

Industrial Ecology ?

The industrial activity is often perceived as having a negative impact on the environment, but economic activities and the protection of the Biosphere can go hand in hand.

In fact, industrial ecology can **reconcile businesses and environmental stakes** by not considering the industrial activity as an independent system of the Biosphere, but thinking it as an agent improving the quality of the environment.

By doing this, industrial ecology aims at developing **clean production** methods to minimize waste and negative emissions polluting the environment. This kind of objective can be translated by the concept of **'Zero Emissions'** and **'Zero Carbon'**.

The CTTÉI applies this approach by **reviewing the design in the first of the products and services'** conception in order to reduce their environmental impacts. The ecodesign of products and services can also be associated with the implantation of **cleaner technologies** and antipollution procedures on the production chain.

Ideally combined to **ecotechnologies** which use nature's potentials to replace an anthropogene technology, the industrial activity will tend to **ecoefficiency** and the products and services to **ecoefficacy**.

In a similar way, cleaner production and industrial ecology count on the **metabolism of industrial systems** where they are both producers and users of secondary materials. In this kind of situation, spoilage is considered a resource and not a waste. It is in fact through **by-product synergy** that the CTTÉI identifies the possible exchanges of material or energy between enterprises. The resulting **symbiosis** promises economic, environmental and social benefits for the concerned parties.

Finally, it is possible to say that industrial ecology integrates most of the environmental management concepts and favors **transdisciplinary collaboration**. In this perspective, the work accomplished by the CTTÉI is sustainable because the concerned parties are engaged and concerted in this approach. The ultimate goal is then to optimize the life cycle of the material and the energy used by the economic activities of a defined territory.

Hereby, the interactions of the environmental management concepts through the life cycle thinking are illustrated. The more the concepts are on an exterior orbit, the more they tend to include the underlying concepts.

Industrial Ecology in relations

