

Foreword

Green technologies for *sustainable development*

Did you know? Ten years ago the term "green technologies" or "environmental technologies" was almost unknown. The concept was formalized in 2004 by the European Community in its Environmental Technologies Action Plan (ETAP)*, which defines environmental technologies as:

- that set of technologies that provide the same service as conventional technologies but have less impact on the environment (including renewable energy);
- "end-of-pipe" technologies: pollution and waste treatment;
- pollution measurement technologies.

Another important point is that the concept of "green technologies" does not merely pertain to technological objects, but includes all processes, products and services that make for greater environmental efficiency.

The formalization of that concept, and the European and national development plans that ensued, helped drive a minor revolution in the field of design/production and consumption, paving the way for hitherto neglected innovations and affording opportunities

for growth. The result has been increasing integration of eco-design methods into product design and development processes, not only through the search of technological approaches or raw materials whose use is not so "heavy" from the environmental standpoint, but also through system management optimization; which has now become possible thanks to information technology (smart grids).

Another result has been the reclassification of much waste, which is now looked at as a source of raw materials from which valuable compounds (e.g., phosphates from sewage) or energy may be obtained. At the level of development (especially for industrial zones) or process creation (e.g. for treatment), the crux of this new vision is an attempt to re-use by-products and waste as near at hand as possible in a circular economy approach: industrial ecology, or a way of applying the concept of environmental technology in a given territory. On the consumer side, people are becoming more aware of the environmental impact of the goods and services they use, and an actual market is emerging.

Thus, to protect consumers from "greenwashing" (a marketing technique whereby products are given an artificial veneer of "greenness") and ensure that they can actually shop in an eco-innovative way, it is essential for scientifically valid environmental assessment methods to be devised.

The development of green technologies is a challenge that the Agropolis scientific community has striven to take up in its specific fields, namely agrobiological processes and land use management, relying on the support of the EcoTech-LR regional platform and the strength and vitality of the region's research efforts.

Prof. Véronique Bellon-Maurel,
*Deputy Director of Strategy and Research
at IRSTEA, Director of the EcoTech-LR
regional platform*

* European Commission, 2004. Stimulating technologies for sustainable development: an environmental technologies action plan of the European Union. COM (2004) 38, 28 January 2004. http://ec.europa.eu/environment/index_en.htm

