



VENICE ■ INTERNATIONAL UNIVERSITY

TEN THEMATIC ENVIRONMENTAL NETWORKS

development  
management  
training  
program  
Environmental

Sino-Italian Cooperation Program  
for Environmental Protection  
Sustainable Development  
and Environmental Management  
Advanced Training Program

Report 03-05

发展高级培训项目

**Sustainable Development  
and Environmental Management**  
**Advanced Training Program**

**Report 2003-2005**

<b>5</b>	<b>Introduction</b>
<b>8</b>	<b>Training Contents</b>
<b>30</b>	<b>Site Visits</b>
<b>46</b>	<b>Training Profile Data</b>
<b>51</b>	List of Acronyms

**Edited** by Venice International University  
T.E.N. Center - Thematic Environmental Networks  
ten@univiu.org  
www.univiu.org

**In Cooperation** with AGROINNOVA - University of Turin

**With the Support** of Italian Ministry for the Environment and Territory

**English proofreading** by Lisa Negrello  
**Chinese translation** by Beijing Spirit Consulting Co., Ltd

**Graphic Design** by studio Cheste (Peppe Clemente + Paola Fortuna)  
**Printed** in November 2005 by Grafiche Veneziane srl

In year 2000, the Italian Ministry for Environment and Territory (IMET) launched a cooperation program with the China State Environmental Protection Administration (SEPA), the Chinese Academy of Social Sciences (CASS), the Ministry of Science and Technology (MOST), Beijing and Shanghai Municipalities.

The program aims at the realization of pilot projects and feasibility studies for natural resources protection and conservation, energy efficiency, renewable sources promotion, low emission transportation systems and technologies, sustainable agriculture and environmental training courses.

The cooperation program was included among the “Partnership initiatives” for sustainable development by the United Nations. In September 2002, the Italian Prime Minister Silvio Berlusconi, together with the Chinese and Italian Ministers, Mr. Xie Zhenhua and Mr. Altero Matteoli presented it during the Johannesburg World Summit.

The program takes its place among the United Nations International Conventions and protocols on climate change, ozone layer protection, biodiversity protection, persistent organic chemicals elimination and the fight against desertification.

Starting from 2003, in the frame of the Sino-Italian Cooperation Program for Environmental Protection, the Italian Ministry for the Environment and Territory has launched an Advanced Training Program on Environmental Management and Sustainable Development addressed to Chinese senior governmental officials, professors, researchers, managers and engineers.

The Training Program is part of a long run perspective where the Chinese decision makers’ and experts’ role is strategic, since it has to become an active and responsible part of the environmental protection development at both national and global dimension. The core aim of the Training Program is to foster and further stimulate concrete actions on sustainable development in the People’s Republic of China.

**Corrado Clini** General Director,  
Department for Environmental Research and Development,  
Italian Ministry for the Environment and Territory

A new paradigm of eco-restructuring for sustainable development, involving shifts in technology, economic activities and lifestyles is particularly needed for large countries such as China, in order to be able to harmonize human activities with natural systems. With the largest population in the world, predicted to peak at 1.6 billion in 2040, the decisions made by China will have a major impact on the global marketplace and environment. China's economic growth has already caused significant impacts on its own environment as well as on that of neighbouring countries.

China's current high rate of economic and social transformation has resulted in extensive pollution and exhaustion of many resources, including water, forests, agriculture and minerals. The situation in many parts of China has reached a critical point. The state of the environment is still worsening and posing, in several areas, obstacles to economic growth. Water pollution has contaminated over half of monitored urban river sections; soil erosion, deforestation, damage to wetlands and grasslands have resulted in deterioration of China's ecosystems and pose a threat to future agricultural sustainability; rapid urbanisation has led to additional pressures on water and land resources and the quality of urban air has been deteriorating rapidly. Without reforming economic and environmental policies, restructuring inefficient industries, conserving scarce natural resources and without investing in cleaner and resource efficient production, the situation is likely to worsen affecting potential for further economic growth.

Many of the environmental problems facing China can be addressed today through the transfer of knowledge and technology. Diffusion of up-to-date technical and scientific knowledges, training of Chinese ruling classes and professionals able to internalize the innovations and to drive the changes in a sustainable point of view, are one of the principal objectives of the Sino-Italian Cooperation Program. It is for this reason that the training courses organized within such Program are specially tailored according to the needs and requests of the Chinese counterpart and deal with the main Chinese environmental problems registered today: greenhouse gasses and carbon dioxide reduction, waste and water management, sustainable agriculture, renewable energies, industrial ecological development, intelligent transport system and eco-compatible urban planning.

The challenge is to create a broader framework for the sustainable development practices in China, involving the Italian expertise at all levels.

**Maria Lodovica Gullino** Training Program Director,  
Agroinnova-University of Turin

Venice International University (VIU) considers Sustainable Development as one of the main fields of its programs both in advanced education and in research. We are convinced that today the challenge of sustainable development cannot be fruitfully addressed without taking a world-wide approach based upon co-operation between mature and developing countries. China is a big and fast developing country that took the issue of sustainable development very seriously. If China will be able to shape its economic growth model as a sustainable one, it will greatly contribute to the solution of global environmental problems and will ultimately benefit Europe as well. On the other hand, what has been and is being done in Europe might be of some help to China in order to better achieve a sustainable development path. This is the profound meaning of these training programs, and this is the reason why Venice International University enthusiastically accepted the proposal of the Italian Ministry of the Environment to organise the training programs presented in this report.

In preparing the training programs at VIU, we have tried to respond to the requirements of the institutions sending participants, but we also tried to keep the complexity of the issue of sustainable development, which involves not only technical aspects, but also economic, legal and institutional ones. Each training course not only consists of classes given by academic experts in different fields, but also of meetings with firms and civil servants concretely operating for sustainable development both in private and public sector; also participants alternate classroom lectures held on the island of San Servolo with site visits where experiments of sound environmental management are presented. The fact that an important part of the programs organised in Italy takes part in Venice has a particular meaning and relevance. Venice is a peculiar example of the complexity of the issue of sustainable development. At the beginning of their courses in Venice, we have taken care that participants were provided with a basic information about the historical ground of the complex environment of Venice and its lagoon; and when for Venice we speak of an historical background, we not only mean the evolution of historical events, but also the historical accumulation of one of the world's most important and unique cultural and artistic heritage.

In what follows, the training program's courses are briefly described according to their specific topic. Moreover, a list of lectures is provided as well as the site visits' charts presenting the institutions that made these visits possible and that deserve our warm thanks for their availability and cooperation. Finally, some figures about lecturers and participants are also presented.

**Ignazio Musu** Dean, Venice International University

# Training Contents

## Environmental Management and Sustainable Development

Sustainable development: the new millennium challenge to guarantee an economical development for today and future generations in accordance with environmental needs.

Twelve courses and a study tour:

Delegation	Module	Period and Location
CAS	Eco-Management Strategies and Policies: Overview on European and Chinese Programs	October 20 <sup>th</sup> -24 <sup>th</sup> 2003, Beijing
MOST	Global Environment and Strategies for Sustainable Development	October 20 <sup>th</sup> -24 <sup>th</sup> 2003, Beijing
CASS	Eco-Management Strategies and Policies	November 17 <sup>th</sup> -27 <sup>th</sup> 2003, Venice
CASS	Eco-Management Strategies and Policies	December 1 <sup>st</sup> -11 <sup>th</sup> 2003, Venice
MOST	National and Local Dimension of Sustainable Development	January 8 <sup>th</sup> -17 <sup>th</sup> 2004, Venice
CASS	Eco-Management Strategies and Policies	February 9 <sup>th</sup> -19 <sup>th</sup> 2004, Venice
CASS	Eco-Management Strategies and Policies	February 23 <sup>rd</sup> -March 4 <sup>th</sup> 2004, Venice
SEPB	Italian Experience of Environmental Management - Study tour	October 2 <sup>nd</sup> -10 <sup>th</sup> 2004, Italy
CASS	Eco-Management Strategies and Policies	October 18 <sup>th</sup> -24 <sup>th</sup> 2004, Beijing
SEPA	Environmental Management and Sustainable Development	November 6 <sup>th</sup> -19 <sup>th</sup> 2004, Italy
MOST	Capacity Building on Sustainable Development	March 1 <sup>st</sup> -4 <sup>th</sup> 2005, Beijing
MOST	Capacity Building on Sustainable Development	March 5 <sup>th</sup> -19 <sup>th</sup> 2005, Italy
SEPA	Environmental Management and Sustainable Development	July 9 <sup>th</sup> -23 <sup>rd</sup> 2005, Italy

### Main objectives

- To give an overview on SD European management, adopted policies, legislation in force and experiences in specific fields.
- To present the main fields of application of sustainable origin techniques and some case studies of successful applications, both from China and EU countries.
- To focus on topics of special interest: industrial ecology, ecological economics, strategic environmental assessment, environmental auditing.

### Topics

#### Sustainable Development and Policies

- *The Environmental Challenge*, V. Canuto, Columbia University
- *International Sustainable Development: Situation and Progress*, H. Jing, ACCA21
- *Plan of Implementation and Type II Initiatives Adopted at Johannesburg*, P. Soprano, IMET

- *Role and Programs of International and Regional Agencies*, L. Canuto, IMET-Permanent Mission of Italy to the UN
- *Valuation of Sustainable Development Policies*, G. Munda, European Commission and Universitat Autònoma de Barcelona
- *Strategic Environmental Assessment for Sustainable Development*, G. Chiellino, e-Ambiente and Ca' Foscari University of Venice
- *Environmental Strategic Assessment with Reference to the EU Structural Funds*, G. Brunelli, O. Mautone and D. Franco, IMET
- *Environmental Sustainability: the Experience of the ESI*, M. Nardo, IPSC-JRC
- *New Issues in the European Union Environmental Management*, I. Musu and P. Nunes, Ca' Foscari University of Venice
- *Environmental Policy Integration in the European Union*, I. Musu, Ca' Foscari University of Venice and VIU
- *Organization and Systems of European Eco-management*, P. Soprano, IMET
- *Sustainable Development in Italy and Europe*, P. Soprano, IMET
- *European Eco-environmental Management: the Role of Firms, Government and People*, M. Turvani, Iuav Architecture University of Venice
- *New Issues in Italian Environmental Management*, P. Soprano and C. Baffioni, IMET
- *The Italian Environmental Policy and the Role of the Italian Ministry for the Environment and Territory*, C. Clini and G. Caropreso, IMET
- *Sustainable Development: Practice and Trends in China*, R. Guo, ACCA21
- *The Practices and Trends of China's Sustainable Development*, W. Weizhong, ACCA21
- *Programs for Sustainable Development in China*, B. Fallace and A. Laurie, UNDP Beijing
- *National Goals and Tasks for Ecological and Environmental Planning during the 11th Five-Year Plan Period*, Z. Sun, National Development and Reform Commission
- *Involvement of Chinese Government in Global Cooperation for Environmental Protection*, Xia Kunbao, UNEP China office
- *Best Practices of China National Programme of Sustainable Development Experimental Communities*, G. Risheng, ACCA21
- *Eco-management for the Development of Western Part of China, Environmental Issues and Solutions*, D. Suocheng, CAS
- *Eco-management in Rural Areas of China – Issues and Solutions*, Q. Futian, Nanjing Agricultural University
- *Eco-management in the “Sustainable Use and Conservation of Wetland Biodiversity in China”*, A. Laurie, UNDP Beijing
- *International Cooperation Projects on Environmental Protection between Italy and China*, A. De Angelis, IMET

