

ECODESIGN FOR THE PLANET.

Solutions for a clean environment and a new economy

Keywords:

- **Green new deal/Green hi-tech/Green economy**
- **Innovative, sustainable technologies. Waste, air, water and contaminated sites**
- **Green products and informed consumption**
- **The culture of responsibility: environmental, technological and ethical**
- **Education and training: Creating professional ecodesigners**

Ecodesign for the planet. Solutions for a clean environment and a new economy

The latest environmental strategies now incorporate a concept of ECODESIGN: a production system that takes into account the best possible use of raw materials and energy in reducing environmental impact and the spread of toxicity. It gives more weight to the end products and achieving higher efficiency in services. In environmental technologies and biotechnologies, concepts such as Ecodesign of Services, dematerialisation and Factor 10 are expressions of the broader concept of Ecodesign, which involves the use of important new technologies and management procedures in industry, together with the use of sustainable, re-usable and recyclable products, validation of the ecosystem and quality of the companies themselves. This can be related to all forms of production and services, and to the various sectors covered at Ecomondo. It is a concept that brings together the multiple meanings and applications in various sectors which best describe the environmental culture, applied research, education and training, and particularly the installations on display at Ecomondo, into a single important commitment needed worldwide and which has been incorporated into European legislation and investments at national and company level.

EMERGING ENVIRONMENTAL ITEMS

Wednesday 28th October 2009, 11.15 am -1.30 pm, Neri Room South Hall

Opening event: policies for the Green New Deal, how sustainability can kick-start the global economy.

By **Rimini Fiera Spa, Regional Government of Emilia Romagna, Conai, Legacoop**, in collaboration with **the Ministry of the Environment, Land and Sea Protection, Confindustria, Anci, Legambiente and the Kyoto Club.**

Lorenzo Cagnoni, Chairman Rimini Fiera Spa

Cristhofer Flavin – Chairman, World Watch Institute

Filippo Bernocchi, Delegato alle politiche ambientali per Anci

Piero Perron - Chairman, CONAI

Vittorio Cogliati Dezza – Chairman, Legambiente

Vasco Errani - Chairman Emilia Romagna regional government (invited)

Giuliano Poletti – Chairman, Legacoop

On. Roberto Menia, Sottosegretario di Stato all'Ambiente e alla Tutela del Territorio e del Mare

Moderator: Antonello Piroso, director journalist, LA7

There will be provided a service of interpreting Italian-English

Wednesday 28th October 2009, 11.30 am -1.30 pm, Neri Room 1 South Hall

Environmental innovation, an engine for a sustainable economy. Launch event Sinnova 2010

By **Rimini Fiera SpA, Sisifo** with the kind support of **Novamont Spa**

Introduced by: Luca De Biase, editor Nova. Il Sole 24 Ore

The engine of innovation, Gunther Pauli, founder of Zero Emission, network of 3,000 scientists involved in environmental innovation

The contribution of environmental transformation in the economy from dissipative to conservative, Catia Bastioli, AD and President Novamont Kyoto Club

The role of financial institution in supporting companies in the field of environmental innovation, Stefano Melazzini - Mediocredito Italiano

Speech of Domenico Sturabotti, Director Symbola (invited)

There will be provided a service of consecutive interpreting Italian-English

Wednesday 28th October 3.00 p.m. - 8.00 p.m. Cooperambiente stage Pavilion D5

AbitarEcostruire. Legacoop and Legambiente sustainability projects

By **Legacoop and Legambiente**

Wednesday 28th October 2.00 p.m. – 6.00 p.m. Diotallevi Room 1, South Foyer

Business and environmental sustainability

By **TÜV Italia and UniCredit Group**

Thursday 29th October 2009 9.15 am - 6.00 pm Neri Room 2, South Foyer

New developments in waste legislation: directive 2008/98/EC and the amendments to the IPPC Directive

By **ISPRA, Safe and Ecomondo**

The national scenario will undergo important new changes following the issue of directive 2008/98/CE by the European Parliament and the 19th November 2008 Council “regarding waste and which repeals some directives”.

The new directive introduces considerable innovations, which intend strengthening the principles of precaution and prevention in waste management, optimizing recycling/recovery and ensuring that all management work, starting with the collection, is carried out in respect of strict environmental standards.

