



"Gheorghe Asachi" Technical University of Iasi, Romania



INDONESIAN ECO-INDUSTRIAL PARK BLUEPRINT: IMPLEMENTING BEST PRACTICES FROM INTERNATIONAL SUCCESS STORIES

**Taufiq Dwi Tamtomo^{1*}, Heri Apriyanto¹, Agung Wiratmoko¹, Noorish Heldini¹,
Agusta Samodra Putra¹, Nugraheni Setiastuti¹, Dhita Ayu Pradnyapasha¹, Warseno¹,
Citra Ardiana¹, Hermawan Febriansyah¹, Amita Indah Sitomurni¹,
Nugroho Adi Sasongko¹, Nurus Sahari Laili¹, Hermawan Prasetya², Ahsan Nurhadi³**

¹Research Center for Sustainable Production System and Life Cycle Assessment, National Research and Innovation Agency (BRIN), the B.J. Habibie Science and Technology Area (KST), South Tangerang, Indonesia

²Directorate of Economy, Employment, and Regional Development Policy, National Research and Innovation Agency (BRIN), B.J. Habibie Building, Jakarta, Indonesia

³The Center for Environmental Studies, Universitas Gadjah Mada, Yogyakarta, Indonesia

Abstract

Eco-industrial parks (EIPs) have emerged as a promising approach to fostering sustainable industrial development worldwide. International EIPs have been successful in implementing best practices for sustainable industrial development. The concept of EIPs offers a promising solution to improve environmental, economic, and social performance through collaboration between businesses, government, and society. However, implementing EIPs in developing countries like Indonesia still faces challenges. This study aimed to examine the best practices of international EIPs, their applicability to Indonesian EIP development, and develop a strategy to overcome the gap. The study identifies important components that support and hinder the development of EIP in Indonesia through best practices, SWOT analysis, and I-E matrix. The results show that EIP development has key drivers to be implemented and create a sustainable industrial development in Indonesia. The key drivers found from this study are the potential of large industrial area, natural resource, infrastructure, skilled worker and awareness in sustainable development goals. In addition, a proposed framework, such as community capacity building can play a role in EIP development through the economy and environmental protection. Finally, policies and guidelines for EIP development in Indonesia are necessary.

Key words: blueprint, eco-industrial park, sustainable development, best practice, key drivers

Received: January, 2024; Revised final: November, 2024; Accepted: November, 2024

* Author to whom all correspondence should be addressed: e-mail: taufiq.dwi.tamtomo@brin.go.id; Phone: +62856 1923160