

**AN EXAMINATION OF CONCEPT OF INDUSTRIAL
ECOLOGY WITH SPECIAL REFERENCE TO
THELAWALA INDUSTRIAL AREA**

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DECLARATION

I declared that this research project report represent my own work, except where due acknowledgement is made and that has not been previously included in a thesis, dissertation, or report, submitted to the University of Moratuwa or any other institution for a degree, diploma or other qualification. I wish to also declare that the total number of words of the body of this report (excluding the tables, appendices, end note and the bibliography) is 15,000 words.

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CERTIFICATION

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ABSTRACT

Industrial Ecology is an industrial environmental management concept with an analogy in the natural ecosystem. In an ecosystem, materials are recycled between organisms, and energy is embedded in the matter of the food chain, while the only external input to the system as a whole is the solar energy. Ecosystem is a system where the industrial actors use this natural recycling model and co-operate by using each other's waste material and waste energy flows to minimize the system. An Industrial virgin material and energy input as well as the waste and emission output from the system as a whole. In theory, concept of Ecology system has been defined as raw material, emission control and waste management costs are reduced through using waste as a resource of production.

The Development of Industrial Ecology is an attempt to provide a new conceptual framework for understanding the impacts of industrial systems on the environment. This new framework helps to identify and then implement strategies to reduce the environmental impacts of products and processes associated with industrial systems, with an ultimate goal of achieving sustainable development. Industrial ecology is the study of the physical, chemical, and biological interactions and interrelationships both within and between industrial and ecological systems. Additionally, some researchers argue that Industrial Ecology involves identifying and implementing strategies for industrial systems to more closely emulate harmonious, sustainable, Ecological Ecosystems.

In this context, the present study attempts to analyze the application of Industrial Ecology concept in Sri Lanka with special reference to the Thelawala Industrial Area located in Moratuwa town in the District of Colombo, Sri Lanka.

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LIST OF ABBREVIATIONS

| | | |
|--------------------|---|---|
| BOI | - | Board of Investment |
| (CEA) | - | Central Environment Authority |
| (CO ₂) | - | Carbon Dioxide |
| (EDB) | - | Export Development Board |
| (EPL) | - | Environmental Protection License |
| GCEC | - | (Greater Colombo Economic Commission |
| (GIS) | - | Geography Information System |
| (GNP) | - | Gross National Product |
| (IEE) | - | Initial Examination |
| (IE) | - | Industrial Ecology |
| (MOID) | - | Ministry Of Industrial Development |
| (MMC) | - | Moratuwa Municipal Council |
| (RISC) | - | Regional Industrial Services Committees |
| (RDA) | - | Road Development Authority |
| (SPMU) | - | Symbioses Project Management Unit |
| (SO ₂) | - | Sulfur Dioxide |
| (SCP) | - | Sustainable consumption and production |
| UDA | - | Urban Development Authority |
| (USA) | - | United States of America |