The new provisions, in compliance with the policies of the thematic Strategy for prevention and recycling, indicate the action member Countries will have to undertake to ensure that the European Union becomes a “recycling society”. As well as the new aspects introduced by the new framework directive, it is also emphasized that the directives regarding end-of-life vehicles (dir. 2000/53/CE) and WEEE (dir. 2002/95/CE and dir. 2002/96/CE) are also undergoing important revision procedure, which will have positive effects for building a society based on recycling.

Lastly, the revision of the IPPC regulations on integrated pollution prevention and control must be mentioned.

After the introductory speeches updating on regulations, the Forum foresees two sessions on emerging topics and a round table with the representatives of the institutions and trade members involved.

Session Chairperson : Rosanna Laraia, ISPRA

Introductory speeches

The framework directive on waste and the revision of the IPPC directive. Emerging and innovative aspects for waste management, Rosanna Laraia – ISPRA

Integrated waste management strategies and the means of validation, Luciano Morselli – University of Bologna – Rimini Campus

Prevention Session

Waste prevention in the light of the new directive, Antonio Cavaliere, ONR Chairman of the Ministry of the Environment

Prevention programs and news regarding planning, Lino Zanichelli, Emilia Romagna Regional Councillor for the Environment, Bologna

GPP: means of prevention, Lucia Venturi – National Secretary, Legambiente, Rome

12 noon -1.30 pm **Round table: Integrated waste management and the best available techniques**

Moderator: Dario De Andrea – Il Sole 24 Ore, Milan

Speakers scheduled

Stefano Laporta, ISPRA Under Board Examiner

Luigi Pelaggi, Representative Ministry for the Environment (invited)

Karolina Fras, DG X Environment European Commission (invited)

Daniele Fortini, Federambiente Chairman

Carlo Noto La Diega, FEAD Chairman

Pietro Colucci, FISE Assoambiente Chairman

Leonardo Ghermandi, CIC Chairman

Cesarina Ferruzzi, ANIDA Chairperson

Filippo Bernocchi -ANCI

Conclusions, Enquiry Commission on the waster cycle, Rt. Hon. Gaetano Pecorella

2.30 – 6.00 pm **Recycling session**

Organized by **ISPRA** and **Safe**

Session Chairman: Riccardo Ballesio – Safe

Speech of Francesco Curcio, Direttore Generale AITEC

Speech of Paolo Tomasi, Presidente COOU

Secondary material and by-products: new European criteria and standards, Federico Foschini - ISPRA

The objectives of separate collection and recycling: consortia's role, Giancarlo Longhi - CONAI

The recycled material market, Corrado Scapino – Chairman, FISE-UNIRE

Energy recovery, Pasquale De Stefanis – ENEA

The management of biodegradable waste, Enzo Favoino – Chairman, ISWA Biological Treatment of Waste work group;

The role of local bodies in the promotion of the recycled material market: Ministerial Decree 203/2003, Stefano Vitali – President, Rimini Provincial Government - UPI

The control system, Vito Belladonna - Technical Director, ARPA Emilia Romagna

**Thursday 29th October, 9.30 am -1.00 pm and 2.30 – 6.00 pm Diotallevi Room 1, South Foyer
Economy and environmental relaunch: opportunities for voluntary tools between green
production and environmental business**

By **ERVET (Emilia-Romagna Valorizzazione Economica del Territorio)**, in collaboration with **ENEA**

Can the market itself manage to direct the economy to a sustainable approach, re-orienting the production and the consumption towards “the green way”?

In which way can the voluntary tools contribute to joining together the market of those who are “green”, because they reduce their process and/or product impacts, with respect those who are green just because they have as a reference market, that of environmental goods and services?

Do the major international reference strategies (PCS, 20-20-20 EU Directive, Aarhus, etc.) and their tools represent an opportunity or a forced choice in which to invest?

The conference will deal with the re-launch of demand through integrated strategies, between the measures of the institutions and the private sector experiences, and it will see Economists and environmental Experts confront with the market operators.

There will be a first morning session, which will clear up the two concepts of “green production oriented” and “green business oriented”, with their different characteristics and driving forces, the policies and the tools they refer to and the advantages they bring.

The role of the institutions as dialogue factor between the two realities will be explained

During the afternoon session, some of the networks, that, with different qualifications, act to support the diverse tools and their innovation, will be invited to present their experiences.