### **Economic and Legal Aspects of Environmental Management**

- *Foundations of Ecological Economics, Integrated European Approach to Sustainable Development*, I. Musu, Ca' Foscari University of Venice and VIU
- *Basic Concept & Theory of Eco-economy*, L. Zhou, CASS
- *Basic Concepts and Theories for Eco-economics: the Institutional Approach*, M. Turvani, Iuav Architecture University of Venice
- *International Trade and Sustainable Development*, I. Musu, Ca' Foscari University of Venice and VIU
- *Trade, Environment and Sustainable Development*, A. Markandya, WB and University of Bath
- *The Latest Legal Progress in Sustainable Development*, J. Luo, National People's Congress
- *International Conventions, Protocols and Agreements on Environmental Protection*, P. Soprano, IMET
- *International Environmental Conventions, Protocols and Agreements and their Impacts to China*, Q. Daomeng, Nankai University
- *Multilateral Environmental Agreements*, T. Grof, UNIDO
- *Integrated Environmental Policy in the European Union*, I. Musu, Ca' Foscari University of Venice and VIU
- *The Role of Legal Principles for Environmental Management, Environmental Harms and European Legislation, EU Environmental Policy*, M. Montini, University of Siena
- *Regulatory Systems in the European Eco-management*, I. Musu, Ca' Foscari University of Venice and VIU
- *EU Environmental Legislation and National Experiences*, G. Landi, Regulatory and Environmental Department, DLA Piper
- *Introducing New Environmental Laws Policies in China*, Z. Tianzhu, Tsinghua University

### **Water Ecosystems, Air and Health Management**

- *Water Scarcity*, G.M. Zuppi, Ca' Foscari University of Venice
- *Integrated Policy Approach to Sustainable Development Water Management*, P. Gardin, VESTA S.p.A.
- *Eco-management in the Exploitation of River Basins*, G.M. Zuppi, Ca' Foscari University of Venice
- *How to Balance the Relation between Development and Eco-Protection: the Case of Fresh Water Management, the Case of Ground Water Management*, G.M. Zuppi, Ca' Foscari University of Venice
- *Eco-management of Biodiversity in the Mediterranean Sea: Concerns and Strategies*, R. Danovaro, Polytechnic University of Marche
- *New Development in Water Quality Legislation and Management in Europe*, J.M. Martin, former EU JRC Ispra
- *Marine Pollution: the Impact of Marine Aquaculture*, R. Danovaro, Polytechnic University of Marche



- *Water Pollution Policy in Europe and in Italy*, A. Barbanti, Thetis S.p.A.
- *Water Pollution in China*, L. Hongzhi, SEPA
- *General Air Pollution Issues*, I. Allegrini and F. Vichi, CNR
- *New Development in Air Quality Legislation and Management in Europe*, J.M. Martin, former EU JRC Ispra
- *Air Quality Control*, F. Dalan, ARPAV
- *Relationship between Health and Environment in EU Policy and Practices*, R. Aertgeerts, WHO
- *Pollution and Health*, M. Vazzoler, ARPAV

### Sustainable Urban Development

- *Sustainable Development at Urban Level*, R. Pagani, Softech
- *Theory & Measures of Eco-system Management in Cities*, W. Rusong, CASS
- *Dynamics of Urban Systems & Ecological Management*, F. Butera and P. Caputo, Polytechnic of Milano
- *Sustainability and Urban Planning*, M. Savino, University of Messina
- *The Metabolic Approach*, A. Costa, IMET-SICPPMO Beijing and FEEM
- *Town Planning and Strategic Environmental Assessment (SEA)*, G. Chiellino, e-Ambiente and Ca' Foscari University of Venice
- *Local Agenda 21: Urban Sustainability in Practice*, F. Musco, Iuav Architecture University of Venice
- *Eco-building and Sustainable Development at Urban Level*, M. Grosso, Polytechnic of Torino
- *Eco-management in the Construction of European Cities*, F. Butera, Polytechnic of Milano
- *Italian Experience on Eco-management System Building*, F. Butera, Polytechnic of Milano
- *Sustainable Mobility*, M. Mazzon, Thetis S.p.A.
- *Sustainable Mobility: Mitigation of Traffic Originated Pollution*, P. Squillante, Thetis S.p.A.
- *Interventions for Sustainable Development in China*, M. Mazzon, Thetis S.p.A.
- *Local Governance, Strategic Planning and Participative Processes: the Venice Experience*, R. D'Agostino and P. Cacciari, Municipality of Venice
- *Eco-building in China*, N. Meishen, China Housing Industry Association
- *Waste Management in China*, L. Hongzhi, SEPA
- *Environmental Impact Assessment in the Frame of the Olympic Winter Games of Turin 2006*, E. Biginelli, Legambiente – Ecopolis
- *Plan and Sustainability in the Frame of the Olympics*, R. Pagani, Softech

- *The Evaluation of Eco-compatibility Projects Expected within the Strategic Environmental Assessment of the XX Olympic Winter Games Torino 2006*, R. Giordano, TOROC
- *Evolution of Environmental Issue in the Venice Lagoon*, P. Campostrini, CORILA
- *Measures for the Protection of Venice and its Lagoon: the Defence of the City from High Water*, F. De Pol, CVN

### Energy, Industry and Sustainable Development

- *The Climate Problem*, A. Navarra, INGV
- *Energy Management: a Tool for Sustainable Development*, M. Martinelli, IMET
- *Sustainable Energy Systems: Promoting Renewable Energy in Liberalized Markets*, A. Lorenzoni, University of Padua and Bocconi University of Milano
- *Energy Efficiency Case Study: the New Hall of Residence*, G. Zanetto, Ca' Foscari University of Venice
- *Energy Efficiency in China and the Utilization of New Energy & Renewable Energy*, Z. Qin, NDRC
- *CDM, Governments and Investors: Different Points of View, CDM Opportunities and Threats, CDM the Italian Experience in China*, E. Russo, ENEL S.p.A. and IMET
- *Industrial Ecology, Industrial Ecology and Environmental Leadership*, M. Chertow, Yale University
- *Applications of Industrial Ecology*, M. Chertow, Yale University
- *Environmental Management and China's Industrial Sustainable Development*, P. Sizhen, ACCA21
- *Cleaner Production in China*, C. Wenming, ZFK Environmental Technology Development Ltd
- *Environmental Auditing and Sustainable Development*, G. Chiellino and M. Samiolo, e-Ambiente
- *Environmental Auditing in Europe*, G. Chiellino, e-Ambiente and Ca' Foscari University of Venice
- *Brownfields Remediation*, S. Soriani, Ca' Foscari University of Venice
- *Cost and Benefits of Site Reclamation Policies*, M. Turvani, Iuav Architecture University of Venice
- *Introduction to European and Italian Policies of Site Reclamation Management*, P. Agostini, IDEAS, Ca' Foscari University of Venice
- *Reclamation: Theory and Case Studies*, A. Barbanti, Thetis S.p.A.
- *Reclamation Planning of an Industrial Estate Area: the Case of Porto Marghera*, A. Barbanti, Thetis S.p.A.
- *Case Study: Marghera Science and Technology Park VEGA*, G. Mattiello, VEGA
- *Case Study: Bagnoli, Bagnolifutura*, C. Azzi, Bagnolifutura S.p.A. di Trasformazione Urbana



- *Environmental Risk Assessment (ERA): Theory and Applications*, A. Marcomini, Ca' Foscari University of Venice and CVR, and C. Carlon, CVR and JRC
- *Decision Support System for the Rehabilitation of Contaminated Sites*, I. Bazzanella, CVR

### Sustainable Development and Rural Development

- *Sustainable Agriculture in the Frame of Sustainable Development*, M.L. Gullino, Agroinnova, University of Torino
- *The Global Food Challenge*, P. Fantozzi, University of Perugia
- *New Issues on Rural Development in the Frame of CAP Sustainable Policy*, G. Brunelli and A. Ferraretto, IMET
- *Ecological Farming*, F. Caporali, University of Tuscia
- *The Role of Biotechnology for Environmental Protection*, M. Pasquali, University of Torino
- *European Policy on Biotechnology in Agriculture*, D. Spadaro, University of Torino
- *Biotechnology Application in the European Context*, D. Spadaro, University of Torino
- *Forestry and the Development of Rural Areas*, G. Scarascia Mugnozza, University of Tuscia
- *Biodiversity*, S. Dalmazzone, University of Torino and IRIS
- *Economics and Policy of Biodiversity Loss*, S. Dalmazzone, University of Torino and IRIS
- *Environmental Conservation and Development*, S. Dalmazzone, University of Torino and IRIS

### Site Visits

- *Sustainable Agriculture*, AGROINNOVA, University of Torino
- *Sustainable Industry*, Paper Mill, BURGO S.p.A.
- *Safeguard of Venice*, CVN
- *Site Reclamation in Practice*, CVR
- *Integration of Traditional and Renewable Energy Sources*, Thermal Power Plant Andrea Palladio, ENEL S.p.A.
- *Clean Energy Resources*, EniTecnologie
- *Safeguard of Venice*, Magistrato alle Acque
- *Urban Sustainability and Transportation*, Municipality of Parma
- *Urban Sustainability in Practice*, Municipality of Torino
- *Strategic Planning and Participative Processes*, Municipality of Venice
- *Sustainable Industry*, Pilkington Italia S.p.A.
- *Environmental Management in Practice*, Thetis S.p.A.
- *Sustainable Industry*, Unindustria
- *Land Reclamation*, VEGA
- *Coastal Management*, Venice Port Authority
- *Integrated Waste Treatment*, Integrated Waste Treatment Plant, VESTA S.p.A.

## Water

Water: an issue of global concern, for both the availability and quality of resources in a situation of growing population and increasing demand.

Three courses and a study tour:

Delegation	Module	Period and Location
<b>MOST</b>	Water	March 22 <sup>nd</sup> -April 2 <sup>nd</sup> 2004, Venice
<b>BMEPB</b>	Water Pollution	November 20 <sup>th</sup> -December 4 <sup>th</sup> 2004, Italy
<b>CASS</b>	Water Pollution Control - <i>Study Tour</i>	December 11 <sup>th</sup> -19 <sup>th</sup> 2004, Italy
<b>SEPB</b>	Environmental Management and Sustainable Development: focus on Water	June 25 <sup>th</sup> -July 6 <sup>th</sup> 2005, Italy

### Main objectives

- To give the participants an overview of water management strategies at Italian and European level.
- To provide experiences from Venice and its region.
- To focus on topics of special interest: water pollution, degradation of aquatic environments and scarcity of water for anthropic uses.

### Topics

#### Water Management and Water Uses

- *Environmental Management and Sustainable Development: Focus on Water*, P. Soprano, IMET
- *Economics of Water*, A. Massarutto, University of Udine and IEFE
- *Water Resources*, G.M. Zuppi, Ca' Foscari University of Venice
- *Water Demand for Drinking Water at a Global Scale*, G.M. Zuppi, Ca' Foscari University of Venice
- *Water Conservation*, S. Ferraris, University of Torino
- *Soil Water*, S. Ferraris, University of Torino
- *Water and Agriculture*, M. Acutis, University of Milano
- *Water and Agriculture: Irrigation Water*, C. Giupponi, University of Milano and FEEM
- *Water Policy at a Global Scale*, P. Minoia, IDEAS, Ca' Foscari University of Venice
- *Integrated Watershed Management*, A. Rusconi and F. Baruffi, Northern Adriatic Basin Authority
- *Water Pollution Management in the European Union*, J.M. Martin, former EU JRC Ispra
- *Economics of Water Pollution Control*, A. Massarutto, University of Udine and IEFE
- *Water Quality Control in Coastal Areas*, M. Vazzoler, ARPAV

- *Water Policy in Italy*, G. Muraro, University of Padua
- *Water Pollution Control Policy in Italy*, G. Caponi, IMET
- *Environmental Services in Italy*, M. Civita, Polytechnic of Torino, GNDCI and CNR
- *Water Conservation Policy in Italy*, M. Carere, IMET
- *Buffer Zones to Control Water Quality in Rural Landscape: Case Study*, D. Franco, IMET
- *Water Quality for Drinking Water at a Local Scale*, S. Boato, ARPAV
- *Hydroelectric Models for the Production of Hydroenergy*, M. Marani, University of Padua
- *Water and Sediment Management in Damps Reservoirs*, M. Rossetto and F. Toffolo, ENEL S.p.A.

