

A COMPREHENSIVE RANGE OF COURSES

Thionville University Institute of Technology (IUT)	Vocational degree in air measurement
Paul Verlaine University	MASTER Environnement et aménagement. Master's degree in subjects such as ecotoxicology and biodiversity / Environmental engineering / Conservation and restoration of ecosystems / Management of aquatic environments and water resources / Geography, development, risks and defence / Development methods and tools
UFR SCI FA Campus Bridoux	Doctorate in Ecology
ESITC - College of Construction and Civil Engineering	Engineers specialising in construction and public works / Civil engineering and the Environment
ENIM - Metz National Engineering College	Specialist engineering diploma: Energy and the Environment
ARTS ET MÉTIERS PARISTECH - College of Engineering	Eco-processes and clean technologies

R&D AT THE SERVICE OF COMPANIES

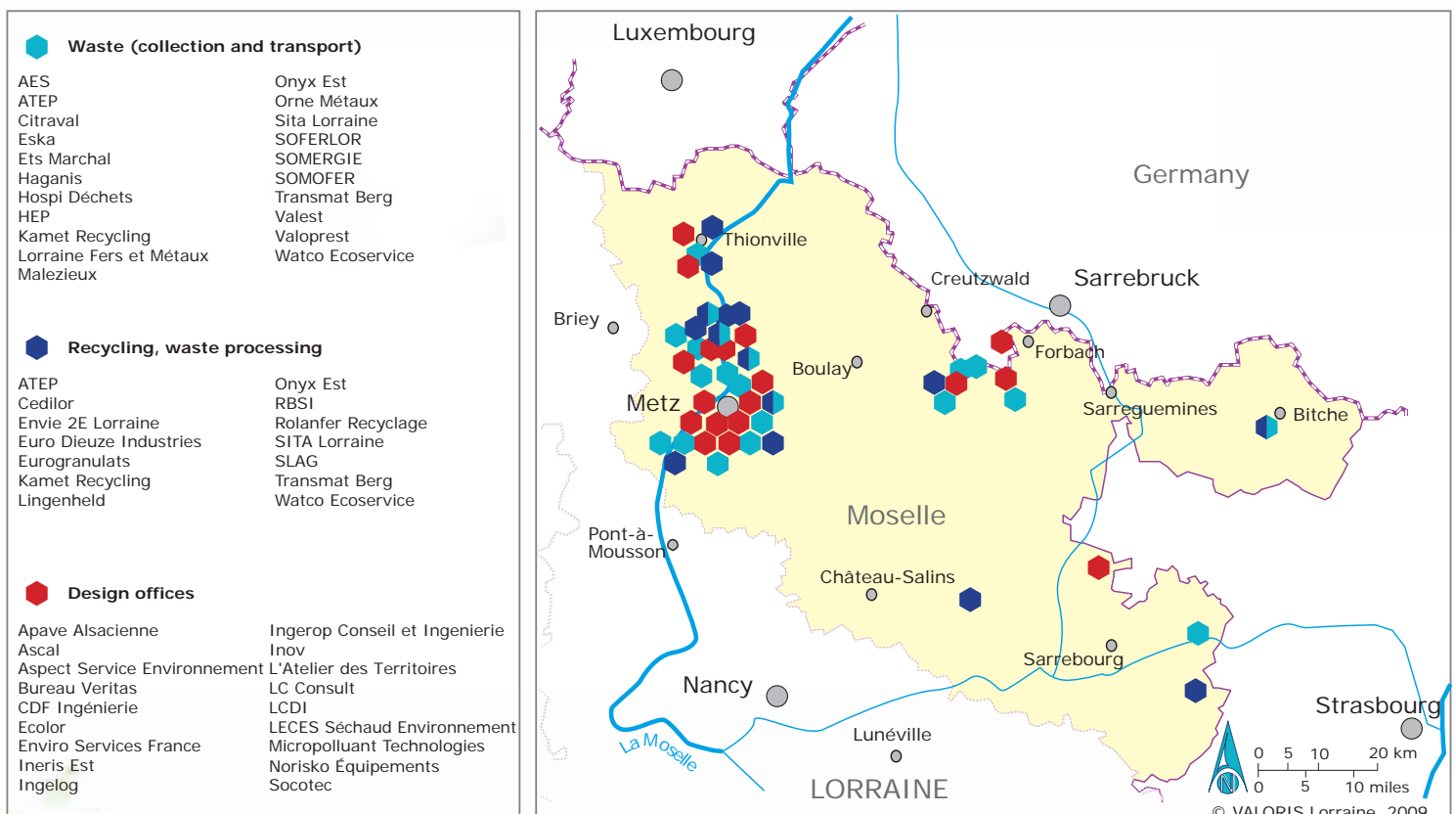
Partnership between Plastinnov and the Technology Platform at the Eastern Moselle IUT	Development of a technology and a process for the preparation of granules made from miscanthus
Laboratoire d'Electrochimie des Matériaux (LEM, Laboratory for the electrochemistry of materials)	Management, chemical and electrochemical maximisation of co-products and industrial mineral waste
Laboratoire Interfaces Capteurs et Microélectronique (LCIM, Laboratory for sensor / microelectronics interfaces)	An electronic nose, a system of "intelligent" sensors
Laboratoire de Spectroscopie de Masse et Chimie Laser (LSMCL, Mass spectroscopy and laser chemistry laboratory) – Institute of Physics	Study of laser / matter interactions and their applications in two specific fields – physical and chemical analysis of mineral materials, pollutants and biomolecules; and the synthesis and transformation of materials using laser technology.
Laboratoire Ecotoxicité, Santé Environnementale (ESE, Ecotoxicity and environmental health laboratory) – Université Paul Verlaine	Determination of ecotoxicity thresholds - effluents and contaminated soils
Centre d'études géographiques de l'Université de Metz (CEGUM, Centre for geographical studies at the University of Metz)	Hydro geomorphological and bioclimatic studies
Le Système d'Information sur l'Eau Rhin-Meuse (Rhine-Meuse water information system)	More than 6 million items of data on water available free of charge thanks to the Rhine-Meuse Water Information System
CODLOR	The aim of this industrial waste exchange is to help companies improve their waste management and identify new recycling and enhancement sectors, in addition to waste disposal.

