

# The Global Market for Bio-based and Sustainable Materials 2023-2033

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## Abstracts

With the need to supplement global plastics production with sustainable alternatives, and the dearth of available recycled plastic (~9% of the world's plastic is recycled), many producers are turning to bio-based alternatives. Bio-based materials refer to products that mainly consist of a substance (or substances) derived from living matter (biomass) and either occur naturally or are synthesized, or it may refer to products made by processes that use biomass. Materials from biomass sources include bulk chemicals, platform chemicals, solvents, polymers, and biocomposites. The many processes to convert biomass components to value-added products and fuels can be classified broadly as biochemical or thermochemical. In addition, biotechnological processes that rely mainly on plant breeding, fermentation, and conventional enzyme isolation also are used. New bio-based materials that may compete with conventional materials are emerging continually, and the opportunities to use them in existing and novel products are explored in this publication.

There is growing consumer demand and regulatory push for bio-based chemicals, materials, polymers, plastics, paints, coatings and fuels with high performance, good recyclability and biodegradable properties to underpin transition towards more sustainable manufacturing and products.

The Global Market for Bio-based and Sustainable Materials 2023-2033 presents a complete picture of the current market and future outlooks, covering bio-based chemicals and feedstocks, materials, polymers, bio-plastics, bio-fuels and bio-based paints and coatings. Contents include:

In depth market analysis of bio-based chemical feedstocks, biopolymers, bioplastics, natural fibers and lignin, biofuels and bio-based coatings and paints.

Global production capacities, market volumes and trends, current and forecast to 2033.

Analysis of bio-based chemical including 11-Aminoundecanoic acid (11-AA), 1,4-Butanediol (1,4-BDO), Dodecanedioic acid (DDDA), Epichlorohydrin (ECH), Ethylene, Furan derivatives, 5-Chloromethylfurfural (5-CMF), 2,5-Furandicarboxylic acid (2,5-FDCA), Furandicarboxylic methyl ester (FDME), Isosorbide, Itaconic acid, 5 Hydroxymethyl furfural (HMF), Lactic acid (D-LA), Lactic acid – L-lactic acid (L-LA), Lactide, Levoglucosenone, Levulinic acid, Monoethylene glycol (MEG), Monopropylene glycol (MPG), Muconic acid, Naphtha, 1,5-Pentametylenediamine (DN5), 1,3-Propanediol (1,3-PDO), Sebacic acid and Succinic acid.

Analysis of synthetic bio-polymers and bio-plastics market including Polylactic acid (Bio-PLA), Polyethylene terephthalate (Bio-PET), Polytrimethylene terephthalate (Bio-PTT), Polyethylene furanoate (Bio-PEF), Polyamides (Bio-PA), Poly(butylene adipate-co-terephthalate) (Bio-PBAT), Polybutylene succinate (PBS) and copolymers, Polyethylene (Bio-PE), Polypropylene (Bio-PP) and Starch.

Analysis of naturally produced bio-based polymers including Polyhydroxyalkanoates (PHA), Polysaccharides, Microfibrillated cellulose (MFC), Cellulose nanocrystals, Cellulose nanofibers, Protein-based bioplastics, Chitosan, Algal and fungal materials.

Analysis of market for bio-fuels.

Analysis of types of natural fibers including plant fibers, animal fibers including alternative leather, wool, silk fiber and down and polysaccharides.

Markets for natural fibers, including composites, aerospace, automotive, construction & building, sports & leisure, textiles (including biobased leather), consumer products and packaging.

Production capacities of lignin producers.

In depth analysis of biorefinery lignin production.

Analysis of the market for bio-based, sustainable paints and coatings.

Analysis of types of bio-coatings and paints market including Alkyd coatings, Polyurethane coatings, Epoxy coatings, Acrylate resins, Polylactic acid (Bio-PLA), Polyhydroxyalkanoates (PHA), Cellulose, Rosins, Biobased carbon black, Lignin, Edible coatings, Protein-based biomaterials for coatings, Alginate etc.

Profiles of over 850 companies. Companies profiled include Aisti Corporation Oy, Algal Bio, AMSilk GmbH, Arkema, Avantium, BASF, Bioform Technologies, Biotic, Bolt Threads, Borealis, Braskem, B'ZEOS, Cathay, CJ Biomaterials, Danimer Scientific, DMC Biotechnologies, Dupont, Ecovative, EnginZyme, Full Cycle Bioplastics, Genecis, Humble Bee Bio, Indorama, Loliware, Keel Labs, Kraig Biocraft Laboratories, Mitsubishi Chemicals, Mycel, MycoWorks, Natrify, NatureWorks, Notpla, Novamont, PeriSkin, PILI, Plastus, Prometheus Materials, Silvis Materials, Smartfiber, Spiber, Stora Enso Oyj, Traceless Materials GmbH, Total Corbion and Venvirotech.

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