



ISO 14001:2026 Guide for Taiwanese Fastener Companies

Part 1: Background to the Revision and Key Challenges

Against the backdrop of the global sustainability drive and supply chain restructuring, **the revision of the ISO 14001:2026 Environmental Management System standard is more than a technical update; it represents an international trend that companies must respond to. The revision will bring both new challenges and opportunities to industries across the board, particularly Taiwan's export-oriented fastener industry.** In recent years, sustainable development, carbon neutrality, and ESG reporting have become international requirements that companies must address. European and U.S. markets, as well as international customers, are placing increasing emphasis on the environmental responsibility of supply chains, requiring suppliers to provide carbon inventory data, net-zero commitments, and sustainability strategies. Taiwan's carbon fee began to be levied in 2025, while the EU's CBAM officially entered its charging phase in 2026. Sustainability is therefore no longer merely a matter of brand image; it has a direct impact on export competitiveness. The revision of ISO 14001:2026 is designed to respond to these trends by integrating environmental management systems more closely with ESG reporting, enabling companies to address international market expectations through a standardized approach.

The new standard also incorporates the 2024 Climate Change Amendment (Amd.1:2024), bringing climate change, biodiversity, and resource availability into its core requirements. When managing environmental issues, companies are now required not only to control pollution but also to comprehensively assess climate risks, ecosystem health, and resource sustainability, and translate these considerations into measurable objectives. For example, companies may analyze carbon emissions and energy efficiency, assess threats posed by extreme weather to their supply chains, determine whether their operating sites involve sensitive habitats and establish protective measures, while also considering the scarcity of water, energy, or raw materials and incorporating these factors into risk management and strategic planning.

The integration of these three major dimensions not only enhances management maturity but also demonstrates a company's competitiveness in sustainable development and international markets. In addition, the 2026 edition renames the "High-Level Structure (HLS)" as the "Harmonized Structure (HS)" and reorganizes certain clauses to create a clearer framework and maintain consistency with standards such as ISO 9001 (Quality Management) and ISO 45001 (Occupational Health and Safety). This harmonization of the structure makes it easier for companies to integrate multiple management systems, reduce duplication in documentation and processes, and improve management efficiency. The specific structural adjustments in ISO 14001:2026 are shown in **Table 1**:

The revision of ISO 14001:2026 is not merely a technical adjustment; it represents an important milestone in the evolution of environmental management systems toward "performance orientation" and "sustainability integration." The new edition introduces significant changes in its structure, content, and management requirements. The following five core changes will have far-reaching implications for corporate environmental management strategies and supply chain sustainability.

1. **Mandatory Inclusion of Environmental Conditions:** In previous versions, issues such as pollution levels, resource availability, climate change, biodiversity, and ecosystem health were largely addressed in annexes or presented as recommendations. In the 2026 edition, however, these environmental conditions have been formally elevated to "core requirements" and must be comprehensively considered in the analysis of the organization's environment



(4.1), the needs of interested parties (4.2), and the determination of the EMS scope (4.3). This means that when planning an environmental management system, companies can no longer focus solely on “pollution control”; instead, **they must demonstrate how they systematically analyze climate risks, ecosystem health, and resource sustainability**. For example, if a company is located in a water-scarce region, water resource availability must be regarded as a significant environmental condition and incorporated into risk management and objective setting. This approach brings environmental management more closely in line with global sustainability issues and makes it highly compatible with ESG reporting requirements.

2. **New Management of Change (6.3):** ISO 14001:2026 introduces “Management of Change” as an independent clause for the first time, **requiring organizations to conduct a risk analysis before implementing any change that may affect the EMS**. This requirement is aligned with the quality management philosophy of ISO 9001 and emphasizes the preventive principle of “assess first, change afterward.” Changes may originate internally, such as organizational restructuring or the introduction of new technologies, or externally, such as regulatory updates or supply chain disruptions. Companies must establish systematic procedures to ensure that, before any change takes place, its potential impact on environmental aspects, risks, and opportunities has been thoroughly assessed and that appropriate control measures are incorporated into daily operations. This not only enhances the integrity of the EMS but also helps prevent compliance gaps or environmental incidents resulting from organizational changes.
3. **Life Cycle Perspective Made More Specific:** In Clause 6.1.2, the new standard clearly identifies **seven stages of the life cycle: raw material acquisition, design, production, transportation/delivery, use, end-of-life treatment, and final disposal**. Companies must identify carbon footprints and resource efficiency at these stages and incorporate them into environmental management. This more specific requirement transforms the life cycle