### Water Pollution

- *Water Quality Control*, A. Barbanti, Thetis S.p.A.
- *Water Pollution in Agriculture*, C. Giupponi, University of Milano and FEEM
- *The Problem of Ground Water Contamination: the Italian Approach*, M. Civita, Polytechnic of Torino, GNDCI and CNR
- *Groundwater Vulnerability to Contamination: Assessment and Mapping*, M. Civita, Polytechnic of Torino, GNDCI and CNR

### Local Issues

- *Local Issues in Water Pollution*, A. Ferronato, ARPAV
- *The Water Monitoring Network in the Veneto Region*, A. Ferronato, ARPAV
- *Actions, Interregional and Cross-border Cooperation in the Northern Adriatic Sea*, M. Vazzoler, ARPAV
- *Restoring Environmental Equilibrium in the Venice Lagoon: Re-qualification and Protection. Measures to Restore the Drainage Basin*, F. Strazzabosco, Veneto Regional Government
- *The Evolution of the Environmental Issue in the Venice Lagoon*, P. Campostrini and J. Da Mosto, CORILA
- *Pollution Issues in the Lagoon of Venice*, A. Pusceddu, Polytechnic University of Marche
- *Distribution Network and Losses Control*, G. Sandri, VESTA S.p.A.
- *Lecture: Water Quality for Drinking Water at Local Scale*, R. Biancotto, ARPAV
- *Water Quality Control in the Venice Lagoon*, E. Delaney, Thetis S.p.A.
- *Public Local Services Management: the Italian and Venetian Experience*, A. Lolli, Federgasacqua

### Site visits

- *Quality Monitoring Program of Sea Water and Ground Water*, ARPAV
- *Safeguard of Venice*, CVN
- *Energy from Water*, Hydropower plant Soverzene, ENEL S.p.A.
- *Waste Water Treatment*, Waste Water Treatment Plant Milano Nosedo, Siba S.p.A.
- *Water Treatment for Drinkable Water*, Water Treatment Plant, SMAT S.p.A.
- *Water Management in Practice*, Thetis S.p.A.
- *Integrated Waste Water Treatment*, Integrated Waste Water Treatment Plant, Treviso Municipality and Ca' Foscari University of Venice
- *Drinkable Water*, Catchments Field and Potabilisation Plant, VESTA S.p.A.
- *Waste Water Treatment*, Waste Water Treatment Plant, VESTA S.p.A.

## Air Quality

Protection from atmospheric pollutants: one of the key aspects for cities' sustainable development, aiming at the general protection of population from adverse effects caused by airborne toxic gases and particulate matter.

Two courses:

Delegation	Module	Period and Location
<b>CASS</b>	Air Quality and Traffic	October 23 <sup>rd</sup> -November 6 <sup>th</sup> 2004, Italy
<b>SEPB</b>	Environmental Management and Sustainable Development: focus on Air	September 10 <sup>th</sup> -24 <sup>th</sup> 2005, Italy

### Main objectives

- To provide the participants with a good knowledge of European policies in terms of air quality.
- To present examples of the most advanced experiences on traffic management and air quality monitoring.
- To meet companies and authorities involved in the projects and share experiences with them.
- To focus on topics of special interest: air pollution, air quality control, intelligent transport systems.

### Topics

#### Policies on Traffic and Air Quality

- *Environmental Protection in the 21st Century, Focus on Air: Challenges and Perspectives*, C. Baffioni, IMET
- *Relationship between Health and Environment in EU Policy and Practices: Focus on Air*, M. Krzyzanowsky, WHO
- *Air Quality in Cities*, L. Susanetti, ARPAV
- *Recent Developments of EU Policy in Terms of Traffic. Directives and Regulations*, G. Gasparrini, IMET
- *Policies for a Sustainable Urban Energy System and Air Quality*, L. Zingale, AGIRE

#### Monitoring and Actions

- *Fine Particles Resulting from Combustion, Environmental Deterioration and Effects on Health. Control & Prevention*, I. Allegrini, CNR
- *Air Quality Control*, F. Dalan, ARPAV
- *Air Quality Control and Sustainable Mobility*, M. Mazzon, Thetis S.p.A.
- *ITS and Vehicle Emission Control*, F. Costabile, CNR
- *ITS Projects*, M. Mazzon, Thetis S.p.A.
- *Turin as a Case Study for Vehicle Emission Control*, F. Profumo, Polytechnic of Torino

### Site visits

- *Energy Plan*, AGIRE
- *Sustainable Agriculture*, AGROINNOVA, University of Torino
- *Role of Regional Agencies in Air Quality Control*, ARPAP
- *Role of Regional Agencies in Air Quality Control*, ARPAV
- *Iveco Motors and the New Family Engines (NEF)*, IVECO S.p.A.
- *Transport Control Systems*, Motorway Company of Venice and Padua
- *Eco-management*, Ecomondo, Rimini fair
- *Sustainable Mobility*, Services for the mobility of the city of Rome, STA
- *ITS Projects*, Thetis S.p.A.

## Waste

The continuous increase in waste production has been placing environment and human health at serious risk; this makes waste management a primary issue at global level for sustainable development.

Two courses:

Delegation	Module	Period and Location
CASS	Waste Management	May 7 <sup>th</sup> -21 <sup>st</sup> 2005, Italy
BMEPB	Solid Waste Management	May 28 <sup>th</sup> -June 11 <sup>th</sup> 2005, Italy

### Main objectives

- To give an overview on current policies of waste management and integrated waste treatment in Italy and Europe.
- To present the legislative, economic and applicative aspects.
- To focus on topics of special interest: management of urban, industrial and hazardous waste, waste treatment, resources from waste.

### Topics

#### Waste Management

- *Waste Management Systems*, L. Morselli, University of Rimini
- *Waste Management*, S. Brida and S. Mastroianni, Consorzio GAIA S.p.A.
- *Economic Analysis of Waste Management Policies*, A. Massarutto, University of Udine and IEFE
- *Integrated Policy Approach to Waste Management*, P. Gardin, VESTA S.p.A.
- *Legislative Aspects on Waste Management in the EU*, F. Benedetti, Consorzio GAIA S.p.A.
- *Urban Waste Management*, G. Genon, Polytechnic of Torino
- *Industrial Waste Management*, G. Genon, Polytechnic of Torino
- *Waste Management in Firms*, A. Tencati, Bocconi University of Milano
- *Solid Waste Management in Firms*, A. Tencati, Bocconi University of Milano
- *Sanitary Landfill Management*, B. Spadoni, Consorzio GAIA S.p.A.

#### Hazardous Waste

- *Hazardous Waste*, A. Marchini, VESTA S.p.A.
- *Hazardous and Potentially Infective Waste Management*, S. Benedetti, Consorzio GAIA S.p.A.
- *Hospital Waste*, E. Pira and I. Pavan, University of Torino
- *Manganese: Uses, Exposures, Risks and Preventive Strategies*, E. Herrero Hernandez, University of Torino

#### Waste Treatment

- *Technical Treatment and Process of some Special Wastes*, S. Mastroianni, Consorzio GAIA S.p.A.
- *Decontamination of Polluted Sites: Experiences inside Porto Marghera, a Site of National Concern*, G. Marchiori, VESTA S.p.A.
- *Composting: European Rules and Techniques*, G. Minuto, CeRSAA
- *Waste as Resource: Consorzio GAIA S.p.A. – an Italian Case Study*, V.I. Dante, Consorzio GAIA S.p.A.
- *E-waste Management and Ecoink Case Study*, L. Pezzato, Ecoink
- *Lca and Integrated Environmental Monitoring System as Joint Tools for Incinerator Environmental Impact Assessment*, L. Morselli, University of Rimini
- *Integrated Waste Management Project, Polo Fusina*, A. Marchini, VESTA S.p.A.

#### Site visits

- *Organic Waste Management*, AMA S.p.A.
- *Compost Treatment*, Compost Treatment Plant, ACEA Pinerolese S.p.A.
- *Energy from Waste*, Waste-to-Energy Plant, ASM Brescia
- *Waste Management Systems*, Consorzio GAIA S.p.A.
- *Landfill Leachate Treatment*, Landfill Leachate Treatment Plant, Depuracque servizi srl
- *Waste Management*, Waste Incinerator and Compost Plant, HERA S.p.A.
- *Separate Waste Management*, Novamont S.p.A.
- *Landfill Management*, Ginestreto Controlled Landfill, Sogliano Ambiente S.p.A.
- *Waste Management System*, Rimini Campus Branch, University of Bologna
- *Hazardous Waste Management*, Inertisation Plant for Hazardous Waste and Integrated Waste Treatment Plant, VESTA S.p.A.

## Energy

The increase of the world's population and the fast industrialization of developing countries will inevitably mean an increase in energy demand. The promotion of an efficient use of energy and the use of alternative energy sources are necessary to ensure the demand's satisfaction guaranteeing a sustainable development.

Four courses:

Delegation	Module	Period and Location
<b>MOST</b>	Renewable Energy	March 1 <sup>st</sup> -5 <sup>th</sup> 2004, Beijing
<b>MOST</b>	Renewable Energy	March 6 <sup>th</sup> -19 <sup>th</sup> 2004, Venice
<b>CASS</b>	Energy Efficiency	January 22 <sup>nd</sup> -February 5 <sup>th</sup> 2005, Italy
<b>MOST</b>	Development and Application of Clean Renewable Energies	April 2 <sup>nd</sup> -16 <sup>th</sup> 2005, Italy

### Main objectives

- To present the main issues linked to energy and its growing use in the world.
- To illustrate different ways to meet energy demand through energy efficiency and the use of renewable energy.
- To focus on topics of special interest: energy efficiency, renewable sources.

### Topics

#### Sustainable Energy Systems and Energy Efficiency

- *The Global Scenario for Energy Demand*, M. Martinelli, IMET
- *Energy Efficiency*, M. Cali Quaglia, Polytechnic of Torino, Y. Dai, NDRC, E. Lavagno, Polytechnic of Torino and M. Lazzeri, D'Appolonia S.p.A.
- *Climate Change & Clean Development Mechanisms*, R. Valentini, EniTecnologie
- *Clean Development Mechanisms (CDM)*, L. Deshun, Tsinghua University
- *Market Mechanisms*, G. Pireddu, University of Milano Bicocca
- *Sustainable Energy Systems: Promoting Renewable Energy and Energy Efficiency in Liberalized Markets*, A. Lorenzoni, University of Padua and Bocconi University of Milano
- *Principles of Energy Balances, Municipal Energetic Characterization*, L. Simonetti, D'Appolonia S.p.A.
- *Economic Evaluation of Energy Saving Investments*, M. Bianchi, D'Appolonia S.p.A.
- *Some Concepts: Demand Side Management, Energy Efficiency and Load Management*, M. Pavan, Italian Regulatory Authority for Electricity and Gas

- *Policies to Promote End-use Energy Efficiency in the European Union: some Examples*, M. Pavan, Italian Regulatory Authority for Electricity and Gas
- *Policies to Promote End-use Energy Efficiency in Italy: an Innovative Approach*, M. Pavan, Italian Regulatory Authority for Electricity and Gas
- *Policy Drivers and Administration of the Energy Sector in Italy: the Role of the Regulator*, M. Pavan, Italian Regulatory Authority for Electricity and Gas
- *Tariff Regulation in the Electricity Sector*, M. Pavan, Italian Regulatory Authority for Electricity and Gas
- *CO2 and other Pollutants Emissions in China*, X. Liu, CERS
- *Living Chemistry for Quality of Life: the Novamont S.p.A. Model towards Economical and Environmental Sustainability*, G. Floridi, Novamont S.p.A.
- *Case Study: Bioplastics*, G. Floridi, Novamont S.p.A.
- *Energy Regulation and Environmental Policy: a Case Study on the Promotion of Renewables and Energy Savings*, M. Pavan, Italian Regulatory Authority for Electricity and Gas
- *Energy Efficiency in Eco-building*, M. De Carli, University of Padua
- *LTDS (Low Temperature Difference Systems) Developments and Case Histories*, M. De Carli, University of Padua
- *Economic Evaluation of Energy Saving Investments*, M. Bianchi, D'Appolonia S.p.A.
- *Energy Diagnosis of a Diplomatic Building*, D. Bosia, D'Appolonia S.p.A.

