

6. Conclusions

Plastics include a wide range of materials, characterized by specific properties, such as, for example, lightness, resistance and cost-effectiveness. These properties make plastics irreplaceable in several applications and have contributed to making our lives easier, safer, healthier, more economical and more sustainable in many sectors. Plastic waste management is an important issue for the sustainability of the entire sector: institutions, industries, and associations have already started actions to increase the circularity of these materials and reduce the dispersion of plastic waste in the environment, with important results especially in Europe. However, further efforts are needed to reach the ambitious targets. To increase the sustainability of plastic materials, there is not a unique solution: it is necessary to rethink the entire life cycle according to circular economy model, from the selection of materials, the design phase, to production and use, up to the virtuous management of product at their end of life. Using a scientific approach, all stakeholders at every step of the value chain are called to give their own contribution. Levering research and innovation, plastics sector can overcome the challenges which has ahead: renewable raw materials (including wastes) and advanced recycling technologies represent valid solutions, and their development can be accelerated thanks to the numerous alliances and platforms which have born in recent years.

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