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# Legal Liability of Bottled Drinking Water Companies for Circulating Reusable Gallons Beyond Their Lifespan

**Nelvina Djaja[1], Audrianna Richella[2], Michelle Jesslyn[3], Jerry Shalmont[4].**
[1,2,3,4] Faculty of Law, University of Pelita Harapan, Indonesia.

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**Corresponding Author:**
Jerry Shalmont.
E-mail: jerry.shalmont@uph.edu.

**Abstract:** This article analyses the legal liability of bottled drinking water (BDW) companies for circulating reusable gallon containers exceeding their technical lifespan, focusing on corporate-compliance failure and its consumer-protection implications. Normatively (das sollen), Law Number 8 of 1999 on Consumer Protection guarantees consumers' rights to comfort, security and safety; empirically (das sein), findings by the Indonesian Consumers Community (KKI) in late 2025 show that 57 per cent of reusable gallons circulating in Jabodetabek have exceeded their reasonable lifespan, exposing consumers to polycarbonate degradation and potential Bisphenol-A (BPA) migration. Using a normative juridical method with statutory and conceptual approaches, this study finds such practices constitute both a corporate-compliance failure and a violation of consumers' rights under Articles 4, 7 and 8 of Law Number 8/1999. The absence of an explicit, quantitative lifespan standard is identified as a normative gap perpetuating information asymmetry between business actors and consumers. Compared with the European Union's stricter BPA trajectory and neighbouring ASEAN jurisdictions, whose BPA bans remain confined to infant feeding bottles, Indonesia's migration limit lags both international and regional consensus. The study recommends strengthening corporate compliance and internal control, together with regulatory reform establishing explicit lifespan and refill-cycle limits for reusable gallon containers.

## 1. Introduction

Bottled Drinking Water (BDW) constitutes a basic public necessity that is consumed extensively, continuously, and on a national scale, making product safety, security, and quality fundamental legal concerns. Within the framework of consumer protection law, consumer protection plays an essential role in ensuring that consumer rights are adequately and fairly safeguarded.[1] Every country establishes consumer protection laws and standards aimed at shielding the public

[1] Rahmat, "Evaluation of Company Compliance With Consumer Protection Standards," Ipso Jure 1, no. 8 (2024): 14, https://doi.org/10.62872/35cabn69.

from unethical business practices and fostering fair and healthy relationships between businesses and consumers.[2] In this context, the assurance of BDW safety is determined not only by the quality of the water itself, but also by the suitability of the packaging that comes into direct contact with the product, particularly reusable gallon containers that are repeatedly utilised within the distribution cycle of the bottled water industry. Gallon packaging must therefore be regarded as an integral component of BDW products that directly affects consumer health and safety.

Drinking water gallons use Bisphenol A (BPA) as a base material in plastic food and beverage packaging. Scientifically and technically, BPA-based gallons are composed of polycarbonate (PC), a polymer material.[3] They have a limited lifespan because repeated use causes material degradation, microcracks, increased porosity, and the potential release of hazardous chemical substances such as BPA, as well as an increased risk of microbiological contamination. International laboratory studies confirm this pattern: chemical migration screening of reusable plastic bottles has shown that polypropylene containers in particular release measurable concentrations of bisphenol-A derivatives, with migration increasing as the bottle ages and is repeatedly washed,[4] while a dedicated study of five-gallon polycarbonate water bottles found that BPA concentrations rose significantly over thirty days of storage, especially under sunlight exposure.[5] The stability of BPA is further affected by storage factors such as ambient temperature and the duration of contact between the beverage and the PC plastic, with higher temperatures accelerating BPA release from bottled water into the product itself.[6] BPA has the potential to harm human health by disrupting the endocrine system and increasing the risk of various health problems.[7] The circulation of reusable gallon containers therefore cannot merely be viewed as an issue of aesthetics or distribution logistics, but rather as a matter with direct implications for consumer safety.

Normatively (*das sollen*), the legal framework governing BDW packaging in Indonesia is comparatively comprehensive. Article 4 letter a of Law Number 8 of 1999 on Consumer Protection (Law Number 8/1999) guarantees consumers' rights to comfort, security, and safety in consuming goods and/or services; Article 7 letter d obliges business actors to guarantee the quality of goods produced or traded in accordance with applicable standards; and Article 8 paragraph (1) letter a prohibits the trading of goods that fail to comply with required standards. These obligations are reinforced by technical regulations, including Ministry of Industry Regulation Number 96/M-

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2 Muhammad Mirza, "Prinsip-Prinsip Good Corporate Governance dan Business Ethic Pada PT Unilever," Journal Ekonomi dan Manajemen Sistem Informasi 1, no. 3 (2020): 261, https://doi.org/10.31933/jemsi.v1i3.107.

3 Hisa Faadhilah and Ami Tjitraresmi, "Review Artikel: Pencemaran Bisphenol A (BPA) Dalam Kemasan Galon dan Dampaknya Bagi Kesehatan," Farmaka 21, no. 2 (2023): 223–229, https://doi.org/10.24198/farmaka.v21i2.46546.

4 Selina Tisler, et al., "Chemical Migration from Reusable Plastic Bottles: Silicone, Polyethylene, and Polypropylene Show Highest Hazard Potential in LC-HRMS Analysis," Journal of Hazardous Materials 465 (2024), https://doi.org/10.1016/j.jhazmat.2023.133296.

5 Zahraa Khalid Ahmed Al-Tameemi, Razia Khanam, and Preetha J. Shetty, "Bisphenol-A Leaching from Polycarbonate 5-Gallon Water Bottles in the UAE: A Comprehensive Study," Nepal Journal of Epidemiology 14, no. 1 (2024), https://doi.org/10.3126/nje.v14i1.59934.

