Eco-Towns in Japan

-Implications and Lessons for Developing Countries and Cities-

June, 2005

Global Environment Centre Foundation

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Acknowledgments

This research paper was prepared in close collaboration with the Research Institute for Environment and Society, whose contribution is greatly appreciated.

In preparing the case studies, the City of Kawasaki, General Planning Bureau and Economic Affairs Bureau, the City of Kitakyushu, Environmental Industries Promotion Office, the City of Minamata, Industries and Constructions Bureau, and the Prefecture of Kagawa, gave a significant assistance to the site surveys and information collections for this report.

The help and advice provided by the United Nations Environment Programme, International Environmental Technology Center, in preparing this report, particularly in the last chapter, is also gratefully acknowledged. We wish to thank all experts who participated in and gave a tremendous contribution to the "High Level Meeting on 3R and Integrated Waste Management through Eco-Town Development" which took place in Osaka on 7th June 2005.

Acronyms

3R: Reduce, Reuse and Recycling
CSR: Corporate Social Responsibility
EMS: Environment Management System
EST: Environmentally Sound Technology
ISO: International Organization for Standardization
METI: Ministry of Economic, Trade and Industry
MoE: Ministry of the Environment
NOx: Nitrogen Oxide
NPO: Nonprofit Organization
PDCA: Plan, Do, Check and Assessment
PET: Polyethylene Terephthalate
PR: Press Release
SME: Small and Medium-sized Enterprise
SOx: Sulfur Oxide

1. Introduction

Eco-Towns in Japan were developed in the last seven years by utilizing regional technologies and industries in Japan. Eco-Towns have a number of key features such as (a) strong legislation, shifting the market towards a sound material-cycle society, (b) national and local governments are spearheading the drive to bring together industry clusters to be more sustainable, (c) increasing product research and development – in both public and private sectors, including universities, (d) large and rapidly expanding eco-business market, domestically and internationally, (e) strong focus on environmental technologies and ESTs, and innovative/cutting-edge solutions to solve environmental problems, and (f) focus on energy conservation, material development and integrated waste management are also features of Eco-Towns.

Eco-Town concepts have recently expanded to include the 3R (Reduce, Reuse and Recycling) concepts and building an economy based on the life-cycle approach as well as accumulation of recycling facilities. The target of the 3R concept is to achieve sustainable consumption and production by means of information access, market creation and networking, policy and strategy development, application and implementation of ESTs, regional corporation, and building sustainable commitment (fig. 1-1). In addition to the 3R, Eco-Town concepts also involve green procurement, green consumerism, industrial ecology, extended producer responsibility, socially responsible investment, integrated waste management, green labeling, global reporting initiative, corporate social responsibility, EMS and ISO 14001. “Eco-Town” therefore becomes a defined area, a laboratory, where various different eco-concepts can be developed and implemented.

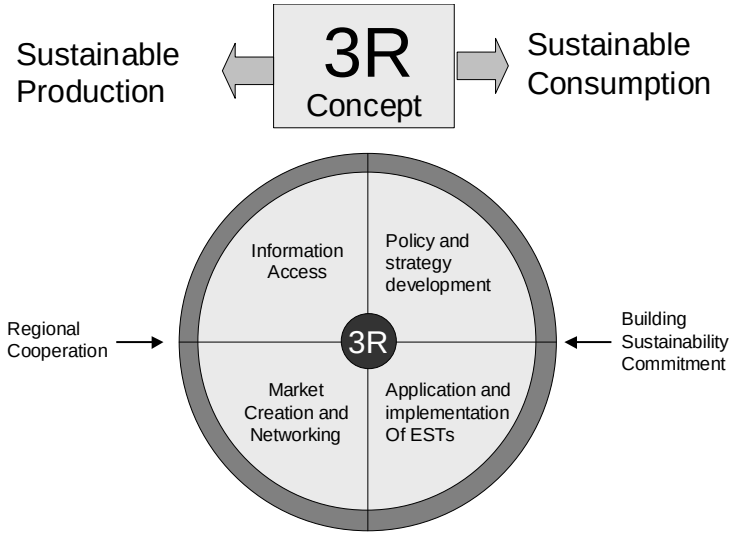

Fig.1-1. 3R Concept

Figure 1-2 shows the relationship between the Eco-Town concept and other similar concepts (Eco-Industrial Parks, Industrial Symbiosis and Eco-City concept: refer to table 1-1). The Eco-Town concept, which originally focused on the individual systems related to 3R, have now expanded to include Eco-Industrial Parks and Industrial Symbiosis to focus on collective areas, and become part of the Eco-City concept, to focus on overall urban planning and urban ecosystems, civil society and greening of cities.