#### Renewable Energies

- *Fuel Shift and Renewable Energies*, L. Zingale, AGIRE
- *The Present and Future Scenario for Renewable Energy in China*, B. Li, MOST Reform Commission
- *Research and Development of Solar, Biomass and Geothermal Energy*, M. Martinelli, IMET and M. Diesendorf, Sustainability Centre Pty Ltd, Sydney
- *Policies and Development Strategy of Renewable Energy in China*, S. Gu, Tsinghua University
- *Case Studies of Renewable Energy in China*, Z. Zhang
- *Geothermal Energy: from the Heart of the Earth*, R. Bertani, ENEL Green Power
- *Geothermal Energy: the Case Study of the Olympic Village in Beijing*, R. Bertani, ENEL Green Power
- *Geothermal Energy and its Industrial Application, with Special Focus on the Production of Electricity*, R. Bertani, ENEL Green Power
- *Geothermal Energy in China: the Yang-Bajing (Tibet) Geothermal Field*, R. Bertani, ENEL Green Power
- *Biomass: Problem or Opportunity?*, B. Fierro, Cannon Bono SISTEMI



- *Cogeneration: the Right Approach*, G. Riva, Comitato Termotecnico Italiano
- *Cogeneration Feed Water Plant: Problems and Solutions*, A. Liati, Cannon Bono SISTEMI
- *Biomass Cogeneration Case Histories: How We Do It*, M. Grosso, Cannon Bono SISTEMI
- *Advanced Practical Application of Solar Energy*, R. Barile, EniTecnologie
- *Case Study: a Solar Village in Inner Mongolia*, R. Barile, EniTecnologie
- *Wind Resource - Technology - Industry – Economics*, L. Pirazzi, ENEA
- *Wind Application – Deployment – Market Stimulation and Constraints*, L. Pirazzi, ENEA
- *Energy from Waste*, A. Marchini, VESTA S.p.A
- *Production, Collection and Disposal of Municipal Solid Wastes in Italy with Particular Concern for the Organic Fraction, the Recoverable Energy from this Fraction, the Treatments and their Environmental Impact*, F. Cecchi, University of Verona
- *Landfill Gas Exploitation*, L. Simonetti, D’Appolonia S.p.A.
- *Road Map to the H2 Economy in Italy*, G. Vicini and M. Tavoni, FEEM
- *How Regions Can Support Hydrogen and Fuel Cells Development – an Example: the Region Lombardy*, M. Careri, Regione Lombardia
- *Public Transport by Hydrogen Vaporetto in Venice*, L. Carvani, Whale Consortium
- *Case Study Renewable Energy Use: Landfill Gas Exploitation*, L. Simonetti, D’Appolonia S.p.A.

### Site Visits

- *Energy from Biomass*, Biomass Co-generation Plant, Cannon Bono SISTEMI
- *Integration of Traditional and Renewable Energy Sources*, Thermal Power Plant Andrea Palladio, ENEL S.p.A.
- *Sustainable Energy*, Thermal Power Plant Porto Tolle, ENEL S.p.A.
- *Wind Energy*, Wind Farm, IVPC srl
- *Eco-building*, Tifs Ingegneria srl
- *Integrated Waste Water Treatment*, Integrated Waste Water Treatment Plant, Treviso Municipality and Ca’ Foscari University of Venice
- *Integrated Waste Treatment Plant*, VESTA S.p.A.
- *Land Reclamation*, VEGA
- *Clean Energy Resources*, EniTecnologie

## Ecological Industrial Development

Industries have a key role in sustainable development: they have to meet the increasing demand of consumers and, at the same time, deal with the scarcity of raw materials and the reduction of their environmental impact.

One course:

Delegation	Module	Period and Location
<b>MOST</b>	Ecological Industrial Development	June 11 <sup>th</sup> -25 <sup>th</sup> 2005, Italy

### Main objectives

- \_ To provide the participants with some suggestions and explanations concerning the role of industry in the new challenges for environmental protection throughout products’ life cycle.
- \_ To present the main policies in this field, through the analysis of the most important regulations and directives about waste and water control in Italian and European legislation.
- \_ To focus on topics of special interest: industrial ecology, environmental auditing, green chemistry.

### Topics

#### Industrial Environmental Issues

- *Biotechnology, Sustainable Development and Protection of Intellectual Property Rights*, I. Musu, Ca’ Foscari University of Venice and VIU
- *Green Chemistry and New Technologies, Applications of Green Chemistry to Pollution Control*, P. Tundo, Ca’ Foscari University of Venice and Interuniversity Consortium “Chemistry for the Environment”
- *Industrial Uses of Water Resources*, M. Aciri, SMAT S.p.A.
- *Environmental Monitoring*, B. Dagna, S. Beneventi, M. Bricarello and V. Meineri, EcoBioqual srl
- *Industrial Waste Management*, G. Genon, Polytechnic of Torino
- *Actions of the Italian Industry for Sustainable Development*, A. Oddone, Confindustria

#### Sustainable Industry

- *Industrial Ecology, Industrial Ecology and Environmental Leadership*, M. Chertow, Yale University
- *Environmental Auditing in Industrial Firms*, G. Chiellino, e-Ambiente and Ca’ Foscari University of Venice
- *Mines Risks and Prevention Strategies*, M. Coggiola, University of Torino
- *Recycle of Industrial Organic Waste*, G. Minuto, CeRSAA
- *A Case Study: VEGA, the Venice Gateway for Science and Technology Park*, G. Mattiello, VEGA

- *The Rehabilitation of Bagnoli-Coroglio, Ex-industrial Site and Bagnolifutura S.p.A.*, C. Azzi, Bagnolifutura S.p.A. di Trasformazione Urbana
- *Land Reclamation: Theories and Case Studies*, A. Barbanti, Thetis S.p.A.

### Site Visits

- *Compost Treatment*, Compost Treatment Plant, ACEA Pinerolese S.p.A.
- *Sustainable Industry*, Paper Mill, BURGO S.p.A.
- *Integration of Traditional and Renewable Energy Sources*, Thermal Power Plant Andrea Palladio, ENEL S.p.A.
- *Sustainable Industry*, Unindustria

## Capacity Building on Clean Development Mechanism

Climate change is an issue of global concern. Within the Kyoto Protocol, Clean Development Mechanism is a flexible tool which involves developing countries in the attempt of reducing greenhouse gas emissions.

Two courses:

Delegation	Module	Period and Location
<b>MOST</b>	Capacity Building on Clean Development Mechanism	October 18 <sup>th</sup> -22 <sup>nd</sup> 2004, Beijing
<b>MOST</b>	Capacity Building on Clean Development Mechanism	December 4 <sup>th</sup> -18 <sup>th</sup> 2004, Italy

### Main objectives

- To present the main problems linked to climate change, the scientific evidence of human impact on the atmosphere and the possible ways to face the issues raised.
- To provide an overview on Clean Development Mechanism, its origin and objectives, opportunities, barriers, costs and how to structure a CDM project.
- To focus on topics of special interest: climate change, CDM.

### Topics

#### Climate Change

- *Climate Change and Global Warming*, A. Longhetto, University of Torino
- *Climate Change Scenarios*, A. Navarra, INGV
- *Human Forcing on Climate Change*, A. Tartaglia, Polytechnic of Torino
- *Social and Economic Impacts of Climate Change and Countermeasures*, Y. Ding, China Meteorological Administration
- *Effects of Climate Change on Plant Diseases*, M.L. Gullino, AGROINNOVA, University of Torino
- *Demand and Opportunities for Technology Transfer of Best Available Environmental Technologies from Abroad into P.R.China*, M. Schwegler, Centre for Environmentally Sound Technology Transfer

#### Clean Development Mechanism

- *International Negotiations on Climate Change and CDM*, F. Gao, Ministry of Foreign Affairs of China
- *Developing CDM Projects*, M. Balasini, IMET
- *CDM: the Point of View of International Investors*, E. Russo, ENEL S.p.A. and IMET



- *Assessment & Certification of Emission Reductions through CDM Projects, Carbon Finance Business*, F. Sacchetto, Environmental Advisor
- *Baseline and Additionality: Two Open Issues in the CDM Approval Process*, E. Russo, ENEL S.p.A. and IMET
- *How to Structure a CDM Contract*, E. Russo, ENEL S.p.A. and IMET
- *Guidelines and Methodologies for CDM*, M. Balasini, IMET
- *Project Approval and Project Cycle in CDM*, M. Balasini, IMET
- *Basic Rules and Requirements of CDM and its Prospect and Implementation in China*, X. Lu, MOST
- *CDM Project: Case Studies in China*, D. Liu, Tsinghua University
- *Basic Rules of CDM Projects of Carbon Sink*, Y. Li, Chinese Academy of Agricultural Sciences

#### Policies on Climate Change and CDM

- *The CDM Issue in Europe and in Italy: Most Potential Areas for Cooperation*, E. Russo, ENEL S.p.A. and IMET
- *Climate Change Program in Italy and the Role for CDM*, M. Balasini, IMET
- *CDM Opportunities between Italy and Developing Countries*, E. Russo, ENEL S.p.A. and IMET
- *The CDM Issue in Europe and in Italy: Major Barriers Encountered*, E. Russo, ENEL S.p.A. and IMET
- *Introduction to CDM. Carbon Finance and the Italian Carbon Fund*, C. Croce, IMET
- *China's Regulation on CDM Projects and Priority Areas*, G. Gao, National Development and Reform Commission
- *Market Mechanism Subsidies Incentives, Energy Conservation and the Environment, Wind Farm Valuation: the Business Plan*, G. Pireddu, University of Milano Bicocca
- *Main Actors in the CDM World and their Complex Relation: Governments, International Organizations, Private Companies, Project Developers and Fund Managers*, E. Russo, ENEL S.p.A. and IMET

#### Site Visits

- *Energy Efficiency in Practice*, D'Appolonia S.p.A.
- *Land Reclamation*, VEGA
- *Agriculture and Global Change*, EUROFACE

## Sustainable Urban Development and Ecobuilding

Urban areas are key places for sustainable development. Ecobuilding links the key aspects of sustainable urban development with energy efficiency.

One course:

Delegation	Module	Period and Location
CASS	Sustainable Urban Development and Eco-building	January 8 <sup>th</sup> -22 <sup>nd</sup> 2005, Italy

#### Main objectives

- \_ To identify urban sustainability issues.
- \_ To analyze urban sustainable policies.
- \_ To explore new solutions in building technologies improving energy efficiency and savings, avoiding heat dispersion and offering at the same time better life conditions.
- \_ To focus on topics of special interest: ecobuilding, energy efficiency, participatory approach.