6 Cindy Farid Febriyantika, Udrika Lailatul Qodri, and Aqidatun Naffiah Choirunniza, "Identifikasi Pengaruh Suhu dan Waktu Penyimpanan terhadap Kandungan Bisphenol-A dalam Sampel Air Galon Polikarbonat serta Validasi Metode Pengukurannya dengan Spektrofotometri UV-Vis," Jurnal Farmamedika (Pharmamedica Journal) 9, no. 1 (2024): 77–87, https://doi.org/10.47219/ath.v9i1.337; Dobrochna Ginter-Kramarczyk, et al., "Influence of Temperature on the Quantity of Bisphenol A in Bottled Drinking Water," International Journal of Environmental Research and Public Health 19, no. 15 (2022), https://doi.org/10.3390/ijerph19159225.

7 Rasty Nurhafilah, Udrika Lailatul Qodri, and Aqidatun Naffiah Choirunniza, "Validasi Metode dan Penetapan Kadar (Bisphenol-A) BPA pada Air Minum Dalam Kemasan Plastik Polikarbonat," Jurnal Farmamedika (Pharmamedica Journal) 9, no. 2 (2024): 189–194, https://doi.org/10.47219/ath.v9i2.359.

IND/PER/12/2011 concerning Technical Requirements of the Packaged Drinking Water Industry, Ministry of Industry Regulation Number 62 of 2024 concerning the mandatory application of the Indonesian National Standard (*Standar Nasional Indonesia*/SNI) for packaged drinking water, and Regulation of the National Agency of Drug and Food Control (BPOM) Number 20 of 2019 concerning Food Packaging. Normatively, these instruments obligate business actors to ensure that packaging materials in direct contact with food are food-grade, safe, and subject to routine quality control.

Empirically (*das sein*), industrial practice tells a markedly different story. A serious problem arises when the circulation practices of reusable gallon containers in the market demonstrate strong indications of non-compliance with these food-safety and consumer-protection principles. Empirical findings by the Indonesian Consumers Community (*Komunitas Konsumen Indonesia*/KKI) at the end of 2025 revealed that approximately 57 per cent of reusable gallon containers circulating in the Greater Jakarta area (Jabodetabek) had exceeded their reasonable lifespan, including gallons bearing production codes from as early as 2012 and 2016 that were still being used and distributed to consumers.[8] This finding is consistent with a separate normative-empirical study of the AMDK industry, which likewise concluded that repeated reuse of gallon packaging increases the risk of microplastic and chemical release into drinking water and recommended stricter enforcement of BPOM's BPA migration standards.[9] The persistence of aged packaging in circulation, corroborated across two independent sources, indicates that the issue is not incidental or attributable to isolated negligence at the distribution level, but rather reflects a systemic and structural pattern within the governance of the BDW industry a clear illustration of the gap between *das sollen* and *das sein* in Indonesian consumer protection practice.

The urgency of this research lies precisely in that gap: the regulatory framework normatively regulates the obligation to ensure the safety of BDW packaging, yet industrial practice demonstrates the massive circulation of reusable gallon containers that are no longer fit for use. The failure of quality control systems and internal supervision within BDW companies reflected in the KKI findings indicates a corporate and structural deficiency rather than a mere technical error in the field.[10] From a legal perspective, this condition raises fundamental questions regarding the form and scope of the legal liability of BDW companies for distributing products that substantively no longer meet safety standards. This research therefore examines whether such practices may be classified as a failure of corporate compliance resulting in violations of consumers' rights to security and safety, and how available legal instruments Law Number 8/1999, industrial regulations, and food safety regulations may be utilised to effectively enforce the liability of business actors. Accordingly, this study possesses both theoretical and practical urgency: strengthening the legal construction of business actors' liability within the consumer protection regime, while contributing to the improvement of BDW industry governance that is more accountable, oriented toward public safety, and grounded in the precautionary principle in the use of reusable packaging.

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8 Hotria Mariana, Agung Dwi Ertato, and Sri Noviyanti, "Bahaya! 57 Persen Galon AMDK di Jabodetabek Berusia di Atas 2 Tahun," 2025, https://nasional.kompas.com/read/2025/12/16/16494531/bahaya-57-persen-galon-amdk-di-jabodetabek-berusia-di-atas-2-tahun, accessed 1 May 2026.

9 Richart Sahatatua, et al., "The Impact of Environmental Management on the Growth of the Bottled Water Industry in Indonesia (Case Study: Sales of Disposable Gallons)," Journal of Multidisciplinary Academic and Practice Studies (2024).

10 Mariana, Ertato, and Noviyanti, "Bahaya! 57 Persen Galon AMDK."

Research concerning packaging quality and consumer protection in the BDW industry has been conducted from various angles, yet each leaves the specific problem addressed here unresolved. An industrial-engineering study of gallon production applied the Six Sigma method and found 22,980 of 503,272 inspected gallons defective, chiefly through cracking caused by inadequate raw-material selection[11] confirming that physical failure follows a systemic, statistically identifiable pattern, though confined to production-stage defects rather than degradation over repeated *post*-production use. A normative legal study of Indonesia's framework Law Number 8/1999, the SNI, and Ministry of Health regulations on microplastic and hazardous-substance content concluded that the framework is formally comprehensive but that enforceable, quantitative safety parameters remain underdeveloped.[12] Research on legal protection for consumers harmed by production defects in refillable gallons has emphasised business actors' explicit responsibility, including compensation obligations,[13] but focuses on case-specific defects such as foreign objects rather than the systemic decline of packaging quality accumulated from prolonged use. Finally, scientific research on polycarbonate packaging has established that temperature and storage duration accelerate BPA release,[14] and a dedicated legal analysis of BPOM's 2024 risk-labelling regulation found that consumers remain inadequately informed of BPA risks despite a four-year transition period.[15] The integration of these scientific and legal findings is relevant to, but has not yet been fully applied to, the specific phenomenon of reusable gallons exceeding their lifespan.

Departing from these previous studies, this research seeks to fill the existing regulatory gap concerning the legal certainty of lifespan limits and refill cycles for reusable gallon containers. Unlike prior studies which examine either production-stage defects, the general adequacy of the BDW legal framework, or single-incident harms this research focuses specifically on the *legal certainty of the usage lifespan* of reusable gallons as a distinct compliance and consumer-information problem, situated within the aspects of corporate compliance and consumers' rights to truthful information and safety under Articles 4 and 7 of Law Number 8/1999. Considering the existence of information asymmetry, in which consumers are placed in a vulnerable position when assessing the feasibility of ageing packaging (produced between 2012–2016) that displays no accessible lifespan indicator, this study offers two concrete contributions rather than a general call for stricter enforcement.

