



## New business models for resource efficient and cleaner production

### Background

As sustainability has gained ground on corporate, national and international agendas, the role of innovation not only in economic value creation but also in resource efficient and cleaner production (RECP), and environmental and social development is gaining more and more recognition. Lack of financing and the lack of a business case are among the most commonly cited and persistent barriers to acquiring RECP services and implementing RECP opportunities. The introduction of new business models for RECP could become a powerful solution to overcome these barriers by increasing the logical appeal of RECP services. New business models for RECP help pave innovative ways of taking products, processes or services to the market, adding value to the business of both the user and the provider. New business models may include alternative financial planning networks and simultaneously bring social, economic and environmental benefits.

### Approach

The United Nations Industrial Development Organization (UNIDO) pursues the conceptual and practical work of identifying, aligning and implementing new business models for resource efficient and cleaner production. UNIDO is a catalyst for the recognition, evaluation and upscaling of new business models for RECP, an enabler of development and a provider of support in service development across the world. Capacity-building and awareness-raising measures include training, project reporting, tools development (such as toolkits and webinars) and promotion (such as books, brochures, videos and on-line training).

In 2013 and 2014, UNIDO conducted an in-depth status report on new business models and selected those with the most promising attributes to support RECP targets. The models identified are of widespread interest, require different skills and have different value propositions, among them:

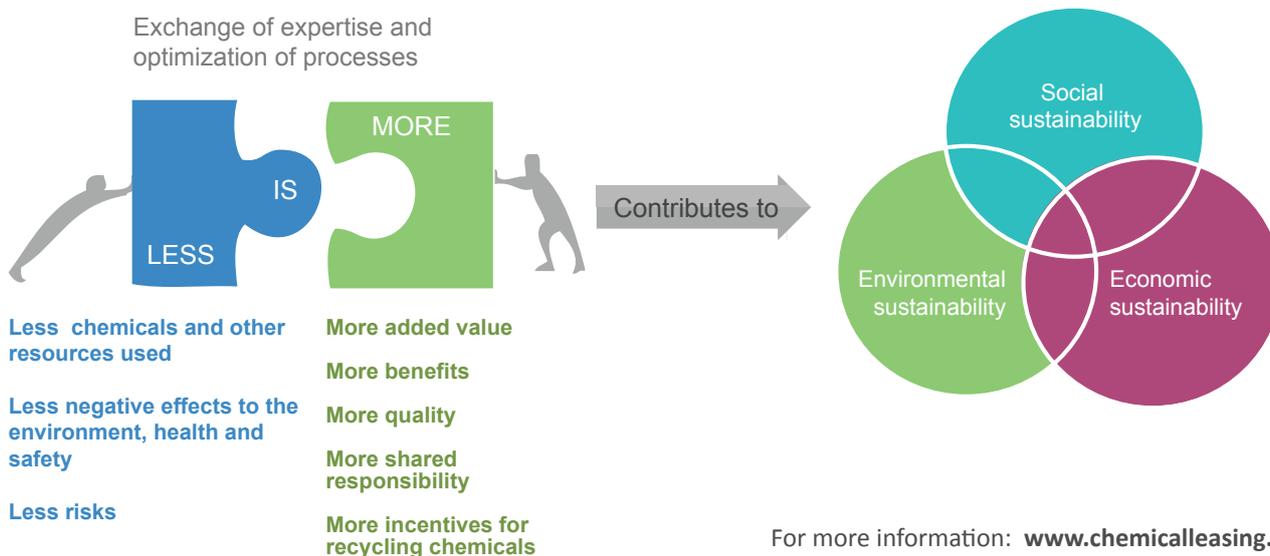


1. **Industrial symbiosis** — a life-cycle model where the key is finding and creating a working partnership that will lead to greening the value chain. Industrial symbiosis is at the same time an example of a systemic innovation model
2. **Eco-industrial parks** — a community of manufacturing and service businesses located together on a common property that benefit from economic and environmental savings from the application of resource efficient and cleaner production at the individual company level and from industrial symbiosis with closed material, energy and/or water cycles within clusters of co-located industries. In eco-industrial parks, industrial production is organized in a synergistic manner that mimics natural systems so that 'waste' from one company becomes a resource for another

company. Business relations change in eco-industrial parks where waste is sold as a by-product, instilling proactivity and environmental stewardship

3. **RECP service company model** — a business logic based on saving the client money through changing production processes and/or resource consumption (of water, chemicals or equipment). Given the simple idea behind the model, "you pay us a proportion of what you save", the RECP service company model is relatively easy to sell
4. **Chemical Leasing** — a service-oriented business model that shifts the focus from increasing sales volume of chemicals towards a value-added approach. The producer mostly sells the functions performed by the chemical and functional units are the main basis for payment

## Chemical Leasing - an outstanding business model for RECP



## Overview of results

Introducing new business models to the framework of resource efficient and cleaner production brought a fresh momentum to the UNIDO's RECP portfolio and the work of National Cleaner Production Centres in the field. The report on the new business models supported initiatives such as the development of eco-industrial parks or the shift from industrial zones to eco-industrial parks in China, Indonesia, Viet Nam and soon Peru and Senegal.

The **UNIDO Chemical Leasing Programme** performed various activities stimulated by the enhanced understanding of new business models (for example, the development of e-learning sessions/webinars) and developed a new Chemical Leasing toolkit. National Cleaner Production Centres have expanded their knowledge of Chemical Leasing and started to apply this business model in their operations.

## Outlook

There is no doubt that the Resource Efficient and Cleaner Production Programme needs to engage in building entrepreneurial attitudes in order to keep pace with rapid global economic developments. The programme intends to further strengthen the new business models initiative to become an integral part of RECP services. Future projects will benefit from state-of-the-art expertise on eco-innovative business models. Facilitating tools and instruments such as the knowledge management system of RECPnet will further support the uptake of new business models among RECPnet members.