#### Topics

##### Ecological Urban Planning

- *Urban Sustainability*, A. Costa, IMET-SICPPMO Beijing and FEEM
- *Sustainable Plan model*, G. Longhi, Iuav Architecture University of Venice
- *Local Agenda 21*, E. D'Alessio, Italian Local Agenda 21 Network
- *Urban Sustainable Policy in Italy*, P. Soprano, IMET

##### Eco-building and Energy Efficiency

- *Sustainable Architecture. Policies, Trends and Initiatives of Eco-building in Italy*, S. Giulietti, IMET
- *Energy Optimization of Building-plant System*, L. Schibuola, Iuav Architecture University of Venice
- *Energy Saving in Historical Buildings and Hospital Plant Systems*, M. Strada, Iuav Architecture University of Venice
- *LTDS: Low Temperature Different System, New Developments and Case Study*, M. De Carli, University of Padua
- *Energy Efficiency and Renewable Energy in a Urban Sustainable Development*, L. Zingale, AGIRE
- *Ecological and Energy Efficient Building*, M. Cucinella, MCArchitects

#### Site visits

- *Olympic Village*, Turin Winter Olympics Village
- *Eco-building*, Tifs Ingegneria srl

# Site Visits

The information reported in this section concerns companies and institutions visited during the training sessions that have authorized this publishing. They are listed in alphabetical order.

## Compost Treatment

### Institution

#### **ACEA PINEROLESE S.p.A.**

via Vigone 42, 10064 Pinerolo, Cuneo  
[www.aceapinerolese.it/homepage.html](http://www.aceapinerolese.it/homepage.html)

### Site Visit Objectives

To illustrate one of the main compost treatment plants in the Piemonte region.

To describe the origins, the chemical, physical and biological trials of composting process as well as the positive repercussions on the environment.

### Institution Profile

ACEA Group is a “multiutility” structure that manages a plurality of services for municipalities, companies and citizens. The Group’s activities concern the water compartment, specifically integrated water cycle management; the energetic sector with methane gas distribution; heat management and sale of electricity; collection, treatment and waste disposal.

## Municipal Energy Planning & Energy Policy

### Institution

#### **AGIRE** Venice Energy Agency

via delle Industrie 17/a, 30175 Marghera, Venice  
[www.veneziaenergia.it](http://www.veneziaenergia.it)

### Site Visit Objectives

To present the experience of an urban scale energy planning and management in the city of Venice.

### Institution Profile

Venice Energy Agency is a specialised body fostered by Venice Municipality and VESTA, the multiutility service company that supplies environmental services in the city of Venice and promoted by the European Commission’s Programme SAVE for energy agencies. Its objective is to monitor and implement Venice’s strategy for energy and CO2, as defined in the Municipal Energy Plan of the Kyoto Protocol target year 2010. High efficiency energy technologies, renewables, fuel shift policies, information, education and training are the Agency’s axes of intervention.

## Sustainable Agriculture

### Institution

**AGROINNOVA** Centre of Competence for the Innovation in the Agro-environmental Sector, University of Torino  
 via Leonardo da Vinci 44, 10095 Grugliasco, Turin  
[www.agrinnova.org](http://www.agrinnova.org)

### Site Visit Objectives

To present Agroinnova’s fields of interest in research and agro-environmental technology transfer and to illustrate some of Agroinnova’s international co-operation programs and activities in China, as examples of sustainable agriculture.

### Institution Profile

AGROINNOVA is a Centre of Competence developed by plant pathologists at the University of Turin. It is located on the University Campus of Grugliasco (Turin). AGROINNOVA brings together the skills acquired so far by public and private, Italian and international researchers in the fields of agro-environment and agricultural and food industry. AGROINNOVA carries out research, knowledge and technology transfer, life-long learning and communication on up-to-date topics in the above stated sectors. Four academic professors, 50 PhD students, postdoc fellows, consultants and technicians, more than 30 ongoing research projects worldwide, 12 high level courses carried out during the period 2003-2005 are some of Agroinnova's specific features. Currently, most of its staff is based in Italy while the rest is abroad (Beijing, Beograd). In particular, AGROINNOVA operates in Grugliasco, at the Ministry for Environment and Territory in Rome and in Albenga at the Experimental Centre of the Chamber of Commerce of Savona.

### Organic Waste Management

#### Institution

**AMA** Azienda Municipale Ambiente di Roma, Composting Plant of Maccarese  
via dell'Olmazzeto I 57, Rome  
www.amaroma.it

#### Site Visit Objectives

To demonstrate how the plant transforms organic waste collected from the neighbourhood's markets, supermarkets, restaurants, coffee shops into fertiliser for agricultural uses.

#### Institution Profile

AMA S.p.A., Azienda Municipale Ambiente (Municipal Environment Company) – funded in 1985 – is an Italian leading company in environmental services and urban solid waste management. AMA provides urban hygiene services throughout Rome Municipality – the largest in Italy – by ensuring the daily collection, haulage and disposal of about 4,000 tons of wastes, street and pavement cleaning covering a total area of 25 millions square meters and the cleaning of 250 local markets, 5 big city markets and weekly markets. Moreover, AMA is in charge of the separate collection of glass, plastic, aluminium and metal, the recovery of hazardous urban waste such as batteries and pharmaceutical products, vehicle batteries and abandoned syringes and – upon request – the cleaning of cesspools.

### Role of Regional Agencies in Air Quality Control

#### Institution

**ARPAP** Regional Agency for Environmental Prevention and Protection in Piemonte, Turin Provincial Department  
Corso Unione Sovietica 216, angolo via Filadelfia c/o C.S.I., Turin  
www.arpa.piemonte.it

#### Site Visit Objectives

To describe the activities dealing with the monitoring and forecast of ambient air quality, meteorology and natural hazards carried out by the Department of Environmental Monitoring and Forecast.

### Institution Profile

Environmental prevention and control duties were assigned to the relevant Regional Agencies by the Law n. 61 of 1994. The agencies became the centres for local environmental vigilance and control.

Arpa Piemonte is a public body whose main institutional duties are: pollution prevention, control and monitoring; organization and distribution of environmental information; natural hazards prevention; technical and scientific support to local authorities on any environmental topic.

### Role of Regional Agencies in Air Quality Control

#### Institution

**ARPAV** Regional Agency for Environmental Prevention and Protection in Veneto, Venice Provincial Department  
via Lissa 6, 30171 Mestre, Venice  
www.arpa.veneto.it

#### Site Visit Objectives

To present the role, the activities and tasks carried out by the Italian Regional Environmental Protection Agencies concerning air quality control in order to spread the knowledge of environmental policies in Italy and Europe.

#### Institution Profile

Environmental prevention and control duties were assigned to the relevant Regional Agencies by the Law n. 61 of 1994. The agencies became the centres for local environmental vigilance and control. The Veneto Agency ARPAV was founded by the Regional Law n. 32 of 18/10/1996 and became operative on October 3rd 1997. The agency pursues two closely linked objectives: protection, through environmental controls preserving the population's health and territorial safety; prevention, through research, training, information and environmental education. It operates on a triennial plan basis and on an annual program.

### Quality Monitoring Program of Sea Water and Ground Water

#### Institution

**ARPAV** Regional Agency for Environmental Prevention and Protection in Veneto, Venice Provincial Department  
via Lissa 6, 30171 Mestre, Venice  
www.arpa.veneto.it

#### Site Visit Objectives

To present ARPAV's quality monitoring program experience.

### Energy from Waste

#### Institution

**ASM Brescia** Waste-to-Energy Plant  
via Lamarmora 230, 25124 Brescia  
www.asm.brescia.it

#### Site Visit Objectives

To present an example of urban waste management combined with energy production and environmental protection that puts into practice the most recent national and European guidelines for energy production.

### Institution Profile

ASM group is a public limited company. It operates in different business areas, i.e. production, transport, distribution and sale of electricity, street lighting, gas (transport, distribution and sale) and district heating/cooling; Integrated water services, including water supply management, distribution, sewerage and water treatment; Environmental services, including waste collection, transport, treatment, recovery and disposal, and street cleaning services; Telecommunications and global services (integrated management of the design, implementation, operation and maintenance of heating, lighting, water and security equipment for buildings).

### Energy from Biomass

#### Institution

**Cannon Bono SISTEMI** Biomass Fired Cogeneration Plants  
via Resistenza 12, 20068 Peschiera Borromeo, Milan  
www.bono.it

#### Site Visit Objectives

To present an example of biomass utilization for power generation. The use of biomasses allows saving fossil fuels, reducing CO2 emissions. Waste products from agricultural activities which usually have high disposal costs and can be polluting if improperly managed can also be used to produce energy.

#### Institution Profile

BONO GROUP can boast 47 years of experience, gained in the design and production of biomass fired steam generators and thermal fluid heaters using a variety of waste fuels such as olive husks, rice husks and wood chips, with more than 42 installations.

The application of Bono boiler technology and design capability has always been of great importance in developing environmentally sound solutions based on small biomass fuelled power plants ranging in size from 2 MW up to 10 MW.

### Waste Management Systems

#### Institution

**Consorzio GAIA S.p.A.**  
via Carpinetana sud 144, 00034 Colleferro, Rome  
www.consorzioaia.it

#### Site Visit Objectives

To present some experiences in waste management.

#### Institution Profile

Consorzio GAIA S.p.A is a public share company operating an integrated waste management system in the environmental field. Consorzio GAIA S.p.A is located in the Lazio region (central Italy) within the Province of Rome and Frosinone.

Consorzio GAIA's activities are strongly committed to environmental practices including integrated waste system, environment management, training and environmental education. Waste collection takes place with innovative and technologically advanced equipment such as computerised loading motor vehicles, small compactors with electric traction and mechanical street sweepers.

### Safeguard of Venice

#### Institution

**CVN** Consorzio Venezia Nuova  
campo Santo Stefano, San Marco 2803, 30124 Venice  
www.salve.it

#### Site Visit Objectives

To present the activities for the safeguarding of Venice and its lagoon as a case study of ecological system management.

#### Institution Profile

Consorzio Venezia Nuova is the concessionary of the Ministry of Infrastructures and Transport – Venice Water Authority and is responsible for the measures concerning the safeguard of Venice and the lagoon for which the State is competent. The Consortium consists in a group of leading Italian and local construction companies. Defence from high waters and sea storms, recovery and protection of the lagoon ecosystem: these are the objectives of the vast program of safeguarding measures which has been carried out in the lagoon and inhabited lagoon areas for many years now.

### Site Reclamation in Practice

#### Institution

**CVR** Consorzio Venezia Ricerche  
via della Libertà 5/12, 30175 Marghera, Venice  
www.veneziaricerche.it

#### Site Visit Objectives

To present a practical example of how site reclamation issues are managed, by combining academic research with the specific requirements of public and private sectors.

#### Institution Profile

Consorzio Venezia Ricerche is a non-profit consortium founded in 1989 representing a trait d'union between the University of Venice, research centres, public bodies and private companies. The Consortium aims at developing research programmes based on advanced scientific methodologies; it boasts an important experience in the creation and coordination of applied research projects both at national and international level. One of the consortium's fields of research is the evaluation of new technologies for the reduction of environmental impacts and their validation. Recent projects include Sediments Remediation Technologies (SeRTech) and Decision Support System for Contaminated Sites Rehabilitation (Desyre), both addressing environmental recovery and requalification of contaminated megasites.

### Energy Efficiency/Energy Saving and CDM Project Development

#### Institution

**D'APPOLONIA S.p.A.**  
via San Nazaro 19, 16145 Genoa  
www.dappolonia.it

#### Site Visit Objectives

To present some case studies on the improvement of energy efficiency in industrial sites both in Europe and China.

To present some applications of CDM project analysis and development, from energy efficiency and landfill to energy projects.

