

## **Co-producing a Research Agenda for Sustainable Palm Oil**

### **ABSTRACT**

The rise of palm oil as the world's most consumed vegetable oil has coincided with exponential growth in palm oil research activity. Bibliometric analysis of research outputs reveals a distinct imbalance in the type of research being undertaken, notably a disproportionate focus on biofuel and engineering topics. Recognizing the expansion of oil palm agriculture across the tropics and the increasing awareness of environmental, social, and economic impacts, we seek to reorientate the existing research agenda toward one that addresses the most fundamental and urgent questions defined by the palm oil stakeholder community. Following consultation with 659 stakeholders from 38 countries, including palm oil growers, government agencies, non-governmental organizations, and researchers, the highest priority research questions were identified within 13 themes. The resulting 279 questions, including 26 ranked as top priority, reveal a diversity of environmental and social research challenges facing the industry, ranging from the ecological and ecosystem impacts of production, to the livelihoods of plantation workers and smallholder communities. Analysis of the knowledge type produced from these questions underscores a clear need for fundamental science programmes, and studies that involve the consultation of non-academic stakeholders to develop “transformative” solutions to the oil palm sector. Stakeholders were most aligned in their choice of priority questions across the themes of policy and certification related themes, and differed the most in environmental feedback, technology and smallholder related themes. Our recommendations include improved regional academic leadership and coordination, greater engagement with private and public stakeholders in Africa, and Central and South America, and enhanced collaborative efforts with researchers in the major consuming countries of India and China.