Table 1. Structural Revisions in ISO 14001:2026

Clause / Section	Specific Adjustment	Significance of the Revision
Clause 4 — Environment Analysis of the Organization (4.1)	Adds five mandatory environmental conditions to be considered: pollution, resource availability, climate change, biodiversity, and ecosystem health	Requires organizations to comprehensively analyze external environmental factors and incorporate sustainability issues into the foundation of EMS planning.
Clause 4 — Needs and Expectations of Interested Parties (4.2)	Strengthens the identification and assessment of interested parties' needs. Needs beyond legal requirements are converted into compliance obligations only when the organization decides to comply with them.	Ensures that organizations can accurately respond to the sustainability expectations of different interested parties, including customers, investors, and government authorities.
Clause 4 — Determining the Scope of the EMS (4.3)	Requires environmental conditions and the needs of interested parties to be taken into account when determining the scope.	Makes the EMS scope more closely aligned with actual operations and external sustainability challenges, avoiding a merely formal or superficial approach.
Clause 6 — Planning	The general requirements of former Clause 6.1.1 have been reorganized in a more systematic manner. In the new edition, “risks and opportunities” are separated into an independent clause, renumbered and adjusted as Clause 6.1.4, while the original “planning actions” has been renumbered as Clause 6.1.5.	Places greater emphasis on systematic risk management and incorporates climate and resource-related risks into the core of the management system.
	Adds a new independent Clause 6.3, “Management of Change.”	Requires risk analysis to be conducted before organizational changes are implemented, ensuring the integrity and continued applicability of the EMS.
Clause 9 — Performance Evaluation	The 2026 edition has been adjusted in line with the comprehensive harmonization of the ISO Harmonized Structure (HS), with the original sections clearly numbered as independent subclauses (9.3.1/9.3.2/9.3.3), making the structure clearer and facilitating auditing and cross-referencing.	Creates a clearer structure and ensures that management can systematically review both inputs and results.
Clause 10 — Improvement	Streamlined into Clauses 10.1 and 10.2, with continual improvement incorporated into the overall improvement process.	Highlights the performance-oriented principle, emphasizing that improvement is not merely a procedural requirement but a core element of continuously enhancing environmental performance.



perspective from an abstract concept into an actionable management tool. For example, in the fastener industry, companies need to consider the high energy consumption and carbon emissions associated with steel extraction during the raw material acquisition stage; introduce low-carbon materials at the design stage; improve product durability during the use stage to extend product life; and strengthen recycling and reuse during end-of-life treatment. By adopting life cycle thinking, companies can reduce their overall environmental impact while strengthening the sustainability and resilience of their supply chains.

- 4. **Expanded Supply Chain Responsibility:** ISO 14001:2026 expands the scope of controls under Clause 8.1 from “outsourced processes” to “externally provided processes, products, or services related to the intended outcomes of the EMS.” This means that external suppliers involved in contracted services, logistics, and material procurement must all be incorporated into the scope of environmental management. This change reflects the global trend toward greater supply chain transparency. International customers are increasingly requiring suppliers to provide carbon emissions data, environmental permits, and sustainability commitments. Companies that are unable to monitor the environmental performance of their supply chains will face a competitive disadvantage in the market. **For Taiwan’s fastener industry, this change is particularly important because the industry is highly dependent on international supply chains for its export markets. Without being able to demonstrate environmental responsibility throughout the supply chain, Taiwanese fastener companies will find it increasingly difficult to meet the sustainability requirements of European and U.S. customers.**
- 5. **Stronger Performance Orientation:** The new standard shifts the focus of audits from “document conformity” to “improvements in environmental performance.” Internal audits (9.2.2) must establish clear audit objectives and use measurable performance indicators as the basis for evaluation. **This means that companies can no longer focus their audits merely on whether “procedural documents exist”; instead, they must demonstrate tangible environmental performance, such as the percentage reduction in carbon emissions, the percentage improvement in energy efficiency, and the extent of improvements in recycling rates.** Management reviews (9.3) also require analysis of trends in inputs and changes in external issues, ensuring that senior management can effectively oversee and drive continual improvements in environmental performance.

