

ECO-INDUSTRIAL PARKS

Transforming business as usual

How can we balance environmental protection and industrial growth? In developing and transitional economies, industrial growth is needed to alleviate poverty, deliver goods and services, create jobs and raise living standards. However, this industrial activity also consumes material resources, water and energy at an unsustainable rate, as well as emitting more toxins, pollutants and waste than the earth's ecosystems can handle. If we want to protect human societies and the environment, "business as usual" is no longer viable. Any future economic growth must be decisively decoupled from increased resource use and negative environmental impacts. This decoupling is an integral part of inclusive and sustainable industrial development (ISID) processes.



From industrial to eco-industrial

An industrial park or industrial estate is an area zoned for industrial development. Industrial parks are drivers of industrialization and prosperity and can foster rapid economic development; the transfer and adaptation of technologies; and the creation of knowledge and skills. To become an eco-industrial park, an industrial park must demonstrate higher standards of environmental and social responsibility, resource efficient production methods and reuse of waste energy and waste materials.

What is an eco-industrial park?

"An **eco-industrial park** or estate is a community of manufacturing and service businesses located on a common property. Member businesses seek enhanced environmental, economic, and social performance through collaboration in managing environmental and resource issues".

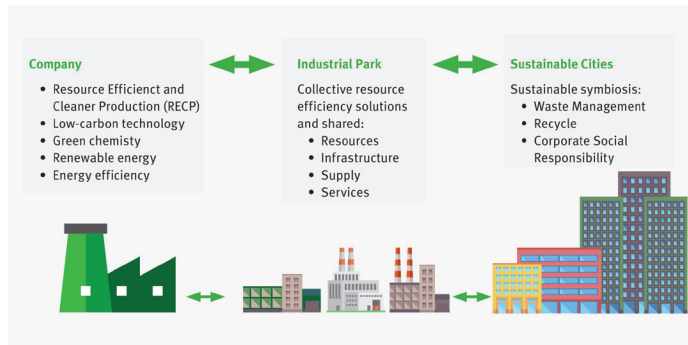
Industrial symbiosis is when traditionally separate industries work collectively to enhance their competitive advantage – involving the physical exchange of materials, energy, water and/or byproducts. Eco-industrial parks are organized in a synergistic manner that mimics natural systems so that "waste" from one company becomes a resource for another company. When waste is sold as a byproduct, business relations change, instilling proactivity and environmental stewardship.



UNIDO makes it green

Eco-industrial parks reject the trade-off between economic growth and environmental protection, integrating economic opportunities and improved eco-systems, as well as innovative avenues for business. This is particularly important for countries with developing and transitional economies. UNIDO supports mainstreaming and upscaling eco-industrial parks in these countries, and in doing so, promotes inclusive and industrial sustainable development (ISID).

Industrial-urban symbiosis fosters inclusive and sustainable development through outward integration



In locations with existing industrial activity, known as brown field locations, UNIDO follows a holistic methodology which includes approaching companies on an individual level and addressing infrastructural, management and zoning structures.

For new or planned industrial parks, known as green field sites, UNIDO takes a different approach. In these cases, sustainability issues can be considered from the outset. During the planning phase, UNIDO helps to conduct a social and environmental impact assessment and produces a master plan including location choice, construction guidelines, economic viable criteria as well as zoning, infrastructural and land use planning.



Michelle Zhao, Chairwoman,
Sino-Swiss Zhenjiang Eco-Industrial Park

“As beneficiaries of the EIP programme, we expect to build up a systematic network of relevant experts, and that enterprises will develop more advanced methods and a clearer idea of Cleaner Production, which will help them to gain both social and economic benefits.”

Local, national, global

In countries with developing and emerging economies – including China, Colombia, India, Indonesia, Morocco, Peru, Senegal, South Africa and Viet Nam – ongoing UNIDO projects show the great potential of the eco-industrial park model. This is promising progress towards the aims and objectives of industrial resource efficiency and sustainable production.

In addition, UNIDO promotes the development of national programmes for eco-industrial parks, as in Latin America and China. These programmes aim to link existing local projects into a network of national stakeholders and to facilitate a country’s efforts to undertake comprehensive and coordinated strategic planning of eco-industrial parks. As such, best practices and lessons learned can be exchanged on a supra-regional level.

Building on these achievements, an ongoing international process to define eco-industrial parks – together with the World Bank Group, GIZ, University of Ulsan, University of Lausanne and further stakeholders – will support the efforts to decouple economic growth from resource use and negative environmental impacts. The minimum requirement for an industrial park to qualify as eco-industrial is that the park’s performance exceeds national compliance and regulations. This necessitates a focus on companies as well as overall park management, which is crucial to ensure continuous environmental improvement, community connections and business success.



One of UNIDO’s main goals is to improve and expand resource efficient and cleaner production practices in order to move beyond eco-industrial parks. This means incorporating these sustainable practices into the framework of a sustainable city. In a sustainable city, industrial, economic and social symbiosis can be achieved on a more holistic level, which takes into account all aspects of sustainable urban planning.

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