### Institution Profile

D'Appolonia S.p.A. is an Italian engineering firm that provides design and consulting services in the fields of environment, energy, infrastructures, space, defence and transportation, with research and development contributions. D'Appolonia has a team of 200 scientists, engineers and technical staff. Since 2001, it is actively developing projects in China in close cooperation with several Chinese institutions acting on behalf of the Italian Ministry for Environment and Territory in the fields of energy efficiency, CDM project development, remote sensing and sustainable development.

### Landfill Leachate Treatment

#### Institution

**Depuracque servizi srl** Waste Water Treatment Plants  
via Roma 145, 30030 Salzano, Venice  
www.depuracque.it

#### Site Visit Objectives

To help understanding the main steps of sound waste water disposal through chemical-physical, biological and vacuum evaporation treatments.

#### Institution Profile

Depuracque servizi srl is an industrial group established in the early seventies specialised in the design and construction of industrial wastewater treatment plants. Today, it operates in the field of environmental protection and reclamation. Its main activities are the treatment, recovery and disposal of special, toxic/noxious hazardous and non hazardous waste for third parties, the implementation of safety measures and the monitoring, design and reclamation of contaminated sites. It also carries out the planning and remediation of contaminated sites with stationary and mobile equipment.

### Integration of Traditional and Renewable Energy Sources

#### Institution

**ENEL S.p.A.** Power Plant Andrea Palladio, Fusina  
via dei Cantieri 5, Malcontenta, Venice  
www.enel.it

#### Site Visit Objectives

To discuss energy management in Italy and to present an example of waste utilisation for energy recovery. In fact, the Andrea Palladio coal-fired plant is one of the first structures in Italy to experiment the use of Refuse Derived Fuel (RDF) as fuel for electricity production.

#### Institution Profile

Created in 1962 as the Italian National Electricity Board, ENEL is today an industrial holding company; in the last decades, together with the traditional operations (production, transmission and distribution), steps have been taken to develop new business areas. ENEL operates with conventional energies like coal and oil and with renewable energies as well. Some branches of the company are in fact devoted to research and applications of new technologies like hydroelectric, wind, solar and geothermal energy.

### Sustainable Energy

#### Institution

**ENEL S.p.A.** Thermal Power Plant  
Porto Tolle, Rovigo  
www.enel.it

#### Site Visit Objectives

To present one of the main thermal power plants in Northern Italy as an example of resource management in the sector of energy production.

To exchange views on the applications of best environmental management techniques on the industrial sector and the use of eco-labels such as ISO 14001.

### Energy from Water

#### Institution

**ENEL S.p.A.** Hydropower Plant Soverzene  
via Roma 6, Soverzene, Belluno  
www.enel.it

#### Site Visit Objectives

To present one of the main hydropower plants in Veneto region as an example of resource management in the sector of energy production.

### Clean Energy Resources

#### Institution

**EniTecnologie** the Corporate Technology Company of Eni,  
Photovoltaic activity  
via Augusto D'Andrea 6, 00048 Nettuno, Rome  
www.enitecnologie.it/index\_en.htm

#### Site Visit Objectives

To present some important experiences carried out by the major centres of excellence on industrial research concerning the use and research of renewable sources taking into account sustainable development.

#### Institution Profile

EniTecnologie works in the sectors of energy, hydrocarbon derived products and alternative sources, innovating while fully respecting the environment and with a view to sustainability. In particular, it investigates innovative technological ideas in sectors linked to oil and gas, power generation, renewable energies, fuels and derived products value chains. EniTecnologie safeguards technological know-how and industrial property in strategic energy sectors and maintains an observatory on the future of technologies and on technological innovation strategies at international level.

### Agriculture and Global Change

#### Institution

**EUROFACE**  
via San Camillo de Lellis I, 01100 Viterbo  
www.unitus.it/euroface

#### Site Visit Objectives

To provide an overview on the functional responses of a cultivated agro-forestry system to the actual and future atmospheric



CO2 concentrations, on the basis of the experimentation carried out on a multiclonal poplar plantation.

#### Institution Profile

EUROFACE is an experimental centre of the University of Tuscia. Euroface is an integrated European scientific infrastructure for studies on global changes concerning forests and agro-forest ecosystems using FACE (Free Air CO2 Enrichment) technology.

The original infrastructure and initial research activities were supported by the European Commission.

The plantation and FACE facility are located in central Italy, near the city of Tuscania, in the province of Viterbo. P.x euramericana (I-214) cuttings were planted during spring 1999, over 9 ha of former wheat field. Within this plantation, 6 experimental plots were equally spaced in order to avoid enrichment pollution of “control” plots with air blown in from ‘FACE’ plots.

#### Waste Management

##### Institution

**HERA S.p.A.** Thermal Waste Treatment Plant and Waste

collection platforms

via Raibano 32, 47853 Coriano, Rimini

www.gruppohera.it

##### Site Visit Objectives

To provide an overview on the different aspects linked to waste management and treatment, through the presentation of HERA’s experiences in this field.

##### Institution Profile

HERA S.p.A. is a corporate organization that manages services related to the water cycle (potability, wastewater treatment, sewers), the use of energy resources (natural gas and energy distribution and sale, energy saving, district heating and innovative solutions), and environmental services management (waste collection and disposal, city cleaning, thermal waste treatment, composting).

HERA was founded in 2002 combining twelve firms in the sector, each with a long tradition and firmly rooted in Emilia-Romagna, with the aim of improving the quality of services to citizens. The founding partners of Hera include 139 Municipalities in the provinces of Bologna, Ravenna, Rimini and Forlì-Cesena.

#### Iveco Motors and the New Family Engines (NEF)

##### Institution

**IVECO S.p.A.**

via Puglia 35, 10156 Turin

www.iveco.com

##### Site Visit Objectives

To present some opportunities for environmental care and vehicle emission reduction, through the experience and products (light commercial vehicles, medium and heavy trucks, buses and coaches and special vehicles) of Iveco company.

##### Institution Profile

Iveco, a global company created in 1975, is now one of the world’s largest manufacturers of commercial vehicles and diesel engines. Iveco designs, manufactures and markets a complete

range of goods commercial vehicles (from 2,8 tonnes up to over 44 tonnes Gross Vehicles Weight), for road and off-road applications, collective passenger transport, fire-fighting and defence vehicles and diesel engines for a wide range of applications, from industrial to power generation, marine and rail.

#### Wind Energy

##### Institution

**IVPC srl** Italian Vento Power Corporation

via Piemonte 39, 00187 Rome

www.ivpc.com

##### Site Visit Objectives

To present the functioning of a wind farm through the activities of a company leader in the sector of wind energy in Italy.

##### Institution Profile

IVPC was founded in September 1993 in Avellino, the location of its legal and administrative offices, and in just a few years, it has become the most prominent company in its sector.

IVPC built 40 wind farms located in Basilicata, Campania, Molise, Puglia, Sardinia and Sicily. IVPC installed a total of 626,57 MW that are in production in its 40 wind farms located in six Italian regions. In 2004, the total wind energy power produced by IVPC wind farms was about 1,2 TWh.

#### Transport Control System

##### Institution

**Motorway Company of Venice and Padua** Control Center

of the Venice-Mestre Ring Road

via Bottenigo 64/a, 30175 Marghera Venice

www.autovepd.it

##### Site Visit Objectives

To present “T3” and “Marco” Systems as examples of innovative control systems for an effective traffic flow management.

##### Institution Profile

The Motorway Company of Venice and Padua is in charge of 41.8 km, including the Mestre ring road. The shareholders of the motorway company are: the provinces of Venice and Padua, the municipalities of Venice and Padua, the Chambers of Commerce of Venice and Padua, the Venice Port Authority, SAVE S.p.A. (company that also operates the airport of Venice), Autovie Venete S.p.A. and the Motorway Company of Brescia, Verona, Vicenza, Padova S.p.A..

#### Separate Waste Management

##### Institution

**Novamont S.p.A.** Biodegradable Plastic Producer

via G. Fauser 8, 28100 Novara

www.novamont.com

##### Site Visit Objectives

To present an example of an effective separate garbage collection in the surroundings of Novara using bags and linings produced with Novamont’s raw material Mater-Bi™ for the collection of the organic part of solid municipal waste.

### Institution Profile

Novamont is an innovative company that produces mainly a bio-plastic named Mater-Bi™. Novamont's project, which stemmed from this concept, aims at finding new ways of using vegetable raw materials and transforming them into bio-plastics for specific applications with low environmental impact. Bio-plastics have all the properties of traditional materials but they can also be completely biodegradable. Today, Novamont provides response for a truly sustainable growth.

### Sustainable Industry

#### Institution

##### **Pilkington Italia SpA**

via delle Industrie 46, 30175 Porto Marghera, Venice  
www.pilkington.com

#### Site Visit Objectives

To present an example of a firm able to combine high levels of production with environmental protection by integrating quality and safety in a comprehensive certified environmental management system.

#### Institution Profile

Pilkington is a group of companies specialized in the production of glass for buildings. The Porto Marghera firm, located in the industrial area of Venice, produces plain, light, colored glass slabs, in paste or laminated, with a total annual gross capacity of 200.000 tons. The extension of this plant is 150.000 square metres.

### Ecomanagement

#### Institution

##### **RIMINI FIERA S.p.A.** Ecomondo Exhibition

via Emilia 155, 47900 Rimini  
www.ecomondo.it, www.riminifiera.it

#### Site Visit Objectives

To meet and learn from leading companies involved in sustainable management of waste cycle, water and contaminated sites, air and soil quality, urban environment quality, risk and safety for the population.

#### Institution Profile

RIMINI FIERA is an Italian leader in the organisation of trade fair events and service provider. Its activities are organised into 4 economic sectors: Hotel & Food Industry, Technology & Environment, Entertainment & Leisure, Travel & Tourism. Ecomondo represents an important event in the sectors of technology and environment. This exhibition covers numerous issues linked with the concept of environmental sustainability such as waste recovery cycle, sustainable energy, water recycling, reclamation, air quality and risks and safety, gathering the major sectors and companies involved in such activities, bringing together environment and market.

### Waste Water Treatment

#### Institution

##### **Siba S.p.A.** Waste Water Treatment Plant Nosedo Milano

via San Dionigi 90, Milan

### Site Visit Objectives

To illustrate the characteristics of the firm and how it manages the construction and maintenance phase of the biggest Waste Water Treatment Plant of Milan during its 15 years concession (1, 25 million inhabitants with an investment cost of 140 million euro).

#### Institution Profile

SIBA S.p.A. is a joint venture leading company that built one hundred waste water treatment plants with different capacities. It manages the main Italian concession in water field with a project financing scheme (B.O.O.T.).

### Water Treatment for Drinkable Water

#### Institution

##### **SMAT S.p.A.** Municipal Water Company of the City of Turin

corso XI Febbraio 14, 10152 Turin  
www.smatorino.it/default.htm

#### Site Visit Objectives

To illustrate the characteristics of the firm, the water networks management and the control processes of water public distribution.

#### Institution Profile

SMAT, Società Metropolitana Acque Torino S.p.A., a publicly owned joint stock company, is one of Italy's leaders in the field of integrated water services, including supply, sewage and treatment. It boasts an advanced production and management system. SMAT manages some of the largest and advanced water mains, drinking water and wastewater treatment plants in Europe. It was the first utility company to use surface water for the production of drinking water in Italy. SMAT offers reliable turnkey solutions and has extensive experience of planning and overseeing construction, quality control and final inspection of water plants and networks.

### Landfill Management

#### Institution

##### **Sogliano Ambiente S.p.A.** Ginestreto Controlled Landfill

via Ginestreto – Morsano 14, 47030 Sogliano al Rubicone, Forlì, Cesena  
www.soglianoambiente.it

#### Site Visit Objectives

To point out one of the most innovative aspects related to landfill activities. Particular attention is given to the strict environmental protection policy and to biogas extraction for electricity production.