First, it advances a legal-construction argument that the absence of an explicit, quantitative gallon-lifespan standard is itself a distinct form of regulatory failure conceptually prior to, and separate from, any question of enforcement that can only be remedied through positive law rather than through supervision of existing norms alone. Second, it benchmarks Indonesia's BPA migra-

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[11] William Christian Loesi Pangalinan, et al., "Six Sigma sebagai Usaha Meminimasi Cacat Produk Galon Air Minum dalam Kemasan," Journal of Industrial View (2024).

[12] M. Aufa, et al., "The Hazards of Microplastics: A Legal Perspective on Unlawful Acts and Consumer Protection," Strata International Journal of Social Issues (2025).

[13] Ayu Citra Santyaningtyas, Warah Atikah, Kukuh Budi Mulya, and Dewi Tiara Fatimah, "Perlindungan Terhadap Konsumen Air Galon Isi Ulang Akibat Cacat Produksi Oleh PT. Tirta Investama," Jurnal Kolaboratif Sains 8, no. 5 (2025), https://doi.org/10.56338/jks.v8i5.7456; see also "Legal Protection For Refillable Gallon Consumers Due To Bisphenol A (BPA) Content," *Majalah Ilmiah Dinamika Administrasi (MIDA)* 20, no. 1 (2023): 285–299.

[14] Edy Supriyo and Siti Nurlaela Noviana, "Kandungan Mikroplastik Pada Air Minum Dalam Kemasan (AMDK) yang Beredar di Semarang, Jawa Tengah," Metana: Media Komunikasi Rekayasa Proses dan Teknologi Tepat Guna 19, no. 2 (2023), https://doi.org/10.14710/metana.v19i2.58548.

[15] Tabitha Fransica Romauli Nababan and Sylvana Murni Deborah Hutabarat, "Kewajiban Pelaku Usaha dalam Pencantuman Label Risiko Bisphenol A Pada Air Minum Kemasan Galon Pasca Peraturan BPOM Tahun 2024," Jurnal USM Law Review 8, no. 3 (2025): 2464–2480, https://doi.org/10.26623/julr.v8i3.13072.

tion threshold not only against the European Union's stricter regulatory trajectory but also against neighbouring ASEAN jurisdictions, Malaysia and the Philippines, showing that the same normative gap recurs across the region. This dual contribution situates the Indonesian reform agenda proposed here within a broader South East Asian governance context, consistent with the comparative and cross-border legal research this journal seeks to advance, and thereby creates legal certainty and sustainable public safety on grounds firmer than administrative urgency alone.

Based on the background analysis above, this research focuses on two principal issues. *First*, how are the legal obligations of BDW companies in implementing corporate compliance principles and effective internal control systems in order to prevent the circulation of reusable gallon containers that are no longer fit for use, including ensuring that standards of safety, quality, and product feasibility continue to comply with applicable laws and regulations? *Second*, how may the circulation of reusable gallon containers that have exceeded their lifespan be qualified as a violation of consumers' rights to security, comfort, and safety in consuming goods as guaranteed under Law Number 8/1999, and what are the legal implications for the liability of business actors?

## 2. Method

This research employs a normative juridical method, combining two approaches, namely the statutory approach and the conceptual approach.[16] The statutory approach utilises relevant legal provisions, such as Law Number 8/1999, regulations concerning product safety standards, and corporate law provisions governing the responsibilities and obligations of business actors. The conceptual approach analyses doctrines, theories, and expert opinions concerning corporate compliance, internal control systems, and the protection of consumers' rights to product safety and security. The research specification is descriptive-analytical: it systematically describes the legal regulations governing the circulation of reusable gallon containers within the BDW industry while critically analysing forms of consumer-rights violations and the failure of companies to implement corporate compliance principles.

The data collection technique was conducted through library research using primary, secondary, and tertiary legal materials. Primary legal materials include Law Number 8/1999 and technical regulations relating to reusable gallon container safety standards. Secondary legal materials consist of books, journal articles, and prior research; the search for secondary legal materials was conducted between January 2024 and May 2026 using the keywords "galon guna ulang", "Bisphenol-A", "corporate compliance", and "product liability" across Google Scholar, Scopus-indexed databases, and the Consensus academic search platform, prioritising publications from the preceding ten years. Tertiary legal materials include investigative news reports and related documents. The technique of analysis applies systematic and grammatical statutory interpretation: relevant provisions of Law Number 8/1999, the Ministry of Industry Regulations, and the BPOM Regulation are read together as an integrated system rather than in isolation, so that obligations expressed in one instrument (for example, the food-grade requirement in Ministry of Industry Regulation 96/2011) are interpreted consistently with the safety and information rights guaranteed under Law Number 8/1999.

[16] Muhaimin, Metode Penelitian Hukum (Mataram: Mataram University Press, 2020), 56–57.

The scope of this research is limited to a normative analysis of BDW companies' legal liability for circulating reusable gallon containers from the consumer protection perspective; it does not extend to empirical measurement of BPA concentrations or to civil litigation practice, which fall outside the adopted method and are identified below as directions for future research. A related limitation concerns the empirical basis of the 57 per cent and 92 per cent figures discussed in this article: both originate from investigative reporting on a Indonesian Consumers Community survey rather than a peer-reviewed dataset or official BPOM audit. Where possible, these figures are read alongside independent legal-normative and scientific literature to mitigate reliance on a single journalistic source; the absence of any official, publicly available BPOM audit of gallon lifespans in circulation is itself treated here as further evidence of the regulatory gap under discussion.

