

World Business Council for Sustainable Development

TIP: END-OF-LIFE TIRES

The WBCSD Tire Industry Project (TIP)—a voluntary, CEO-led initiative undertaken by 11 leading tire companies—is committed to advancing the successful recovery, reuse, and recycling of end-of-life tires (ELT). Today, it is estimated that one billion tires reach the end of their useful lives annually. This high turnover rate necessitates cooperation between tire manufacturers, retailers, governments, and tire users.

To advance sustainability, TIP has initiated and supported extensive research on ELT management systems globally, and is continually evaluating the best practices, innovative methods, and recovery rates that have made tires one of the most heavily recycled consumer products in the world. Although tire manufacturers are not directly involved in beneficial re-use markets for ELT, TIP believes its ELT analysis can be used to assess what beneficial re-use markets are optimal for society.

OBJECTIVES:

- Assess and evaluate the current landscape of ELT management, recovery rates and statistics
- Identify types and the pros & cons of ELT management systems
- Share research on ELT management—from insight to methodology to development

FOCUS:

- TIP formed the ELT working group in 2008 to help member companies better inform customers, government representatives, regulators, and the environmental community about ways to recover and manage ELT. This work has been accomplished through a series of reports published by TIP.
 - The report *Managing End-of-Life Tires* (2008) provides an overview on common recovery routes and the various management methods for ELT around the world.
 - The report *End-of-Life Tires, A framework for effective management systems* (2010) provides in-depth information about global ELT management systems and can help support the implementation or modification of an ELT management system.
 - The report *End-of-Life Tires, A Global State of Knowledge* (2017) evaluated the recovery rates, recovery routes, and management methods in 51 countries that account for 89% of the world's vehicles, updating the global map of ELT generation and identifying some of the most promising recovery routes for developing and developed markets.
- Recent research shows that ~25,000 kilotons of ELT are generated per year worldwide and ~17,000 kilotons of ELT are recovered annually.

- Among the 51 countries TIP evaluated, tires are recovered at approximately 67% — outpacing glass, aluminum, cardboard and paper. Regional recovery rates for ELT include¹:
 - Europe, 91%
 - United States, 87%
 - Japan, 85%
 - South Korea, 95%
- Each year, recovered tires are converted into new materials, fuels and reclaimed rubber, all of which contributes to the tire industry's efforts to build a circular economy. Post-recycling, ELT are most commonly used for the production of:
 - Material Recovery (47%)
 - Energy Recovery (20%)
 - Civil Engineering and Backfilling (2%)
- Effective ELT management systems may consist of extended Producer Responsibility (EPR) systems, government responsibility financed through a tax, and free-market systems. In practice, hybrid systems can be implemented and other variants of these systems also exist. However, a minimum level of intervention from the government is often necessary to properly develop the ELT recycling industry.

FACTS AND FIGURES

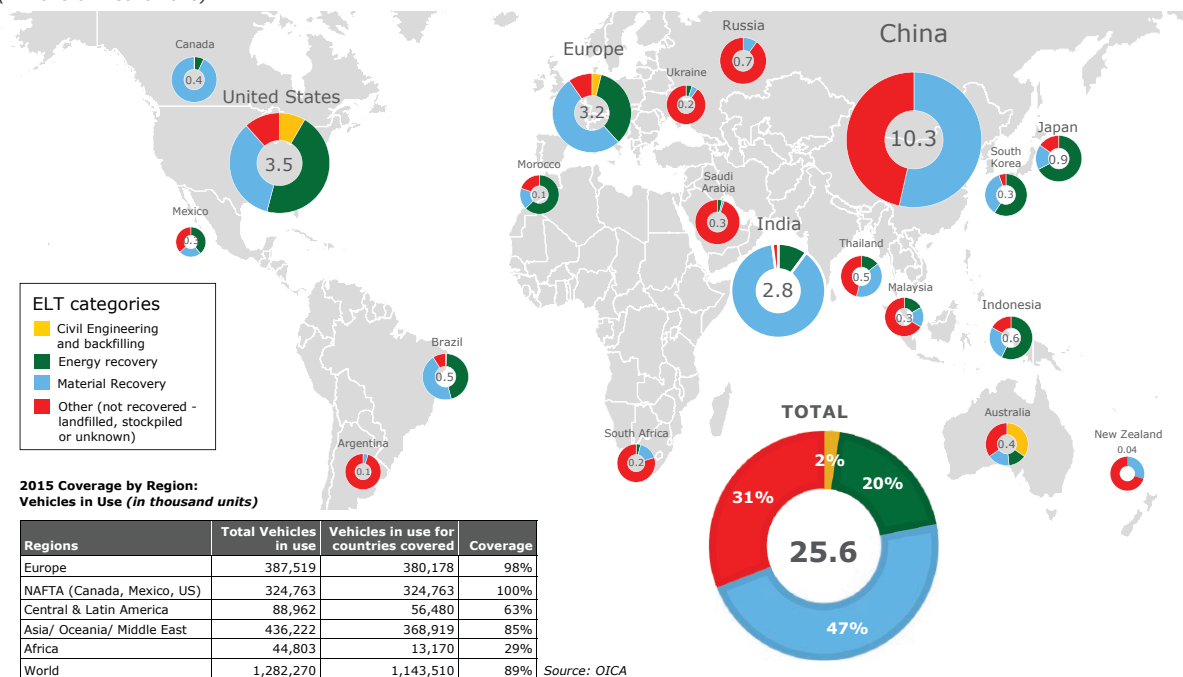
- It is estimated that **one billion** tires reach the end of their useful life **annually**.
- According to the TIP report *Global ELT Management - A global state of knowledge on collection rates, recovery routes, and management methods*, ELT are **recovered 67% of the time**.
- ELT are **recycled and recovered at higher rates** than peer materials such as aluminum cans, glass, cardboard and paper.
- Recovered tires can be used in applications such as **rubberized asphalt, civil engineering, reclaim rubber, energy recovery, and energy and material recovery in cement kilns**.

THE ROAD AHEAD:

- TIP will continue to research and identify data gaps pertaining to ELT management systems.
- TIP will add to the body of knowledge to help address data gaps in regulation, awareness and technological advancements.
- TIP will communicate findings to the tire industry, trade associations and external stakeholders to help advance the beneficial use of ELT.

End-of-Life Tires Recovery Rates by Region

(Millions of Metric Tons)



¹Source: Deloitte "Global ELT Management—A Global State of Knowledge on Collection Rates, Recovery Routes, and Management Methods" 2017

ABOUT THE WORLD BUSINESS COUNCIL FOR SUSTAINABLE DEVELOPMENT

WBCSD is a global, CEO-led organization of over 200 leading businesses working together to accelerate the transition to a sustainable world. We help make our member companies more successful and sustainable by focusing on the maximum positive impact for shareholders, the environment and societies.

Our member companies come from all business sectors and all major economies, representing a combined revenue of more than US\$8.5 trillion and with 19 million employees. Our Global Network of almost 70 national business councils gives our members unparalleled reach across the globe. WBCSD is uniquely positioned to work with member companies along and across value chains to deliver high-impact business solutions to the most challenging sustainability issues.