A number of developmental objectives have been simultaneously achieved in eco-towns. It has helped to stimulate the local economy and secure employment as well as to dispose waste in an environmentally sound manner and protect air and water resources. A number of lessons have been learnt in the setting up of such eco towns in Japan, not only within these eco towns, but also in the cities where they are located. This report focuses on identifying the key lessons learnt in the setting up of the eco towns (through four case studies). These lessons will help in the development of step-by-step guidelines for local and national governments in developing countries to set up eco-towns in their countries.

Chapter 2 provides on overview of the Eco-Towns in Japan, focusing on the roles of stakeholders. Chapters 3 to 6 introduce four distinguishing Eco-Towns in Japan (Kawasaki, Kitakyushu, Minamata and Naoshima Eco-Town), and presents case studies of those Eco-Towns. The case studies give an outline of the features of the projects, municipal support, environmental activities, and partnerships among stakeholders. Chapter 7 presents some of the lessons learnt from the case studies, including prerequisites for the establishment of an Eco-Town, drivers and tools, and triple bottom lines benefits, and suggests a step-by-step flowchart.

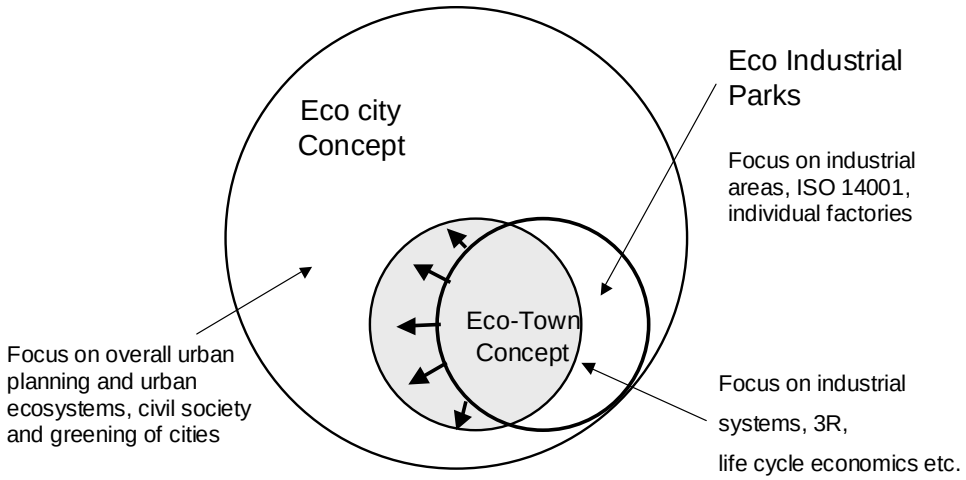

Fig.1-2. Eco-Town concept and other similar concepts

Table 1-1: Concepts and definitions similar to Eco-Towns

Concepts	Definitions	Reference
Eco-Industrial Park	An eco-industrial park is a community of manufacturing and service businesses seeking enhanced environmental and economic performances through collaboration in managing environmental resource issues, including energy, water and materials	(*1)
Eco-Industrial Park	The goal of an EIP is to improve the economic performance of the participating companies while minimizing their environmental impacts. Components of this approach include green design of park infrastructure and plants (new or retrofitted); cleaner production, pollution prevention; energy efficiency; and inter-company partnering. An EIP also provides benefits for neighboring communities to assure that the net impact of its development is positive.	(*2)
Industrial Symbiosis	Industrial symbiosis, as part of the emerging field of industrial ecology, demands resolute attention to the flow of materials and energy through local and regional economies. Industrial symbiosis engages traditionally separate industries in a collective approach to competitive advantage involving physical exchange of materials, energy, water, and/or by-products.	(*3)
Eco City	The path to sustainability lies in transformation of our cities to restore the patterns and processes of sustainable ecosystems and to achieve ecological balance, healthy communities and viable economies within the bioregions.	(*4)