## 3. Legal Obligations of Bottled Drinking Water Companies in Implementing Corporate Compliance and Internal Control to Prevent the Circulation of Substandard Reusable Gallons

Corporate compliance refers to a company's concrete efforts to align all of its operational activities with applicable laws, regulations, procedures, and standards. The implementation of corporate compliance aims to mitigate legal risks and ensure that business activities are conducted in accordance with provisions established by authorised institutions. In addition, compliance reflects corporate credibility and forms part of the risk-management mechanisms intended to prevent potential violations at an early stage.[17] Within the BDW industry, corporate compliance requires that all production and distribution processes be carried out in accordance with food-safety standards, particularly those relating to the use of packaging.

From the perspective of industrial technical regulation, Article 12 paragraph (2) of Ministry of Industry Regulation Number 96/M-IND/PER/12/2011 (Ministry of Industry Regulation 96/2011) affirms that packaging constitutes an integral part of BDW products and that food-packaging materials must fulfil food-grade criteria namely being safe for use, resistant to repeated washing and disinfection, and not posing health risks. When gallon containers are used beyond their technical lifespan and undergo physical and chemical degradation, their food-grade status is factually invalidated, even where the containers continue, administratively, to be utilised within the distribution system. Article 8 of the regulation requires BDW companies to implement Good Manufacturing Practices (GMP) as a form of compliance in comprehensively maintaining product quality and safety, including production facilities and repeatedly used packaging. Article 10 further obliges BDW companies to carry out comprehensive and documented quality control to ensure that the resulting products comply with SNI and other applicable standards.

SNI functions as a legal instrument establishing minimum technical standards for products circulating in society.[18] SNI is determined by the National Standardisation Agency (*Badan Standardisasi Nasional*/BSN), and within the BDW context its mandatory implementation is governed

[17] Adetoyese Latilo, Ngozi Samuel Uzougbo, Munachi Chikodili Ugwu, and Portia Oduro, "Strategies for Corporate Compliance and Litigation Avoidance in Multinational Enterprises," World Journal of Advanced Science and Technology 6, no. 1 (2024): 74–75, https://doi.org/10.53346/wjast.2024.6.1.0048; see also Otoritas Jasa Keuangan, "Roadmap Tata Kelola Perusahaan Indonesia," 2014.

[18] Novrisa Adellya, Erniwati, and Sakinah Agustina, "How Is the Implementation of Mandatory Indonesian National Standards (SNI) for Children's Toys Products According to Law No. 3 of 2014 Concerning Industry," Jurnal Hukum Sehasen 11, no. 2 (2025): 413.

by Ministry of Industry Regulation Number 62 of 2024 (Ministry of Industry Regulation 62/2024), which supersedes and reinforces the earlier mandatory SNI regime. Under this regulation, companies are required to obtain and maintain an SNI conformity mark for packaged drinking water, subject to periodic surveillance audits by accredited certification bodies. Where gallon containers in circulation have exceeded their reasonable lifespan, this condition demonstrates violations of SNI, both in terms of product quality and in the failure of business actors to ensure that products circulating in the market continue to satisfy established standards. This indicates weaknesses in quality-control systems and internal supervision mechanisms, such that the violations occurring are no longer individual in nature but reflect systemic failures in the implementation of standardisation.

From the perspective of food-safety law, Law Number 18 of 2012 on Food (Law Number 18/2012), in conjunction with Government Regulation Number 86 of 2019 concerning Food Safety (Government Regulation 86/2019), places the prevention of contamination as a primary obligation of business actors throughout the food supply chain, including during the use and distribution of packaging. These provisions emphasise that food safety is determined not only by the substance of the product itself but also by the packaging that comes into contact with the product. Further regulation is provided under BPOM Regulation Number 20 of 2019 concerning Food Packaging (BPOM Regulation 20/2019), Article 3 of which requires every business actor to use packaging that does not endanger human health.

The definition of food packaging under Article 1 point 3 of BPOM Regulation 20/2019 encompasses all materials used to contain or wrap food products, whether in direct or indirect contact with food, and Article 2 further clarifies that the regulation also applies to packaging made from recycled materials. In the context of reusable gallon containers, which generally utilise PC materials, such packaging is legally categorised as food packaging and is therefore subject to strict safety standards. The use of gallon containers that have exceeded their lifespan poses serious risks, particularly concerning the migration of hazardous chemical substances such as BPA.[19] Scientifically, PC material is unstable when exposed to high temperatures and repeated washing over long periods, resulting in polymer degradation and the release of chemical substances into drinking water.[20]

Annex 17.2 of BPOM Regulation 20/2019 (Polycarbonate Resin Articles) establishes a maximum BPA migration limit of 0.6 ppm markedly permissive when measured against international standards. Following a 2023 re-evaluation, EFSA reduced its tolerable daily intake for BPA roughly 20,000-fold, from 4 µg/kg body weight/day to 0.2 ng/kg body weight/day, on the basis of accumulated evidence of immunotoxicity and endocrine-disrupting effects at far lower exposures than previously assumed.[21] On that basis the European Commission adopted Commission Regulation (EU) 2024/3190, prohibiting BPA outright in food-contact materials across the EU, including reus-

[19] Abdulaziz A. M. Abahussain, et al., "Toxic Threats from Plastic Waste: Human Health Impacts, Challenges, and Policy Solutions," RSC Advances 15, no. 48 (2025): 40761, https://doi.org/10.1039/d5ra05845g; see also Hervian Glen, Sandro Metekohy, Merry Tjoanda, and Ronald Fadly Sopamena, "Perlindungan Konsumen Terhadap Produk Pangan Berkemasan Plastik Yang Mengandung Bisphenol-A (BPA)," *Jurnal Ilmu Hukum* (2024).

[20] Supriyo and Noviana, "Kandungan Mikroplastik."

[21] Frederick S. vom Saal, et al., "The Conflict between Regulatory Agencies over the 20,000-Fold Lowering of the Tolerable Daily Intake (TDI) for Bisphenol A (BPA) by the European Food Safety Authority (EFSA)," Environmental Health Perspectives 132, no. 4 (2024), https://doi.org/10.1289/EHP13812.

able polycarbonate bottles, from 20 January 2025.[22] Indonesia's Annex 17.2 limit, calibrated to an earlier and less conservative assessment, has not kept pace with this international consensus (Table 1), reinforcing the urgency of periodic technical review of BPOM's own migration standard.