#### Institution Profile

Sogliano Ambiente S.p.A., a share company owned 70% by the Sogliano al Rubicone City Council, manages the Ginestreto landfill site. The landfill, settled in 1990, covers an area of 200.000 square metres and receives 185.000 tons per year of urban waste, serving an overall population of 200.000 inhabitants.

### Sustainable Mobility

#### Institution

##### **STA** Services for the Mobility of the City of Rome

via Ostiense 131/L, 00154 Rome  
www.sta.roma.it



### Site Visit Objectives

To present some practical examples of traffic control through the experience of the Traffic Control Centre in Rome.

### Institution Profile

STA, Services for Mobility, is a company owned by the Municipality of Rome aiming at supplying strategic and planned solutions concerning the city's mobility. Through its competences, STA develops projects and services with new technologies paying attention to urban requalification and environment.

### Water Management in Practice

#### Institution

#### Thetis S.p.A.

Castello 2737/f, 30122 Venice

[www.thetis.it/default.htm](http://www.thetis.it/default.htm)

#### Site Visit Objectives

To present practical experiences of system studies on the territory's sustainable development, remediation of polluted industrial areas, environmental monitoring systems and services linked to water management.

#### Institution Profile

Thetis is an advanced engineering and system integrator joint-stock company, combining knowledge in environmental technologies and ICT (Information and Communication Technology) and providing innovative solutions in two business areas: Environmental and Civil engineering and Intelligent Transport Systems (ITS).

### ITS Projects

#### Institution

#### Thetis S.p.A.

Castello 2737/f, 30122 Venice

[www.thetis.it/default.htm](http://www.thetis.it/default.htm)

#### Site Visit Objectives

To present practical experiences of planning and fleet management systems for public transport, traffic and mobility management. Control systems are the main fields taken into consideration.

### Environmental Management in Practice

#### Institution

#### Thetis S.p.A.

Castello 2737/f, 30122 Venice

[www.thetis.it/default.htm](http://www.thetis.it/default.htm)

#### Site Visit Objectives

To present the company's projects carried out in Italy and China as examples of sustainable management solutions for specific problems.

### Eco-building

#### Institution

#### Tifs Ingegneria srl

Padua

[www.tifs.it](http://www.tifs.it) (under construction)

### Site Visit Objectives

To present an example of eco-building, how it is built and its functioning in order to underline the importance and opportunities of energy efficiency in buildings.

### Institution Profile

Tifs is an engineering company set up in 2001 that operates in the plant engineering sector with a high level of specialization and specific expertise in HVAC, public health, fire protection, electricity, communication, safety, security, lighting systems, etc.

The common aspect of Tifs' projects is the constant search for innovative solutions oriented to the respect of environment in a global economy and security.

### Integrated Waste Water Treatment

#### Institution

**Treviso Municipality** Integrated Water Management Plant

via Cesare Pavese, S. Antonino, Treviso

[mail.comune.treviso.it](mailto:mail.comune.treviso.it)

#### Site Visit Objectives

To present an innovative treatment plant that integrates the water cycle and the organic fraction of urban solid waste, combining high levels of depuration performance with energy recovery.

#### Institution Profile

The Municipality of Treviso has a population of about 80.000 inhabitants. The waste water produced in its territory is treated in two plants. The main plant, with an overall capacity of 70.000 PE, receives both civil wastewater and organic waste coming from Treviso Municipality. In order to promote a continuous innovation in this field, the Municipality hosts in the treatment plant area, a research group from the Environmental Science Department of Ca' Foscari University of Venice and from other linked universities.

### Sustainable Industry

#### Institution

**Unindustria** Industrialists' Association of the Province of Venice

via delle Industrie 19, 30175 Marghera, Venice

[www.unindustria.venezia.it](http://www.unindustria.venezia.it)

#### Site Visit Objectives

To present Unindustria as an example of the importance and necessity of involving the industry for a sound management of the environment.

To develop in the industrial world a new vision of environment, not considered as something based only on rules, taxes and sanctions to comply with, but as an internal element and value for the company to manage.

#### Institution Profile

Unindustria is an association of industries and industrial managers of the Province of Venice. Economical profit not being its objective, it aims at representing and supporting its members, promoting the creation of new firms and developing the existing ones. It provides its members with advice on trade union matters, business management, taxes and fiscal issues, press service and general information.

## Waste Management Systems

### Institution

**University of Bologna** Rimini Campus Branch  
via Angherà 22, Rimini  
www.polorimini.unibo.it

### Site Visit Objectives

To explore the waste management experience of a university operating in this field.

To present a new university, deeply involved in finding new ways of linking academic knowledge with productive sectors.

### Institution Profile

Rimini University Campus Branch was instituted in November 2001 with the decentralisation process of the University of Bologna and was given partial financial administrative, teaching and scientific autonomy. The academic programme (nearly 20 courses every year) offers traditional courses such as Economic Sciences and Business Economics, Statistics, Chemistry, Pharmacy, Nursing and Education, as well as new courses connected to tourism, fashion, environment, sport and the body's well-being.

## Land Reclamation

### Institution

**VEGA** Scientific and Technological Park of Venice  
via della Libertà 5/12, 30175 Marghera, Venice  
www.vegapark.it

### Site Visit Objectives

To offer a good example of how a site reclamation could be an opportunity for the economical and environmental sustainable re-development of an industrial area: VEGA, built over a former polluted industrial site after its remediation, is the City of Technology and Innovation for the Municipality of Venice.

### Institution Profile

VEGA, located in Marghera (the industrial area of Venice), is a limited company running as a consortium and a non-profit organisation. It was established in 1993 by 34 partner organisations, including the two universities of Venice, two banks and some important private companies. VEGA aims at improving the competitiveness of enterprises in the national and international market perspective, promoting and carrying out projects to improve the quality and range of products and their productive cycles.

## Coastal Management

### Institution

**Venice Port Authority** Port of Venice  
Zattere 1401, 30123 Venice  
www.port.venice.it

### Site Visit Objectives

To present an example of a port's sustainable management in a fragile context such as the lagoon's ecosystem.

### Institution Profile

The Venice Port Authority (1995) is a public agency that promotes investments, innovation, employment and new services aiming at improving the quality and competitiveness of Venice

Port by upgrading the maritime and land infrastructures for a better access, thus favouring the development of the harbour traffic and its relative activities.

## Drinkable Water

### Institution

**VESTA S.p.A.** Catchment Fields and Potabilisation Plant  
Ca' Solaro, Favaro Veneto, Venice  
www.vestaspa.net

### Site Visit Objectives

To provide an overview on different aspects concerning drinkable water management, by presenting VESTA's experiences in this field. In particular, groundwater catchment site in Quinto di Treviso and potabilisation plant of Ca' Solaro were visited.

### Institution Profile

VESTA is Venice Municipality's limited company that manages environmental services in town and in some other municipalities of the mainland serving 610.000 inhabitants.

VESTA's activities concern water supply and urban services such as drinkable water supply, urban and industrial wastewater treatment, waste collection and treatment, public and private cleaning, management of green areas and cemeteries and environmental reclamation work.

## Integrated Waste Treatment

### Institution

**VESTA S.p.A.**, Integrated Waste Treatment Plant  
Fusina, Venice

### Site Visit Objectives

To present an effective example of waste management that integrates different systems: a thermodestruction plant, a Refuse Derived Fuel (RDF) production plant, a composting facility for wet fraction from differentiated waste collection, sludge treatment and sewage depuration.

## Hazardous Waste Management

### Institution

**VESTA S.p.A.** Inertization Plant  
Fusina, Venice

### Site Visit Objectives

To present an example of sound management of hazardous waste such as contaminated soils and sludge coming from the restoration activities of Venice's Lagoon.

## Waste Water Treatment

### Institution

**VESTA S.p.A.** Waste Water Treatment Plant  
Fusina, Venice

### Site Visit Objectives

To present an example on an effective urban and industrial waste water management through an integrated system.

# Training Profile Data

## Training courses 2003-2004

Delegation	Course	General Schedule	Participants
<b>CASS</b> - Beijing	Eco-management Strategies and Policies: Overview on European and Chinese Programs	Oct. 20 <sup>th</sup> -24 <sup>th</sup> 2003	160
<b>MOST</b> - Beijing	Global Environment and Strategies for Sustainable Development	Oct. 20 <sup>th</sup> -24 <sup>th</sup> 2003	30
<b>CASS</b>	Eco-Management Strategies and Policies	Nov.17 <sup>th</sup> -27 <sup>th</sup> 2003	41
<b>CASS</b>	Eco-Management Strategies and Policies	Dec. 1 <sup>st</sup> -11 <sup>th</sup> 2003	43
<b>MOST</b>	National and Local Dimension of Sustainable Development	Jan. 8 <sup>th</sup> -17 <sup>th</sup> 2004	35
<b>CASS</b>	Eco-management Strategies and Policies	Feb. 9 <sup>th</sup> -19 <sup>th</sup> 2004	40
<b>CASS</b>	Eco-management Strategies and Policies	Feb. 23 <sup>rd</sup> -Mar. 4 <sup>th</sup> 2004	37
<b>MOST</b> - Beijing	Renewable Energy	Mar. 1 <sup>st</sup> -5 <sup>th</sup> 2004	42
<b>MOST</b>	Renewable Energy	Mar. 6 <sup>th</sup> -19 <sup>th</sup> 2004	42
<b>MOST</b>	Water	Mar.22 <sup>nd</sup> -Apr. 2 <sup>nd</sup> 2004	39

Total courses in Italy: 7  
Total courses in Beijing: 3

Total participants: 509  
Total participants in Italy: 277

## Training courses 2004-2005

Delegation	Course	General Schedule	Participants
<b>SHEPB</b> – Study tour	Italian Experience of Environmental Management	Oct. 2 <sup>nd</sup> -10 <sup>th</sup> 2004	5
<b>MOST</b> – Beijing	Capacity building on Clean Development Mechanism	Oct. 18 <sup>th</sup> -22 <sup>nd</sup> 2004	30
<b>CASS</b> – Beijing	Eco-Management Strategies and Policies	Oct. 18 <sup>th</sup> -24 <sup>th</sup> 2004	160
<b>BMEPB</b>	Air Quality and Traffic	Oct. 23 <sup>rd</sup> -Nov. 6 <sup>th</sup> 2004	21
<b>SEPA</b>	Environmental Management and Sustainable Development	Nov. 6 <sup>th</sup> -19 <sup>th</sup> 2004	17
<b>CASS</b>	Water Pollution	Nov. 20 <sup>th</sup> -Dec. 4 <sup>th</sup> 2004	41
<b>MOST</b>	Capacity building on Clean Development Mechanism	Dec. 4 <sup>th</sup> -18 <sup>th</sup> 2004	27
<b>BMEPB</b> – Study tour	Water Pollution Control	Dec. 11 <sup>th</sup> -19 <sup>th</sup> 2004	8
<b>CASS</b>	Sustainable Urban Development and Eco-Building	Jan. 8 <sup>th</sup> -22 <sup>nd</sup> 2005	42
<b>CASS</b>	Energy Efficiency	Jan. 22 <sup>nd</sup> -Feb. 5 <sup>th</sup> 2005	42
<b>MOST</b> – Beijing	Capacity Building on Sustainable Development	Mar. 1 <sup>st</sup> -4 <sup>th</sup> 2005	30
<b>MOST</b>	Capacity Building on Sustainable Development	Mar. 5 <sup>th</sup> -19 <sup>th</sup> 2005	23
<b>MOST</b>	Development and application of Clean Renewable Energies	Apr. 2 <sup>nd</sup> -16 <sup>th</sup> 2005	28
<b>CASS</b>	Waste Management	May 7 <sup>th</sup> -21 <sup>st</sup> 2005	38
<b>BMEPB</b>	Solid Waste Management	May 28 <sup>th</sup> -Jun. 11 <sup>th</sup> 2005	21
<b>MOST</b>	Ecological Industrial Development	Jun. 11 <sup>th</sup> -25 <sup>th</sup> 2005	24
<b>SEPB</b>	Environmental Management and Sustainable Development: focus on Water	Jun. 25 <sup>th</sup> -Jul. 6 <sup>th</sup> 2005	22
<b>SEPA</b>	Environmental Management and Sustainable Development	Jul. 9 <sup>th</sup> -23 <sup>rd</sup> 2005	20
<b>SEPB</b>	Environmental Management and Sustainable Development: focus on Air	Sep. 10 <sup>th</sup> -24 <sup>th</sup> 2005	20