THE ENVIRONMENT: ONE OF MOSELLE'S STRENGTHS

- Moselle's strong industrial tradition, especially in the mining and steelmaking sectors and, now, in car manufacturing, chemicals and plastics, has led to the development of environmental professions.
- A comprehensive sector has grown up, with waste disposal from collection to landfill, and including the processing and optimisation of dangerous waste, soil cleaning and protection of air quality.
- Moselle leads the way in environmental studies and treatment, which is why some of France's largest measurement and instrumentation companies can be found here e.g. JUMO REGULATION, THERMO EST, PROSENSOR etc.



MAJOR ENVIRONMENTAL COMPANIES IN MOSELLE



MOSELLE IS A LEADER IN WASTE OPTIMISATION

■ **Household and organic waste methane plant in Eastern Moselle:** designed to process household biowaste. In the longer term, the area around the plant will become an "eco-industry" business park. Every year, approximately 100 kgs of biowaste are produced per inhabitant. Sorting at source and optimising the 100 kgs will allow the production of biogas for an energy equivalent of 7 litres of diesel and, secondly, the production of approximately 16 kgs of compost. The plant will process some 42,000 tonnes of household and other, similar biowaste every year.

■ **ECOPUR EST, in the Three Borders area:** A plant specialising in the optimisation of sludge will open at the end of 2009 on the industrial estate in Thionville-Metzange. The joint subsidiary of MALEZIEUX and VEOLIA Propreté will process 60,000 tonnes of sandy waste, fatty waste and hydrocarbonated waters collected from throughout Eastern France, thereby ensuring that it does not end up on landfill or in a sewage farm.

ECOLOGICAL MATERIALS: HEMP IS BEING SPUN AT THE FIBRES CLUSTER

EST CHANVRE is working 300 hectares of hemp in 2009 and it intends to significantly increase the area in the years to come with a view to setting up a Lorraine/Eastern France hemp industry. The farmers' association is supported by Moselle Department and the Eastern France Fibre Cluster (Pôle Fibre Grand Est) which has included the group in 3 cooperative applied research programmes – Interreg agronomic development programme / Filamentation and industrial fibres and threads / Optimisation of lignin (the woody part of hemp) to extract the polymers required for the production of green adhesives and resins.

REGULAR GROWTH IN ECOLOGICAL CONSTRUCTION

- The market for energy-saving houses, timber-framed houses and houses built of ecological materials is enjoying something of a boom (e.g. INNOV HABITAT, ECOLOGGIA, BIOMAIISONBOIS, EUROMAC2 etc.). Low-cost housing associations are also expressing increasing interest in the construction or renovation of ecological, energy-saving housing.
- The "Commitment to Sustainable Development" charter set up by the Fédération BTP 57, the Syndicat des Installateurs Electriciens de Moselle and the Fédération Nationale de l'Immobilier, with the backing of the Chamber of Commerce & Industry, now brings Moselle's construction companies together so that they integrate into their work a number of concrete measures linked to environmental protection and energy saving.
- Numerous public authorities and towns have taken the "High Environmental Quality" ("HQE") criteria on board in their own property developments and wood-fired heating systems have become massively popular (86 wood-fired systems installed in Lorraine by the end of 2008).

NUMEROUS INDUSTRIAL STAKEHOLDERS

- The REHAU group in Morhange manufactures plastic components for renewable energy products such as heated floors and geothermal probes.
- The INTERPANE group in Seingbouse manufactures solar and thermal control glass for double glazing and is researching the production of glass for thermal and photovoltaic solar panels.
- EAGLE (NKK) INDUSTRIE France produces components for automobile air-conditioning units (valves) in Faulquemont. It also supplies SANDEN.
- CEDILOR (SARP INDUSTRIES group): Centre for Industrial Pollution Control in Malancourt-la-Montagne. The Centre processes dangerous waste (toxic waste in dispersed quantities) and special household waste.
- ENVALOR in Louvigny: This multi-purpose optimisation platform employs a work force of 50 and processes 400,000 tonnes of waste annually including clinker, polluted soil, washout and smelting works sand, biomass and waste from the building industry and allied trades.

SPECIALIST SITES



The **Ecoparc**, a high environmental quality business park for tertiary industries to the north of Metz, beside the A31 Brussels-Lyon motorway.



Faulquemont Industrial Estate: This extensive industrial estate (270 hectares) is classified as having high environmental quality and it puts the emphasis on environmental management through the inclusion of a large area of open spaces, joint environmental actions and the presence of a private environmental consultancy agency.



Domo Futura in Morhange in the centre of Moselle is the site chosen for the office of Ecologgia, a company specialising in the construction of ecological houses.

The "**Cité de l'Habitat**" ("**City of Housing**") in Yutz on the Metz-Luxembourg road will bring together on the same site, by 2010, all the techniques, technologies and systems available to achieve energy-saving, sustainable construction and the use of renewable energies.