**Table 1**. Comparative Overview of Technical Regulations Governing Reusable Gallon Packaging

| Regulatory Instrument | Legal Basis | Primary Object Regulated | Key Obligation on Business Actors | Sanction / Enforcement Mechanism |
|---|---|---|---|---|
| Ministry of Industry Regulation 96/2011 | Industrial technical standards for BDW | Production facilities and food-grade packaging | Good Manufacturing Practices (Art. 8); documented quality control (Art. 10) | Administrative sanction; revocation of industrial business licence |
| Ministry of Industry Regulation 62/2024 | Mandatory SNI for packaged drinking water | Product and packaging conformity to SNI | Obtain and maintain SNI conformity mark; periodic surveillance audit | Withdrawal of SNI mark; administrative sanction; market withdrawal |
| BPOM Regulation 20/2019 | Food packaging safety | Packaging materials in direct/indirect food contact | Use of packaging not endangering health; compliance with BPA migration limit (Annex 17.2: 0.6 ppm) | Administrative sanction under Art. 3; referral for criminal liability under Law 8/1999 where consumer harm results |
| Commission Regulation (EU) 2024/3190 *(comparator)* | EU food contact materials framework | All food-contact materials and articles containing BPA | Prohibition of BPA in food-contact materials, including reusable PC bottles, from 20 January 2025 | Market withdrawal; EU-wide enforcement under food-contact materials law |

The regulatory gap identified in Indonesia is not an isolated national anomaly but reflects a broader pattern across neighbouring South East Asian jurisdictions. Malaysia's ban on Bisphenol A is confined to infant feeding bottles under Regulation 27A of the Food Regulations 1985 and has never been extended to reusable polycarbonate gallon containers used in the bottled-water trade, leaving no explicit lifespan or refill-cycle standard for the latter.[23] The Philippines follows a similar pattern: FDA Circular No. 2019-004 bans BPA only in infant feeding bottles and sippy cups, while general food-contact packaging, including reusable BDW containers, remains governed by broader safety principles without a dedicated lifespan parameter.[24] Read together with Indonesia's own permissive Annex 17.2 migration limit, these regional comparators suggest that the absence of an

[22] European Commission, Commission Regulation (EU) 2024/3190 of 19 December 2024 Amending Regulation (EU) No 10/2011 as Regards the Use of Bisphenol A and Other Bisphenols with a Harmonised Classification for Specific Effects on Human Health in Materials and Articles Intended to Come into Contact with Food, Official Journal of the European Union, 2024.

[23] N. H. Nordin, H. Hara, and N. Kaida, "Integrating Environmental Management into Food Safety and Food Packaging in Malaysia: Review of the Food Regulation 1985," *IOP Conference Series: Earth and Environmental Science* 67 (2017): 012009, https://doi.org/10.1088/1755-1315/67/1/012009; see also V. S. Deepika Rani, R. Naveen Kumar, and Sudershan Rao Vemula, "A Review on Regulatory Aspects of Food Contact Materials (FCM's)," *The Indian Journal of Nutrition and Dietetics* 55, no. 4 (2018), noting ASEAN member states' move toward harmonising food-contact-material regulation. Under Regulation 27A of the Malaysian Food Regulations 1985, the ban on Bisphenol A applies only to feeding bottles and has not been extended to reusable polycarbonate gallon containers, and no explicit lifespan or refill-cycle standard has been established for the latter.

[24] Philippine Food and Drug Administration, FDA Circular No. 2019-004, "Ban of Bisphenol A (BPA) from Infant Feeding Bottles and Sippy Cups as Child Care Article Products," 2019; the ban is likewise confined to infant feeding bottles and sippy cups, leaving reusable BDW gallon containers, and their permissible lifespan or refill cycles, outside its scope.

explicit gallon-lifespan standard is a shared regulatory blind spot across ASEAN's BDW governance, rather than an issue unique to Indonesia reinforcing both the cross-border relevance of this study and the case for coordinated regional standard-setting, consistent with this journal's focus on comparative legal governance in South East Asia.

Beyond migration limits, physical damage in the form of microcracks in gallon containers resulting from prolonged use may become breeding grounds for microorganisms in the form of biofilms, thereby increasing the risk of microbiological contamination.[25] A broader review of chemical migration from various reusable plastic bottle materials similarly found that ageing and repeated washing measurably increase the release of unintended chemical substances regardless of the base polymer, underscoring that lifespan-related degradation not merely initial manufacturing quality is a distinct and material safety variable.[26] Accordingly, from the BPOM perspective, food packaging constitutes an integral component of the food-safety system, such that failure to maintain packaging quality directly reflects a violation of applicable food-safety standards.

Corporate compliance within the BDW industry is therefore not merely administrative, but a preventive instrument protecting consumers from health risks. Audits and inspections under GMP are an important mechanism for ensuring such compliance in practice, and specialised compliance practice in the AMDK sector emphasises that routine audit of the Food Safety Management System (SMKPO) under BPOM Regulation 21/2021 is essential to avoid administrative sanctions and protect product safety.[27] Yet the KKI findings above demonstrate failures in corporate compliance and internal control, evidenced by the continued circulation of gallons aged eight to twelve years indicating that companies failed to adequately perform their supervision and withdrawal obligations.

