinic and well-equipped Mobile Gym continue to travel to remote areas, providing medical and health care for the elderly and individuals with limited mobility. We conducted educational courses ranging from health, technology, environmental protection to arts and crafts, to promote physical and mental health for the elderly in the surrounding communities • **Improved learning and living environments for disadvantaged children:** We are a long-term supporter of after-school care programs for disadvantaged students in remote areas. We continue to provide financial support and take active steps to improve their learning and living conditions, ensuring that they grow up happy and healthy

Focus	SDGs Alignment	Business Drivers	Business Benefits & KPIs	Social/Environmental Benefits & KPIs	Impacts
Public Advocacy	17 PARTNERSHIPS FOR THE GOALS	Sustainable development goals are achieved through the sharing of knowledge, expertise, technologies and financial resources. To that end, ASEH is promoting global partnerships in sustainable development, exchanging knowledge, expertise and technology knowhow with stakeholders, and expanding its sphere of influence through active involvement in industry organizations. The primary factors driving the company's core operations are: • Developing and formulating the next generation semiconductor technology blueprint and standards with the industry supply chain • Co-developing policy white papers with industry associations to serve as references for the establishment of policies and regulatory standards **2030 Targets** • 25 sustainability initiatives	**Driving innovation and development in semiconductor and electronic technologies and improving ASEH's leadership status in sustainable development** 2023 • Collaborated with 46 external organizations in areas related to core business • Active member of SEMI, the leading global industry association representing the electronics and design supply chain - Vice Chairmanship of the SEMI Board of Directors - Driving technology and industry through representation at key SEMI committees; Assembly and Testing, Flextech, Smart Manufacturing, MEMS and Sensors, High-Tech Green Manufacturing, Materials, Testing, Cybersecurity and Sustainable Manufacturing 2015-2023 • Collaborated with 525 external organizations in areas related to core business	**Initiating and driving impactful sustainability agendas to advance the semiconductor industry** 2023 • Collaborated with 94 external organizations in sustainable development • 6 sustainability topics and legislative initiatives: Net-zero emissions, DEIR, air pollution prevention and control, waste management, SEMI flexible hybrid electronics measurement standards, and environmental declarations for IC packaging and test services 2015-2023 • 32 sustainability and legislative initiatives	• **Driving the development of the semiconductor industry:** Setting industry standards for advanced packaging and associated technologies. Collaborating across the industry chain to promote the advancement of the industry • **Developing a complete and sustainable semiconductor industry ecosystem:** Partnering with various relevant organizations to promote initiatives for the sustainable development of the semiconductor industry, influencing government policy-making and corporate operations, and raising public awareness of sustainability issues