

Preface

In many region municipal solid waste has not been treated properly. It creates many problems not only environmental but also social and economic issues. It is sadly to say also that local and appropriate technology related to solid waste treatment is not properly developed. The awareness of the local people and government related to this issue are also quite low. It's still clearly seen in some area there are illegal waste dumping and handling, beaches and seas full of plastic waste, polluted rivers, overloaded landfills, even more animal raising and illegal settlement in the landfill sites.

On the other hand, we also experience non-renewable resource depletion. Almost all of natural resources have been exploited and overused. After their lifetime all are dumped as waste. This unsustainable practice has to be stopped immediately. We should seek a way of minimizing the resource extraction and maximizing the waste recycle. To address this issue, this year we take the theme: **Pursuing Sustainability through Circular Economic Society**.

The background to this theme actually due to our great concern related to the current situation of municipal solid waste condition in our regions. In 2017, initiated by researcher in PIAT UGM, about 40 lecturers and practitioners who share a common interest established a forum called Indonesian Solid Waste Forum (ISWF) that become a platform to held many activities related to solid waste research and development including annual symposium and scientific publication.

This book as the result of ISWF annual meeting that covers topics about green technology, cleaner production, pollution prevention, physical separation and pre-treatment, physical and chemical characterization method, energy production: solid waste to energy, solid waste thermal treatment, bio-conversion of solid waste, agricultural bio-product recycle and reuse, fertilizer production from natural resources, municipal solid waste emerging technology, urban Mining, life cycle assessment of solid waste treatment, bio-refinery, and life cycle analysis. We do hope that we can start to provide some small but meaningful answers to the huge problem of solid waste management for the better and sustainable future.