9.30 am *Introductory speech: introductory framework about the main tools trends and news*, Fabio Iraldo, *IEFE Bocconi*

Morning session: from 10.00 am to 1.30 pm - Green Economy and Environmental Certification

Session Chairman: Enrico Cancila, *ERVET Emilia Romagna Valorizzazione Economica Territorio*

Speakers foreseen

10.00 am Marianne Muller – European Commission, Environment Directorate-General

10.20-11.20 am Experiences from “the best” firms – Contributions from organisations and certification bodies

11.20 am *Competitiveness and Eco-industrial “District”: presentation of the national survey*, Roberto Cariani, *Ambiente Italia*

11.40 am *Large retailers and environmental labels*, a representative of COOP Italia

12 noon Discussion session

Institutions representatives will debate about the perspectives of an economy really based on sustainable development

- Lino Zanichelli, Emilia Romagna Regional Government environment councillor
- Filippo Trifiletti, SINCERT manager
- A representative of the Ministry for the Environment
- A representative of the Ministry for Economic Development
- A representative of the ISPRA

are invited to attend the session.

Afternoon session: from 2.30 to 5.30pm – The role of networks between the support and the innovation of process and product certification

Evidences of some national networks that promote voluntary tools, and study cases

Session Chairperson: Maria Litido - ENEA

Speakers foreseen

2.30 pm *Economy and environment in the Life Cycle Sustainability Analysis*, Paolo Masoni, Rete Italiana LCA and Study case.

3.00 pm A representative of *CARTESIO* network (Patrizia Bianconi) and Study case (Capannori Industrial area)

3.30 pm A representative of Kyoto club and energy certification Study case

4.00 pm A representative of Coordinamento Agende 21 and Study case

4.30 pm A representative of *Nodo EMAS ER (ARPA ER)* and Study Case

3-4 Call for Papers

Thursday 29th October 2009, 2.30 - 6.00 pm Diotallevi Room 2 South Foyer

The 99/31/CE Landfill Directive is ten years old. How has Italy and other European countries fulfilled its objectives?

Organized by **ISWA Italy, ISPRA, ISS, CNR**

The Italian Government adopted the Landfill Directive into its law in 2003, with Decree n. 36. Precise rules were established for the criteria under which waste could be landfilled and also on how landfills should be built, managed and cared for post-closure.

Italy has delayed the application of these criteria several times, and in 2009 over 50% of all its MSW still ends up in landfills.

It therefore is interesting, on this particular anniversary, to look at how other countries have (or have not) applied the Landfill Directive and what strategies need to be adopted to achieve fulfilment. Further, the Italian scenario is not homogeneous - Regions have applied the Directive in different ways, often ignoring it.

The objective of this Conference is to give an overview of what is happening around Europe and within Italy and to suggest what strategies need adopting immediately to reduce our dependence on landfills.

Moderator: Carlo Noto La Diega - Chairman, FEAD

Rosanna Laraia ISPRA, The Ministry of Environment letter on the application of the Directive and the Decree of 3rd August 2005

Loredana Musmeci ISS, Waste containing hydrocarbons, what are the limits for acceptance in landfills?

Giuseppe Mininni CNR, Critical aspects in landfill management for the disposal of sewage sludge

Martin Steiner, TBU Austria, Case Studies from Austria, Slovenia, ex-Yugoslavia and Turkey

Margherita Gorio, Fise Assoambiente – Managing landfills within a fluid and unclear legislative

Erik De Baedts, NVRD Holland, Case Study from the Netherlands

Steen Stentsøe, COWI Denmark, Case Study, Danish application of the Directive

Goran Vujic, Head of Department for Environmental Engineering, University of Novi Sad,

Executive director of SeSWA Serbia - Case Study, Serbia

Antonello Antonicelli, Environment Department Director, Apulia Regional Government, Case Study - Apulia

Friday 30th October 2009, 9.30 am - 1.15 pm, Neri Room 2, South Foyer

Cradle to Cradle. National and European innovations, strategies, realities and experiences in wasteprevention

Organized by **Ecomondo Technical Scientific Committee**

The reduction of the consumption of resources, recovery of material and energy from waste, defending ecosystems will have to involve the production of new goods, also in the light of new emerging regulations.

Various strategies are being adopted at national and European level in this direction, but even more innovative challenges are arising on the international scenario and go against the traditional theorem of "reducing the intensity of manufacturing and production processes, recycling the waste derived from them and limiting consumption, " and according to Brangard, (author with McDonough of the book "From the Cradle to the Cradle") "it is possible to overcome the growth / protection dualism of environmental balance which takes concrete form with "Eco-effectiveness" in planning of production chains that upstream already foresee the re-inclusion of the materials in later productive cycles".