In addition to corporate compliance, internal control functions as a corporate management strategy to anticipate and mitigate risks, comprising five complementary components: (1) the control environment underpinning organisational culture, integrity, and competence; (2) risk assessment to identify potential obstacles; (3) control activities such as procedures and segregation of duties; (4) information and communication systems ensuring accurate data; and (5) monitoring mechanisms for continuous improvement.[28] Companies are therefore required to guarantee the quality and feasibility of their production facilities and products through a strict internal control system; internal audit, in particular, plays a critical role in evaluating internal control and preventing negligence from recurring.[29]

Consequently, companies must establish and implement corporate compliance mechanisms to prevent legal violations and the risk of legal sanctions. Compliance with consumer protection regulations is not contradictory to business interests; rather, it strengthens the company's competi-

[25] Mariana, Ertato, and Noviyanti, "Bahaya! 57 Persen Galon AMDK."
[26] Tisler, et al., "Chemical Migration from Reusable Plastic Bottles."
[27] SIP Law Firm, "Pahami Kepatuhan & Audit AMDK, Hindari Sanksi dan Tingkatkan Keamanan Produk," 2025; see also Ely Rahmawati and Yos Sunitiyoso, "Strategy for Improving Food Safety Compliance in Bottled Drinking Water Production Facilities (Case Study: Provincial Office of Indonesian FDA in Kupang)," *International Journal of Economics, Business and Accounting Research (IJEBAR)* 6, no. 2 (2022): 1111–1118, https://doi.org/10.29040/ijebar.v6i2.4989.
[28] Maria Grace Lusiana and Revi Arfamaini, "Evaluasi Penerapan Sistem Pengendalian Internal Atas Penjualan Kredit Pada PT. Tri Tehnik Perkasa," Jurnal Manajemen Keuangan Publik 6, no. 1 (2022): 32–49, https://doi.org/10.31092/jmkp.v6i1.1553.
[29] Widhi Nugroho and Bunga Indah Bayunitri, "Pengaruh Audit Internal Terhadap Kinerja Keuangan (Studi Kasus Pada PT Pos Indonesia (Persero))," Jurnal Akuntansi Bisnis Dan Ekonomi 7, no. 1 (2021): 1903, https://doi.org/10.33197/jabe.vol7.iss1.2021.633; see also Sugiatno, "Desain Kelembagaan Satuan Pengawas Internal (SPI) Di STAIN Curup (Sebuah Penawaran Desain SPI Untuk Efektivitas Dan Efisien Pengelolaan Keuangan, Kinerja Pegawai Dan Aset Negara)," *Tadbir: Jurnal Studi Manajemen Pendidikan* 2, no. 1 (2018): 89–106, https://doi.org/10.29240/jsmp.v2i1.423.

tive position while simultaneously creating mutually beneficial long-term relationships between business actors and consumers.[30] Corporate compliance therefore serves as a preventive instrument to protect consumers from the recurrence of similar incidents, while ensuring the effective enforcement of the company's internal control system.

In the circulation of reusable gallon containers, the mechanism for withdrawing substandard containers cannot be imposed solely upon producers, but instead constitutes a shared responsibility across the entire distribution chain, including producers, distributors, and refill depots. Gallon containers that are physically aged, cracked, dull, discoloured, or that technically have exceeded their lifespan limits no longer satisfy the criteria of safe food packaging required under Article 3 of BPOM Regulation 20/2019. Both producers and refill depots are therefore obligated to withdraw such containers from circulation and replace them with new containers as part of fulfilling their obligation to maintain overall product safety.

As a form of compliance with BPOM regulations and the principle of sustainable quality control, reusable gallon containers should ideally undergo comprehensive inspection during every refill cycle, encompassing at minimum four principal aspects: the physical condition of the packaging, the cleanliness of the interior and exterior surfaces, the presence or absence of leakage, and indications of plastic degradation such as discolouration, turbidity, or the emergence of microcracks that may become sites of microbiological contamination. These inspection standards are consistent with the quality-control obligations stipulated under Ministry of Industry Regulation 96/2011 and are reinforced by GMP, which requires routine inspection of all production facilities, including primary packaging.

In practice, several large-scale BDW producers have adopted proactive measures by including production codes or age indicators on gallon containers a concrete traceability mechanism and an important component of effective internal control. Yet such codes do not automatically guarantee adequate supervision: the KKI findings discussed above showed that supervision over the condition and age of circulating gallons remained highly inconsistent, evidenced by containers produced in 2012 and 2016 still actively circulating.[31] This indicates that periodic inspection and withdrawal mechanisms have not been implemented systematically by business actors. The solution proposed here is therefore not merely stricter enforcement of existing rules, but explicit and quantitative regulation of gallon lifespan limits, accompanied by mandatory reporting and verification mechanisms supervised by BPOM, so that compliance becomes a measurable legal obligation rather than a matter of good faith.

## 4. Legal Qualification of the Circulation of Substandard Reusable Gallon Containers as a Violation of Consumers' Safety Rights

From the perspective of Law Number 8/1999, consumer protection is not limited solely to the substance of goods but also encompasses all attributes that affect consumer safety and security, including packaging.[32] Article 1 point 4 of Law Number 8/1999 broadly defines goods as any object

[30] Brenda Carnescia, "Analisis Pengaruh Hukum Perlindungan Konsumen dan Kepatuhan Perusahaan Terhadap Loyalitas Pelanggan di Sektor Ritel," JETBUS Journal of Education Transportation and Business 6, no. 1 (2024).

[31] Mariana, Ertato, and Noviyanti, "Bahaya! 57 Persen Galon AMDK."

[32] Tomy Yoanes, Iriansyah, and M. Yusuf Daeng, "Perlindungan Konsumen terhadap Peredaran Produk yang Tidak Mencantumkan Informasi dalam Bahasa Indonesia," Jurnal Cendekia Hukum 6, no. 2 (2021): 241, http://doi.org/10.33760/jch.v6i2.321.

that may be utilised by consumers; reusable gallon containers, as primary packaging that comes into direct contact with drinking water, therefore cannot be separated from the consumed product itself. Accordingly, the condition of gallon containers that are no longer fit for use normatively fulfils the elements of a violation under Article 8 paragraph (1) letter a of Law Number 8/1999, because companies continue to trade goods that do not satisfy the required standards.

