Ms. Sumy Sebastian is a Senior Scientific Officer (Polymer) i/c at the Central Coir Research Institute (CCRI), Coir Board, Ministry of MSME, Government of India, with more than 19 years of experience in research, development, testing, and standardization of coir and polymer-based products. She holds a Diploma in Polymer Technology from Government Polytechnic College, Koratty, a B.Tech in Polymer Engineering with Distinction from M.G. University College of Engineering, Kerala, and an MS by Research from the Indian Institute of Technology (IIT) Palakkad. She is currently pursuing M.Tech in Polymer Engineering and Nanotechnology at Mahatma Gandhi University, Kottayam.

Ms. Sebastian possesses over 19 years of professional experience in polymer engineering, materials technology, product testing, and research, including more than 15 years of dedicated research experience in the coir sector. Prior to joining the Central Coir Research Institute, Ms. Sebastian gained valuable industrial and research experience in diverse sectors of polymer and materials engineering. She worked as a Quality Controller at National Paints Factories India Pvt. Ltd., Angamaly, where she was involved in quality assurance and product evaluation of coating materials. Earlier, she served as a Junior Analyst at Thomson Reuters, Hyderabad, and as a Rubber Technologist at Haritha Hawai Ltd., contributing to product development and quality improvement initiatives. She also underwent professional training at Apollo Tyres Ltd., Kalamassery, which provided a strong foundation in rubber technology and industrial manufacturing processes. Her multidisciplinary expertise bridges polymer engineering and natural fibre technology, enabling the development of innovative, environmentally sustainable solutions for engineering and infrastructure applications.

At CCRI, she is actively involved in research and development activities related to coir geotextiles, coir-polymer composites, natural fibre modification, sustainable materials, and value-added coir products. Her expertise encompasses polymer characterization, testing of coir and coir products, product development, and quality evaluation. She has made significant contributions towards the development of eco-friendly and sustainable materials for geotechnical, environmental, infrastructure, automotive, and domestic applications.

Ms. Sebastian has authored and co-authored numerous research papers published in reputed national and international journals and conference proceedings. Her research work focuses on enhancing the performance and durability of coir fibres, yarns, and geotextiles through

innovative modification techniques, thereby promoting the wider adoption of natural fibre-based engineering materials. She has presented her research findings at several prestigious national and international conferences, including events organized by IIT Madras, IECA-USA, and other leading scientific forums. Her research publications and citations can be accessed through her Google Scholar Profile and ResearchGate Profile,.

She plays an active role in the standardization of coir products and serves as a member of multiple Bureau of Indian Standards (BIS) sectional committees. She has contributed significantly to the formulation of standards and technical guidelines related to coir products and coir geotextiles, including inputs to IRC and RDSO guidelines for infrastructure applications. In recognition of her contributions, she has received appreciation from BIS and the Chairman, Coir Board, for her efforts in standardization and technology promotion.

An accomplished innovator, Ms. Sebastian is a co-inventor of several Indian and international patents covering advanced coir-based composites, weather-resistant geotextiles, and sustainable material technologies. She has also guided postgraduate research projects in areas such as nanotechnology, fibre modification, wastewater treatment, and value addition of coir by-products.

Through her research, publications, patents, and standardization activities, Ms. Sebastian continues to contribute towards the advancement of sustainable materials and the development of innovative coir-based technologies that support environmental conservation, circular economy principles, and the sustainable growth of the coir industry.