This seminar involves Michael Braungart's prestigious participation and also has the contribution of other important speeches and networking between the speakers and the public taking part.

Speakers Scheduled

Chair: David Newman - Ecomondo Technical Scientific Committee

09:30am *Welcome Opening*, Luciano Morselli - University of Bologna, Polo di Rimini

09:50am *The European Framework Directive and prevention programs*, Rosanna Laraia-ISPRA

10:15am *"From the Cradle to the Cradle"*, Michael Braungart - Erasmus University Rotterdam, Founder of HUI Hamburger Umweltinstitut

Debate with the public speakers and facilitators

Moderators: Daniele Fortini, President Federambiente, Atilio Savino President ISWA International

11:30am **Virtuous examples from Italy**, Valentina Cipriano - Federambiente, Rome

11:55am *Holland, the first steps towards the policies of prevention of "From Cradle to the Cradle"*, Erik De Baedts - ISWA Holland (NVRD)

12:15pm *Including prevention in local operating plans*, Edo Ronchi, Chairman SUSDEF, Rome

12:35pm *Critical aspects in regional prevention programming*, Fabio Fiori – Veneto Regional Government



Ciclo e Riciclo dei Rifiuti
Waste Cycle & Recycling

Thursday 29th October 9.30 am - 1.30 pm Neri Room 1 South Foyer

WEEE Forum: the new WEEE system: results and prospects

By **FISE Servizi** and promoted by the **WEEE Coordination Centre, ANCI, ANIE, Federambiente and AssoRAEE**

The “**WEEE Forum**” is the annual appointment at Ecomondo, for in-depth updating on the status of the accomplishments of the national WEEE (Waste Electrical and Electronic Equipment) management system.

The event is extremely interesting for obtaining a overview of the application of the agreements inked by the Coordination Centre with the ANCI, regarding both the collection and pick-up at waste collection centres on behalf of the collective WEEE management systems, and with salvage company associations, as far as the treatment phase is concerned.

This year, the Forum will offer a comparison with other important experiences at international level.

Moderator: Antonio Cianciullo, “La Repubblica”

Speeches scheduled

Important international experiences (TBA), Christian Brabant, Director Eco-systemes (F)

The process of revision under way on the WEEE Directive, Daniela Capaccioli - ANIE

The first multi-consortium system: opportunities, problems, ideas for improvement, Watch and Control Committee

Operational data on WEEE collection and management WEEE treatment agreement, Giorgio Arienti, Chairman CdC RAEE

Outcome of the application. Program agreement for the pickup of WEEE and tender for financing waste collection points, ANCI

WEEE collection Experiences and requirements, Roberto Caggiano - Federambiente

End-of-life, a combination of regulations and market. First effects of the changeover from the old to new the system, Gabriele Canè, Chairman FISE Assorae

The launch of the take-back scheme, Pierpaolo Masciocchi - Confcommercio (Distribution)

Conclusions: Overall outcome of the new system RAEE and the enforcement of the relative discipline, Luigi Pelaggi -Ministry for the Environment

Thursday 29th October, 9.30 am - 1.30 pm, Tiglio Room, Hall A6

Bio-based Economy and Biorefineries

Coordinated by the Italian Technology Platforms **SusChem Italy & Biofuels Italia**, in cooperation with **ENEA, Legambiente** and **Associazione Chimica Verde Bio-net**

The bio-based economy would be the 21st Century new economy. Agriculture would have a key role in it by providing the required feed-stocks for obtaining chemicals, biomaterials and biofuels. Biorefineries would indeed generate new and conventional chemicals and materials characterized by a very high biocompatibility and biodegradability (*bio-based products*) along with biofuels from dedicated crops, agri-food by-products and polluting wastes, thus avoiding the use of highly expensive and environmental impacting petroleum and reducing the overall release of CO₂. The generated bio-products have special interest for the modern chemical, textile and energy industries, which are requiring a new competitiveness and an improved environmental sustainability. The aim of the conference is to present and discuss a) the state-of-the-art of R&D and innovation in the biorefinery sector; b) examples of biorefineries active or under development in Italy and c) the major environmental, economical and policy issues to be managed to boost the biorefinery sector and the *knowledge-based bio-based economy* in Italy.