Challenges Facing Taiwan’s Fastener Industry

Against the backdrop of the ISO 14001:2026 revision, the challenges facing Taiwan’s fastener industry stem not only from the requirements of the new standard itself, but also more profoundly from changes in global supply chains and the evolving competitive landscape. Three major challenges are particularly significant: export pressure, requirements from international customers, and the reshaping of the competitive landscape.

Figure 1. Export Value of Taiwan’s Steel Fasteners (HS 7318), 2021-2025

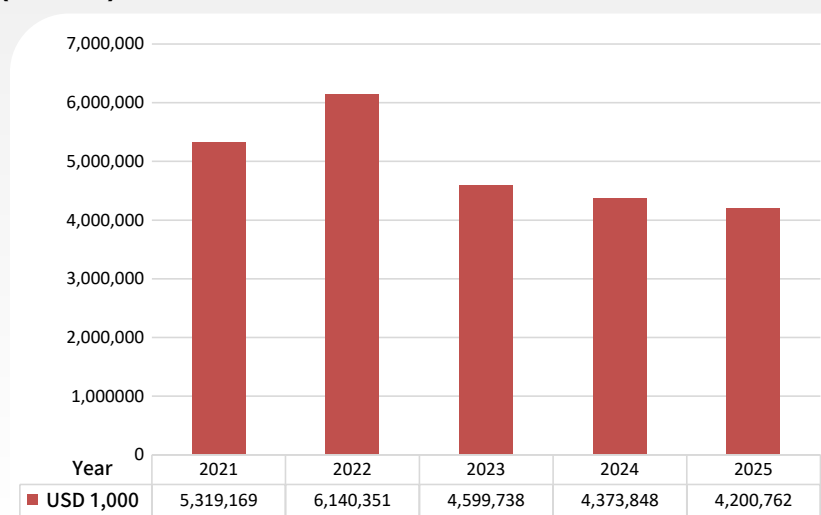
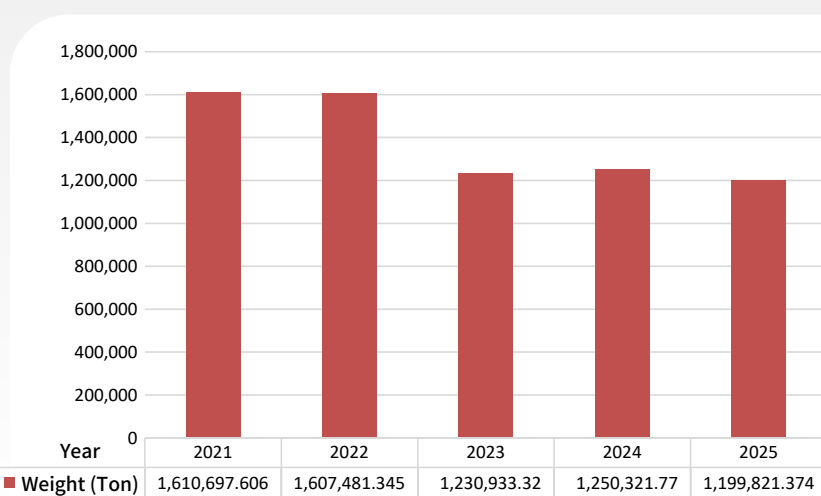


Figure 2. Export Weight of Taiwan’s Steel Fasteners (HS 7318), 2021-2025



1. Export Pressure: A Dual Decline in Both Volume and Value

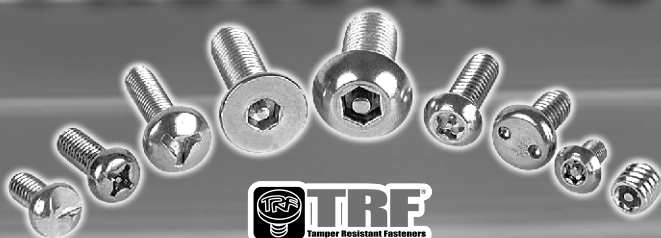
Taiwan's fastener industry has long relied heavily on exports as its primary business model. However, in recent years, both export weight and value have shown a downward trend. According to Taiwan's customs export statistics, the total export weight and value of HS 7318 products—including iron and steel screws, bolts, nuts, automotive screws, screw hooks, rivets, cotters, cotter pins, washers (including spring washers), and similar products—from 2022 to 2025 are shown in **Figures 1 and 2**.

