THE CASCADING MATERIALS VISION

extending the life of our natural resources

Our Vision

We envision a global system of efficient, cascading reuse of materials, allowing every business and industry to protect their profits, the environment, and the future wealth of our natural resources.

Our Purpose

Aligned around this shared vision of a responsible future, we aim to use a common framework of guiding principles in order to

- Inform decision-making that will expand the availability and use of high-quality secondary materials
- Influence all relevant sectors toward achievable, sustainable, and inclusive solutions that address the systemic issues that prevent the creation, trade, and use of secondary materials

The Cascading Materials Vision was developed by a collaboration spearheaded by WWF that brings together the world's leading companies, policy-makers, and environmental nonprofits.

Guiding Principles

1. Maximize Benefit: Maximize environmental and social benefit and measure impact.

    1.1 Waste solutions should be evaluated by the effect they will have on the environment and people—with the goal of mitigating negative impacts, creating shared value, and increasing recovery.

    1.2 Measurable metrics should be in place to evaluate the effectiveness of any implemented project.

2. Shared Value: Sharing responsibility and accountability across sectors is key, and should be balanced by shared value creation.

    2.1 The entire value chain has shared responsibility for the end of life of their products, but also shared opportunity to benefit from value created through better materials management and increased access to secondary materials.

3. Inclusive Solutions: The health, safety, and welfare of local communities, waste workers, and the public are critical factors.

    3.1 Better environmental performance should not come at the expense of the welfare, safety, or health of local people or waste workers. Ultimately success depends on the actions of local people and inclusive planning processes are needed to ensure their support.

    3.2 The safety and quality of secondary materials is critical, and solutions must ultimately result in secondary materials that meet quality and cleanliness standards appropriate to their application.

4. Effective Policy: Sensible legislation that supports viable solutions.

    4.1 Policy and legislation should take into account all relevant factors, and should ultimately aim to support programs that are sustainable socially, environmentally, and economically. Legislation should strive to support innovative and practical solutions that meet these criteria.

5. Adaptability: Solutions that work today and can adapt for tomorrow.

    5.1 Avoid investment in solutions which will either quickly become obsolete or prevent innovation. Any proposed waste solution should be able to build on the current landscape (limited or available waste infrastructure, current waste stream material mix, etc.) and be able to adapt to future changes. For example, separate collection or separation of dry and wet waste allows for more flexibility as different materials can be treated differently.

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6. Integrated Approach: Innovation in the design of products and in waste management should be connected.

   6.1 Connecting product design innovation and waste management innovation is key—the two must work together within a system where all impacts and values are considered. Effective waste management is heavily dependent on the mix of materials and forms collected, and the end of life impacts of a product are dependent on what waste management systems are in place.

   6.2 Minimization of waste is part of efficient resource use, and should be used in concert with waste management infrastructure. Both waste minimization and waste management are needed, and waste management should not be disregarded in favor of solely minimizing waste.

7. Embrace Diversity: Support multiple solutions.

   7.1 Regional differences and material property differences necessitate many solutions—there is no silver bullet that fits all situations.

8. Systems Approach: Infrastructure development should be done in parallel with capacity building and citizen engagement.

   8.1 All components must be in place for waste management systems to function effectively.

   8.2 Better waste management depends on behavior change; an engagement program (including education, communication of any incentives, etc.) is key to long-term success.

9. Cascading Value: Solutions should capture the value of materials as resources. Biodegradability is valuable in targeted applications coupled with proper infrastructure, but not a solution to litter or marine debris.

   9.1 Designing for ultimate biodegradability in conjunction with food and biowaste for managed end of life disposal systems (such as compositing and anaerobic digestion) offers value as an environmentally responsible management approach. Context should be used to judge when this is the best option to extract value from materials—biodegradation should not be considered a viable strategy for litter control.

   9.2 Even if ultimate biodegradation can be reliably achieved (very uncertain given the range of environmental conditions), the littered material will still impact people and the environment while it is degrading. Furthermore, the biodegradation of valuable materials does not ultimately support the use of secondary materials (e.g., cascading use and circularity).

   9.3 Biodegradability for marine equipment (fishing nets and line, etc.) could be an added value in case of loss, but not a plan for waste management.

10. Informed by Science: Additives that promote degradability of plastic are not solutions for waste management, unless credible third-party evidence of full degradability in the range of environments and conditions in question proves otherwise.

    10.1 This applies to any substance added to a nonbiodegradable plastic with the intent of promoting degradation (i.e., oxo-degradable, photo-degradable, starch, enzymes, and other additives). Currently there is no credible evidence that these additives offer an environmental benefit compared to plastics which do not contain them.

    10.2 Even if third-party evidence of full biodegradation is obtained, biodegradability is not a solution to litter or marine debris (see point 9).