Furthermore, the circulation of substandard reusable gallon containers demonstrates systemic failures in internal control, particularly regarding mechanisms for product withdrawal from circulation. Article 4 letter a of Law Number 8/1999 grants consumers the right to comfort, security, and safety in consuming goods and/or services a right that is preventive in nature and does not depend upon the occurrence of actual harm. Given the potential hazards posed by degraded gallon containers, the elements of a violation of consumer rights are fulfilled because the products circulating in the market contain risks reasonably foreseeable by business actors. Article 7 letter d additionally obliges business actors to guarantee the quality of goods produced or traded in accordance with applicable standards, which in this context includes not only the quality of the drinking water itself but also the safety of the packaging used.

The increasing level of consumer awareness regarding product-safety issues does not necessarily correspond to an ability to identify the feasibility of reusable gallon packaging in circulation. Consumers generally have no access to information regarding lifespan limitations, and some gallon containers in circulation merely display production codes without any accompanying explanation of their significance. This reflects a genuine information asymmetry: producers know, or should know, the condition of the gallons being circulated, whereas consumers have no access to technical information concerning lifespan, production codes, or indicators of PC material degradation. A subsequent KKI survey published in 2026 reinforced this finding, reporting that 92 per cent of consumers were unaware that reusable gallon containers possess a limited usage lifespan at all.[33] Read together, the two KKI findings 57 per cent of circulating gallons exceeding their lifespan, and 92 per cent of consumers unaware such a lifespan exists indicate that the obligation of business actors to provide accurate, clear, and honest information under Article 7 letter b of Law Number 8/1999 has not been adequately fulfilled, and that the problem lies squarely with the supply side of the information asymmetry rather than with consumer literacy. This conclusion is corroborated by a dedicated legal analysis of BPOM's 2024 risk-labelling requirement, which found that the four-year transition period for mandatory BPA-risk labelling itself risks entrenching non-compliance and delaying the realisation of consumers' information rights unless BPOM supervision and early voluntary labelling are actively pursued.[34]

This information obligation is active in nature, requiring business actors to establish quality-control systems that include recording the lifespan of gallon containers, supervising distribution, and implementing withdrawal mechanisms for products no longer fit for circulation. The finding that a majority of reusable gallon containers have exceeded their lifespan limits demonstrates that these obligations have not been adequately performed, reflecting systemic negligence in quality

[33] Hotria Mariana and Aditya Mulyawan, "Survei KKI: 92 Persen Konsumen Tak Tahu Galon Guna Ulang Ada Masa Pakai," 2026, https://health.kompas.com/read/26E08140527268/survei-kki-92-persen-konsumen-tak-tahu-galon-guna-ulang-ada-masa-pakai, accessed 26 May 2026.

[34] Nababan and Hutabarat, "Kewajiban Pelaku Usaha."

control and product traceability.[35] Article 8 paragraph (1) letter a explicitly prohibits trading goods that do not comply with standards, such that circulating substandard gallon containers may be legally qualified as a violation carrying implications for liability compensation, product withdrawal, or other sanctions. Read with Article 62, business actors violating Article 8, 9, 10, 13(2), 15, 17(1) (a,b,c,e), (2), and 18 may face up to five years' imprisonment or a fine of up to Rp2,000,000,000, reflecting the real risk to consumer health. Evidentially, Law Number 8/1999 requires business actors to prove the safety of products they trade, strengthening consumers' position in dispute resolution.[36] A comparative analysis of Indonesian and United States strict-liability practice observes that, notwithstanding this reversed burden of proof, Indonesian enforcement still shows interpretative hesitation in fully applying strict liability compared with the fully strict-liability US regime suggesting Indonesian practice may still under-protect consumers exposed to degraded gallon packaging relative to comparable jurisdictions.[37]

Overall, the regulations governing BDW safety and quality demonstrate a comprehensive, multilayered legal system covering both pre-market and post-market stages: pre-market obligations under Article 7 letter d and Article 8 paragraph (1) letter d of Law Number 8/1999, and post-market supervision, withdrawal, and quality-maintenance obligations reinforced by BPOM Regulation 20/2019 and the SNI regime under Ministry of Industry Regulation 62/2024. Notwithstanding this multilayered framework, neither Law Number 8/1999 nor related regulations explicitly and quantitatively establish the lifespan limits of reusable gallon containers, whether as a maximum number of usage cycles or a specific period of use. This absence indicates a normative gap: although obligations to maintain packaging safety are strictly regulated, the technical parameters for when a gallon must be withdrawn are not clearly formulated in legislation.

The absence of such technical parameters directly weakens consumers' position because, without clear benchmarks, they cannot independently determine when a gallon is no longer suitable for use, while business actors retain broad discretion to interpret feasibility standards subjectively. Determinations of feasibility thus depend entirely on business actors' own internal control systems physical inspection, usage-cycle records, and quality control which in practice remain vulnerable to negligence and inaction. This reinforces the empirical finding that gallons exceeding their lifespan circulate not merely through individual violations but through the absence of rigid, measurable legal standards. The principal issue, then, lies not only in violations of existing norms but in the incompleteness of the norms themselves, creating a grey area that may be exploited or ignored by business actors, increasing health risks and weakening the preventive protection that is Law Number 8/1999's primary objective.

Notably, a search of the Supreme Court's public decision directory (*Direktori Putusan Mahkamah Agung*) and published BPSK case reports conducted for this research did not identify any reported decision specifically addressing the lifespan or refill-cycle degradation of reusable gallon containers, as distinct from decisions on general product defects or mislabelling. Rather than weakening the argument advanced here, this absence of adjudicated case law is itself consistent with

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35 Mariana and Mulyawan, "Survei KKI: 92 Persen."

36 Dyah Putri Purnamasari and Khoidin, "Analisis Pembalikan Beban Pembuktian Dalam Penyelesaian Sengketa Konsumen Ditinjau Dari Undang-Undang Nomor 8 Tahun 1999 Tentang Perlindungan Konsumen Dan Hukum Acara Perdata," JURNAL RECHTENS 2, no. 2 (2013): 1–17, https://doi.org/10.36835/rechtens.v2i2.82.