Taiwan's fastener export weight declined from 1,610,697 metric tons in 2021 to 1,199,821 metric tons in 2025, representing a 25.5% decrease over four years. Export value also fell from US\$5.319 billion to US\$4.201 billion, a decline of approximately 21% over the same period. These figures indicate that Taiwan's export competitiveness has come under significant pressure. The decline not only reflects weakening market demand but also suggests that Taiwan's share of the international market is gradually being taken by other countries.

According to the export statistics in **Table 2**, Taiwan's fastener exports from January to July 2026 declined by US\$146.678 million in value compared with the same period in 2025, representing a 20.19% decrease. Export weight decreased by 79,551.51 metric tons, or 10.95%. This indicates that **Taiwan's fastener products continued to lose ground in international markets in 2026**.

The underlying causes of the export pressure facing Taiwan's fastener industry are multiple and interconnected. First, in terms of cost competitiveness, countries such as China continue to expand their exports by leveraging economies of scale and lower production costs, squeezing the market space available to Taiwanese fastener manufacturers. Second, fluctuations in market demand are another important factor. Demand for fasteners in European and U.S. markets has become increasingly volatile due to industrial relocation and policy adjustments, affecting Taiwan's export performance. Third, the trend toward supply chain restructuring cannot be overlooked. Global supply chains are gradually shifting toward emerging markets, challenging Taiwan's position within international supply networks. In addition, geopolitical factors have further intensified export pressure, with uncertainty surrounding regional security directly or indirectly affecting the export environment for Taiwan's fastener products. Overall, the export pressure facing Taiwan's fastener industry is not attributable to a single factor, but rather results from the combined effects of costs, demand, supply chain restructuring, and geopolitics. This dual decline in export weight and value is forcing Taiwanese fastener companies to seek new competitive strategies. Otherwise, they risk continued erosion of their market share. This also highlights **the need for Taiwan's fastener manufacturers to maintain international competitiveness through sustainability certifications, quality enhancement, and strategic transformation**.

Security Fasteners

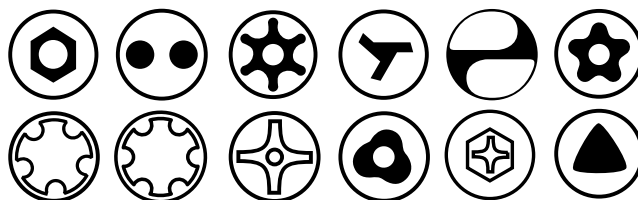


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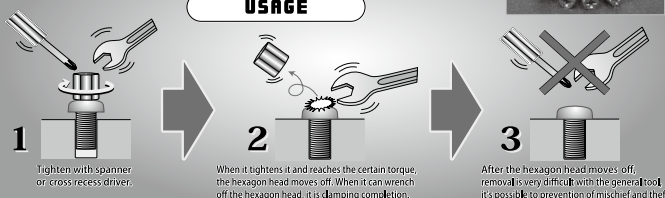
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Table 2. Taiwan's Metal Fastener (HS 7318) Export Statistics, January–July 2025 vs. 2026

Month	2025 Value (US\$ Thousand)	2025 Weight (Tons)	2026 Value (US\$ Thousand)	2026 Weight (Tons)
January	371,990	108,282	345,048	93,965
February	304,911	91,159	324,669	88,804
March	401,566	118,142	341,050	93,578
April	313,873	91,013	315,939	86,695
May	403,659	114,199	348,825	95,176
June	347,872	100,259	334,212	91,474
July	362,229	103,314	349,679	97,122
Total	2,506,100	726,367	2,359,422	646,816