Session Chairs Fabio Fava – SusChem Italy and Gianpietro Venturi - Biofuels Italia

9.40 am *Introduction*, Ezio Andreta - APRE

Plenary

10.00 am *Bio-based economy and how to implement it: the case of North-Rhine Westphalia (Germany)*, Christian Patermann - Advisor to the State Government of North-Rhine Westphalia (NRW), Germany & Former Director EU Commission, DG RTD

Innovation in the sector

10.40 am *Novel crops for bioenergy production*, Andrea Monti - University of Bologna & Biofuels Italia

11.00 am *Plants for the production of fine chemicals and nutraceuticals*, Giovanni Dinelli - University of Bologna & Technology Platform Italian Plants for the Future

11.20 am *Process innovation*, Gabriele Centi – University of Messina & SusChem Italy

Examples of *bio-based industries* and biorefineries in Italy

11.40 am *Biofuels: the European vision*. Alessandra Borelli - ENI SpA, Brussels

12 noon *Polymers from biomass and agricultural by-products*, Catia Bastioli, Novamont

12.20 pm *Second generation bioethanol: M&G and Italian technology innovation in the sector*, Dario Giordano, Mossi & Ghisolfi

12.40 pm *Ethers as fuels from biomasses*, Water Mirabella - Lyondell-Basell

1.00 pm *Biodiesel and sustainability*, Maria Rosaria di Somma - Assocostieri

13.20 *Bio-hydrogen production from bio-waste: ready for full-scale applications?*, Andrea Schievano¹, Enrico Consonni¹, Alberto Tenca², Roberto Oberti², Fabrizio Adani¹ -¹Departimento di Produzione Vegetale & ²Dipartimento di Ingegneria Agraria Università di Milano, Via Celoria 2, 20133, Milano, Italy

13,35 *Valutazione tecnico-economica di diversi sistemi colturali per l'ENERGY FARM*, Giuliana D'Imporzano¹ Giorgio Colombo², Tommaso Maggiore¹, Fulvia Tambone¹, Andrea Schievano¹, Marco Negri¹, Fabrizio Adani¹, ¹DiProve – Università degli Studi di Milano – Via Celoria 2, Milano-Italy; ²Monsanto Agricoltura Italia. Via San Colombano 81/a Lodi -Italy.

Thursday 29th October 2009 10.00 am -1.00 pm Ravezzi Room 2 South Foyer

III ITALIAN NATIONAL CONFERENCE ON HEALTHCARE WASTE TREATMENT

Organised by **Superior Institute of Health (ISS), ISWA Italia**, with the kind support of **Mengozzi SpA**

The third edition of this national conference on healthcare waste treatment reviews the situation in Italy, including an update on the legislative framework and a case study from a Sicilian hospital and from the central region of Emilia Romagna; but above all reflects the international mission of ISWA which recognises the global need for sustainable management of health-care wastes. With the presentation of the latest edition of the WHO Blue Book, to which ISWA has contributed, the Conference will also look at sterilisation processes for treatment in the Balkan countries and how the British manage electric and electronic waste from their hospitals. Finally our sister Association in Brazil will illustrate how developing countries are dealing with their health care waste.

Program

Introduction: Monica Bettoni, Director, ISS Rome

Ruth Stringer, WHO, presents the Blue Book

Dr. Loredana Musmeci, ISS Rome, presents the Italian situation

Mr. Paul Williams, Manager for Waste and Environment NHS Trust UK, Member GDL ISWA, how Britain applies the European directives on managing hazardous and WEEE in UK hospitals.

Giuseppe Viviano, ISS Rome, presents the Italian situation on healthcare waste incineration

A case study- health care waste treatment in Sicily

A case study- health care waste treatment in Santa Caterina, Brazil (ABRELPE)

Mengozzi SpA, - advanced systems for health care waste treatment

A case study - sterilisation technologies used for treatment in the Balkan region (ISWA Serbia)

Goran Vujic, Head of Department for Environmental Engineering, University of Novi Sad, Executive director of SeSWA Serbia-Case Study, Serbia.

Davide Sgarzi, Emilia Romagna Regional Government, Health Care Directorate

Conclusions: Dr. Loredana Musmeci

Thursday 29th October, 2.00 pm - 6.00 pm, Ravezzi Room 1, South Foyer

International Conference: First IAMAW International Symposium "Agro-industrial by-products: waste or resource?"

Organized by **IAMAW, International Association of Mediterranean Agro-industrial Waste**

The International Association of Mediterranean Agro-industrial Waste (IAMAW) is an international scientific association, working in the public interest to promote issues related to treatment and recycling of Mediterranean waste streams and by-products of agro-industrial activities, in an environmental-sensitive manner. The term Mediterranean refers to climatic/edaphic condition and not to geographic location. Since its foundation IAMAW recruited about 30 members from the main Mediterranean countries (Italy, Spain, Greece, Israel, Portugal, Turkey, Tunisia and Australia).