Total courses in Italy: 16  
Total courses in Beijing: 3

Total participants: 619  
Total participants in Italy: 399

## Training courses 2005-2006

Delegation	Course	General Schedule	Participants
<b>CASS</b> – Beijing	Eco-Management Strategies and Policies	Oct. 24 <sup>th</sup> -30 <sup>th</sup> 2005	160
<b>MOST</b> – Beijing	Capacity Building on Clean Development Mechanism	Oct. 24 <sup>th</sup> -28 <sup>th</sup> 2005	40
<b>MOST</b>	Capacity Building on Clean Development Mechanism	Oct. 29 <sup>th</sup> -Nov. 12 <sup>th</sup> 2005	41
<b>BMEPB</b>	Environmental Management Mechanism	Nov. 12 <sup>th</sup> -26 <sup>th</sup> 2005	21
<b>CASS</b>	Sustainable Urban Development and Eco-Building	Nov. 26 <sup>th</sup> -Dec. 12 <sup>th</sup> 2005	42
<b>CASS</b>	Energy Efficiency	Dec. 9 <sup>th</sup> -23 <sup>rd</sup> 2005	42
<b>BMEPB</b>	Environmental Education	Jan. 7 <sup>th</sup> -21 <sup>st</sup> 2006	21
<b>SEPA</b>	Sustainable Development and Environmental Management	Feb. 11 <sup>th</sup> -25 <sup>th</sup> 2006	21
<b>MOST</b>	Clean and Renewable Energies	Feb. 25 <sup>th</sup> -Mar. 11 <sup>th</sup> 2006	31
<b>CASS</b>	Waste Management	Mar. 3 <sup>rd</sup> -18 <sup>th</sup> 2006	42
<b>SEPB</b> – Shanghai	Capacity Building on Clean Development Mechanism	Mar. 22 <sup>nd</sup> -24 <sup>th</sup> 2006	15
<b>MOST</b> – Beijing	Capacity Building on Sustainable Development	Mar. 27 <sup>th</sup> -31 <sup>st</sup> 2006	30
<b>MOST</b>	Capacity Building on Sustainable Development	Apr. 1 <sup>st</sup> -15 <sup>th</sup> 2006	31
<b>CASS</b>	Water Pollution	May 13 <sup>th</sup> -27 <sup>th</sup> 2006	42
<b>SEPB</b>	Sustainable Urban Development	May 27 <sup>th</sup> -Jun. 10 <sup>th</sup> 2006	15
<b>SEPA</b>	Sustainable Development and Environmental Management	Jun. 10 <sup>th</sup> -24 <sup>th</sup> 2006	21
<b>MOST</b>	Marine Environmental Development	Jun. 24 <sup>th</sup> -Jul. 8 <sup>th</sup> 2006	31
<b>BMEPB</b>	Ecosystem Conservation	Jul. 8 <sup>th</sup> -22 <sup>nd</sup> 2006	21
<b>SEPA</b>	Sustainable Development and Environmental Management	Sep. 2 <sup>nd</sup> -16 <sup>th</sup> 2006	21
<b>SEPB</b>	Environmental Legislation and Eforcement	Nov. 4 <sup>th</sup> -18 <sup>th</sup> 2006	15

Total courses in Italy: 16  
Total courses in Beijing: 3  
Total courses in Shanghai: 1

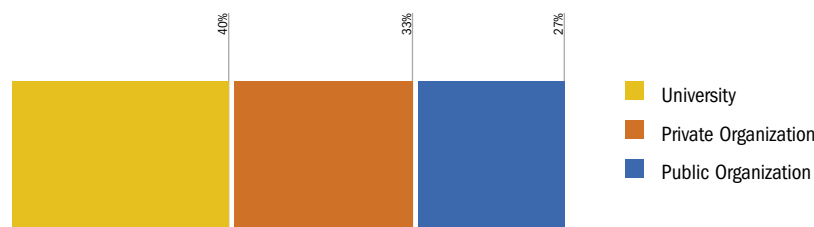
Total participants: 703  
Total participants in Italy: 458

### Training lecturers

During the first two years of training activities, more than 150 lecturers have contributed to the trainings.

In order to cover a wide range of topics and to be able to discuss about practical aspects of environmental management, to present practical case studies and to set up an exchange of experiences with the participants, speakers from the academia, the public sector and private companies have been invited.

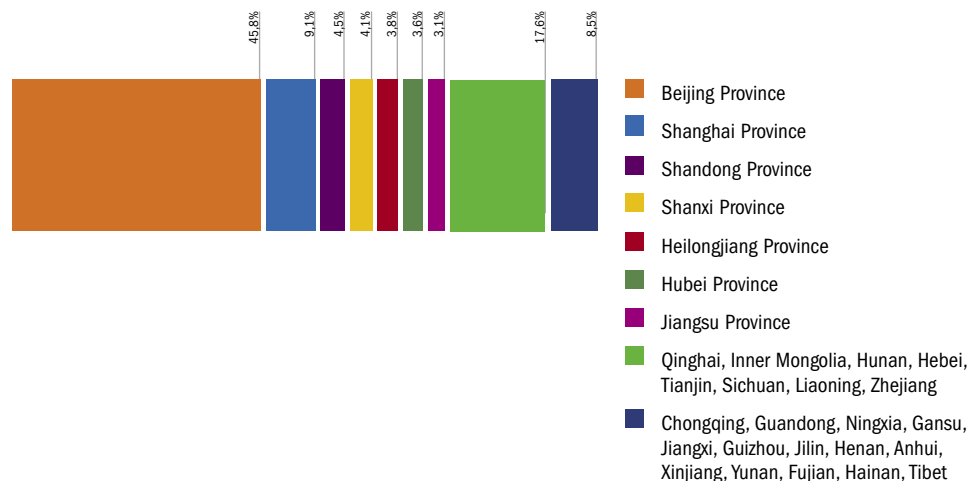
Figure 1. Lecturers' affiliation



### Training participants

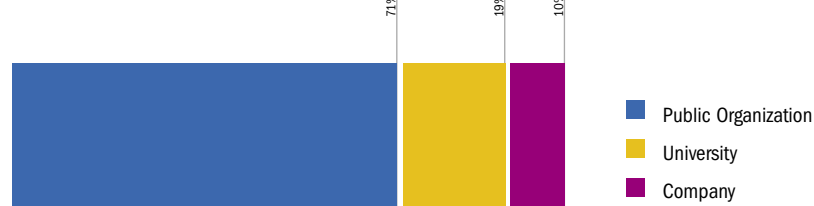
More than 1000 participants have attended training until now. Although most of the trainees came from Beijing, all the Chinese provinces were represented, with their needs, peculiarities and specific issues.

Figure 2. Trainees' provenience



Training addressed Chinese governmental officials, academics and representatives of the private sector involved in environmental management.

Figure 3. Trainees' affiliation



## List of Acronyms

<b>ACCA21</b>	Administrative Centre for China's Agenda 21
<b>AGIRE</b>	Venice Energy Agency
<b>AMA</b>	Azienda Municipale Ambiente – Municipal Environment Agency
<b>ARPAP</b>	Agenzia Regionale per la Prevenzione e Protezione Ambientale del Piemonte – Piedmont Regional Agency for Environmental Prevention and Protection
<b>ARPAV</b>	Agenzia Regionale per la Prevenzione e Protezione Ambientale del Veneto – Veneto Regional Agency for Environmental Prevention and Protection
<b>ASM</b>	Azienda dei Servizi Municipalizzati di Brescia – Brescia Municipal Services Agency
<b>BMEPB</b>	Beijing Municipal Environmental Protection Bureau
<b>CAS</b>	Chinese Academy of Sciences
<b>CASS</b>	Chinese Academy of Social Sciences
<b>CERS</b>	China Energy Research Society
<b>CeRSAA</b>	Centro Regionale di Sperimentazione ed Assistenza Agricola – Regional Center for Experimentation and Assistance in Agriculture
<b>CNR</b>	Consiglio Nazionale delle Ricerche – National Research Council
<b>CORILA</b>	Consorzio per la Gestione del Centro di Coordinamento delle Attività di Ricerca inerenti il Sistema Lagunare di Venezia – Consortium for Coordination of Research Activities concerning the Venice Lagoon System
<b>CVN</b>	Consorzio Venezia Nuova – Venezia Nuova Consortium
<b>CVR</b>	Consorzio Venezia Ricerche – Venezia Research Consortium
<b>ENEA</b>	Ente per le Nuove tecnologie, l'Energia e l'Ambiente – Agency for New Technologies, Energy and Environment
<b>FEEM</b>	Fondazione Eni Enrico Mattei – Eni Enrico Mattei Foundation
<b>GNDCI</b>	Gruppo Nazionale per la Difesa dalle Catastrofi Idrogeologiche – National Groups for the Defence from Hydrogeological Catastrophes
<b>HVAC</b>	Heating Ventilating and Air Conditioning
<b>IDEAS</b>	Centro Interdipartimentale per l'Analisi delle Interazioni Dinamiche tra Economia, Ambiente e Società – Interdepartmental Center for Dynamic Interactions between Economy, Environment and Society
<b>IEFE</b>	Istituto di Economia e Politica dell'Energia e dell'Ambiente – Institute of Economics and Energy and Environment Policies
<b>IMET</b>	Italian Ministry for the Environment and Territory

<b>INGV</b>	Istituto Nazionale di Geofisica e Vulcanologia – National Institute of Geophysics and Volcanology
<b>IPSC</b>	Istituto per la Protezione e la Sicurezza del Cittadino – Institute for the Protection and Security of Citizens
<b>IRIS</b>	Istituto di Ricerca Interdisciplinare sulla Sostenibilità – Interdisciplinary Research Institute on Sustainability
<b>IUAV</b>	Istituto Universitario di Architettura Venezia – Architecture University of Venice
<b>IVPC</b>	Italian Vento Power Corporation
<b>JRC</b>	EU Commission Joint Research Centre
<b>MOST</b>	Ministry of Science and Technology of China
<b>NDRC</b>	China National Development & Reform Commission
<b>SD</b>	Sustainable Development
<b>SEPA</b>	State Environmental Protection Administration of China
<b>SEPB</b>	Shanghai Municipal Environmental Protection Bureau
<b>SICP</b>	Sino-Italian Cooperation Programme for Environmental Protection
<b>SICP PMO</b>	Sino-Italian Cooperation Programme Project Management Office
<b>SMAT</b>	Società Metropolitana Acque Torino – Municipal Water Company of Turin
<b>STA</b>	Società Trasporti Automobilistici – Services for the mobility of Rome
<b>TEN</b>	Thematic Environmental Networks
<b>TOROC</b>	Torino Organising Committee
<b>UNDP</b>	United Nations Development Programme
<b>UNEP</b>	United Nations Environmental Programme
<b>UNIDO</b>	United Nations Industrial Development Organisation
<b>VEGA</b>	VEnice GAateway for Science and Technology
<b>VESTA</b>	Venezia Servizi Territoriali Ambientali – Venice Environmental Territorial Services
<b>VIU</b>	Venice International University
<b>WB</b>	World Bank
<b>WHO</b>	World Health Organisation