2. International Customer Requirements: Sustainability Certification Becomes Essential

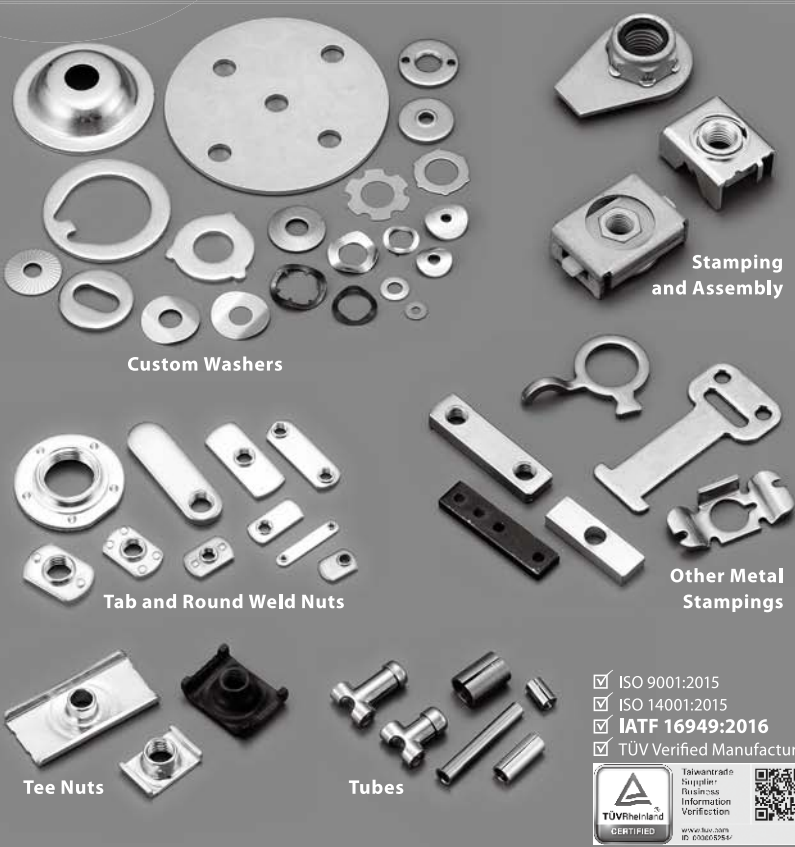
Against the global trend toward ESG and carbon neutrality, international customers in European and U.S. markets are imposing increasingly stringent sustainability requirements on their supply chains, creating new challenges for Taiwan's fastener industry. Specifically, customers require suppliers to provide comprehensive carbon inventory data and demonstrate concrete carbon reduction plans to ensure supply chain transparency and credibility. At the same time, companies must establish clear net-zero emissions commitments and implement them throughout their supply chains in order to meet the sustainability expectations of international markets. Therefore, **ISO 14001:2026 certification has become a basic threshold for entering international markets.** If Taiwanese fastener manufacturers are unable to obtain the new certification, they may permanently lose opportunities to work with European and U.S. customers. More importantly, customers are no longer demanding merely "compliance," but also "transparency"—companies must be able to provide verifiable environmental performance data. However, traditional ISO 14001 environmental management practices have often placed greater emphasis on documentation and record-keeping than on performance data. This presents



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another major challenge for Taiwanese companies, forcing them to transform from a document-oriented approach toward a sustainability management model centered on data and performance.

3. Reshaping Competitive Landscape

China has long dominated the global fastener market through its low costs and enormous production capacity. Particularly in the mid- and low-end standard fastener segment, China has leveraged economies of scale and price advantages to become the world's largest fastener producer and exporter, continuously expanding its market share. At the same time, the competitiveness of emerging markets such as Vietnam has risen rapidly, driven primarily by the anti-dumping duties imposed by Europe and the United States on Chinese fastener products, as well as the "China + 1" supply chain strategies adopted by multinational corporations. These companies have gradually shifted part of their production bases to Vietnam, India, and other locations, resulting in significant growth in exports from these emerging production hubs and gradually eroding the market share traditionally held by established suppliers. To maintain their competitiveness, Taiwanese fastener manufacturers must differentiate themselves through sustainability certification and quality enhancement. Therefore, adopting ISO 14001:2026 will not only enable Taiwanese fastener companies to meet international customer requirements, but also demonstrate their maturity in sustainability management, establish differentiation from low-cost competitors, and maintain a solid market position amid the ongoing restructuring of global supply chains.

Overall, Taiwan's fastener industry is facing three major challenges: export pressure, growing sustainability requirements from international customers, and the reshaping of the competitive landscape. The decline in both export weight and value indicates a gradual contraction in market share, while international customers are imposing stricter supply chain requirements amid the global shift toward ESG and carbon neutrality. This makes ISO 14001:2026 certification an essential requirement for entering European and U.S. markets. **Taiwanese fastener manufacturers must proactively adopt the new ISO 14001:2026 standard, establish carbon inventory and sustainability data management systems, and strengthen quality and supply chain collaboration to maintain their competitiveness amid the ongoing restructuring of global supply chains.** The upcoming second part, "Practical Steps and Methods for the Revision," will further explain the specific steps and implementation methods that companies can adopt during the transition, helping fastener manufacturers turn these challenges into opportunities to enhance their competitiveness. ■

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