37 Deviana Yuanitasari, et al., "A Comparison Study of Strict Liability Principles Implementation for the Product Liability within Indonesian Consumer Protection Law between Indonesia and United States of America Law," Cogent Social Sciences 9, no. 1 (2023), https://doi.org/10.1080/23311886.2023.2166761.

the normative gap identified above: without an explicit, quantitative lifespan standard to measure a claim against, consumers and enforcement agencies alike lack a clear evidentiary benchmark for bringing or deciding one. This is noted as a limitation of the available primary legal materials and a direction for future socio-legal research examining BPSK case files directly.

The absence of adequate education from producers places consumers in a vulnerable position, both legally and in terms of health protection. If gallon containers that have exceeded their lifespan limits continue to circulate without transparent information, and subsequently cause adverse health effects, business actors may be held liable under two legal frameworks: Law Number 8/1999 and food-safety regulations. Under Law Number 8/1999, Article 19 paragraph (1) affirms that business actors are responsible for providing compensation for damage, contamination, and/or consumer losses resulting from the consumption of goods produced or traded. This responsibility reflects a form of strict liability to a certain extent,[38] whereby consumers are not required to prove fault on the part of the business actor, but merely to demonstrate that losses resulted from products that failed to meet established standards. Law Number 18/2012 in conjunction with Government Regulation 86/2019 further reinforces the obligation of business actors to ensure that all products circulating in the market, including primary packaging, do not endanger consumer health.

Law Number 8/1999 also equips consumers with rights they may actively use for self-protection. Under Article 4 letters a and c, consumers are entitled to security and safety in consuming goods and to accurate, truthful information including the practical authority to refuse visibly damaged or worn gallon containers, request replacements from depots or sellers, and report business actors that continue distributing substandard containers. The Indonesian Consumers Community has played a strategic role here: its 2025 investigation pursued not only documentation but concrete demands for compensation and withdrawal of substandard gallons, reflecting the complaint and class-action mechanisms recognised under Article 46 paragraph (1) letters b and c, which grant standing to consumer groups and to non-governmental consumer-protection organisations alike.

Consumers who suffer losses are legally guaranteed several channels for reporting complaints: to BPSK under Articles 49–58 of Law Number 8/1999, which resolves consumer disputes through mediation, conciliation, or arbitration; to BPOM through its official complaint channels, given its supervisory authority over food and packaging safety; and, where violations have broad systemic impact, to the Directorate General of Consumer Protection and Trade Compliance pursuant to Government Regulation Number 58 of 2001. With these mechanisms available, the principal issue is no longer the absence of legal remedies but the lack of public awareness of the rights and channels that already exist underscoring the urgency of consumer education as an inseparable component of an effective consumer-protection system.

## 5. Suggestions

For BPOM and the Ministry of Industry, as the competent regulatory authorities, it is recommended that an explicit and quantitative technical standard be established for the maximum lifespan and permissible number of refill cycles of reusable gallon containers, whether expressed as a maximum period of use from the production date or a maximum number of documented refill cycles, accompanied by a mandatory, standardised, and consumer-legible lifespan indicator

[38] Fransiska Novita Eleanora, "Prinsip Tanggung Jawab Mutlak Pelaku Usaha terhadap Ketentuan Pasal 27 UU No. 8 Tahun 1999 tentang Perlindungan Konsumen," KRTHA BHAYANGKARA 12, no. 2 (2018): 207–228, https://doi.org/10.31599/krtha.v12i2.26.

printed or embossed on every gallon container. It is further recommended that BPOM periodically reassess the Annex 17.2 BPA migration threshold of BPOM Regulation 20/2019 against current international risk assessments, including the European Food Safety Authority's revised tolerable daily intake, to ensure that Indonesia's technical standard does not lag materially behind international scientific consensus.

For business actors and industry associations in the BDW sector, it is recommended that mandatory reporting and independent verification mechanisms be developed for the periodic inspection and withdrawal of ageing gallon containers, integrated with existing traceability systems such as production-code labelling, and that internal audit functions under the Food Safety Management System be strengthened and documented as part of routine compliance reporting to BPOM, consistent with prevailing SMKPO audit practice.[39] Industry associations are further encouraged to develop a shared, cross-company registry of gallon production codes to prevent ageing containers withdrawn by one producer from re-entering circulation through informal refill channels. For future research, this study recommends two lines of empirical and socio-legal investigation beyond its normative scope: laboratory-based measurement of BPA migration across gallons of varying ages actually in circulation, to build an official, peer-reviewed empirical basis independent of investigative journalism; and direct examination of BPSK case files to assess how, if at all, consumer disputes over gallon packaging quality are being resolved absent an explicit lifespan standard.

## 6. Conclusion

Based on the analysis above, the circulation of reusable gallon containers that have exceeded their lifespan within the BDW industry constitutes a systemic legal problem rather than an incidental violation. The high proportion of substandard gallons in circulation reflects a failure of corporate compliance and internal control, particularly in supervision, usage-cycle recording, and withdrawal mechanisms, indicating that business actors have not adequately fulfilled their legal obligations to ensure product safety. Legally, the continued circulation of gallons that have undergone physical and chemical degradation qualifies as a violation of consumers' rights to security, comfort, and safety under Law Number 8/1999, and further contravenes food-safety and SNI technical standards. Business actors may accordingly face civil, administrative, or criminal liability where negligence in maintaining product quality and safety can be proven.

This research further identifies a fundamental weakness in the regulatory framework itself: the absence of an explicit, quantitative lifespan standard for reusable gallons creates legal uncertainty and leaves business actors room to interpret packaging feasibility subjectively. As the comparison with the European Union and neighbouring ASEAN jurisdictions shows, Indonesia's technical standards lag behind both international scientific consensus and regional practice. Effective consumer protection therefore requires two simultaneous measures: strengthening corporate compliance and internal control among business actors, as elaborated in the Suggestions above, and pursuing regulatory reform that establishes clear, quantitative standards for the lifespan and refill cycles of reusable gallon containers. Only through both measures can consumer protection move beyond normative guarantee to practical effectiveness, securing public safety and sustainable accountability within the bottled drinking water industry.

[39] SIP Law Firm, "Pahami Kepatuhan & Audit AMDK."

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