The aim of the symposium is to illustrate to the scientific and general communities some of the main topics that IAMAW is dealing with by means of relevant presentations, delivered by its members. The scope of the presentations includes all themes related to the recycling and utilization of Mediterranean agro-industrial wastes.

14.00 **Introduction:** Michael Raviv, Israel

Session 1: Biotechnological and microbiological approaches to the use of Mediterranean agro-industrial wastes. Chairs: **Federico Federici, Italy and Fazilet Vardar Sukan Turkey**

- 14:10: *Biotech production of polyhydroxyalkanoates from olive mill wastewater.* **Lorenzo Bertin**, Marianna Villano, Mauro Majone, Mario Beccari, Cristina Bettini, Fabio Fava - DICASM, University of Bologna, Italy
- 14:25: *Microbial production of enzymes on olive mill wastewater.* **Maurizio Petruccioli**, Federico Federici, Alessandro D'Annibale - DABAC, University of Tuscia, Viterbo, Italy
- 14:40: *Agro-industrial waste: a source of bioactive phenolic compounds useful for the production of fine chemicals.* **Roberta Bernini**, Maurizio Barontini, Fernanda Crisante, Maria Cristina Ginnasi, Gianfranco Provenzano - DABAC, University of Tuscia, Viterbo, Italy
- 14:55: *Metal complex dye degradation by the fungus *Trametes versicolor* followed by metal adsorption with a low cost activated carbon derived from Tunisian olive-waste cakes.* **Rym Baccar**⁽¹⁾, Montserrat Sarrà⁽¹⁾, Paqui Blánquez⁽¹⁾, Gloria Caminal⁽¹⁾, Teresa Vicent⁽¹⁾, Jalel Bouzid⁽²⁾, M. Feki⁽²⁾, ⁽¹⁾Universitat Autònoma de Barcelona, Spain, ⁽²⁾Université de Sfax, Tunisie
- 15:10: *Bacteria involved in the degradation of olive mill waste polyphenols: the tannic acid as case of study.* **Milva Pepi**⁽¹⁾, Arianna Lobianco⁽¹⁾, Roberto Altieri⁽²⁾, Alessandro Esposito⁽²⁾, Antonio Feola⁽³⁾, Silvano E. Focardi⁽¹⁾, ⁽¹⁾Department of Environmental Science, University of Siena, Italy; ⁽²⁾Consiglio Nazionale delle Ricerche (CNR), Institute for Agricultural and Forest Mediterranean Systems, Perugia, Italy, ⁽³⁾Parco Nazionale del Cilento e Vallo di Diano, Salerno, Italy
- 15:25: *Ethanol production from different substrates by a flocculent *Saccharomyces cerevisiae* strain.* **José Duarte**, L. Baeta-Hall, B. Ribeiro, M.C. Sààgua, J. Pereira - LNEG, Uniy of Bioenergy, Lisboa, Portugal
- 15:40: *Production of Growth Promoting Poultry Feed Additive from Olive Vegetation Water by Using Clinoptilolite Minerals.* **Erdinc Ikizoglu**, Fazilet Vardar Sukan - Ege University, Dept. Bioengineering, Bornova, Izmir, Turkey
- 15:55: *Bioremediation for waste treatment.* **Emanuela Galli** - CNR, IBAF, Roma, Italy

Session 2: Agricultural and horticultural recycling of Mediterranean agro-industrial wastes.

Chairs: Emanuela Galli (Italy), Tan Nair (Australia)

- 16:10: *Agronomic and horticultural value of OMW compost.* **Michael Raviv**, Dept. of Environmental Horticulture, Neve Ya'ar Research Center, ARO, Ramat Yishay, Israel
- 16:25: *Effect of olive mill wastes on the microbial ecology of soil.* **Immaculada Sampedro**⁽¹⁾, José A. Siles⁽¹⁾, Rosario Díaz⁽¹⁾, Mercedes García-Sánchez⁽¹⁾, Mariangela Giubilei⁽²⁾, Ermanno Federici⁽³⁾, Federico Federici⁽²⁾, Maurizio Petruccioli⁽²⁾, Juan Antonio Ocampo⁽¹⁾, Inmaculada García-Romera⁽¹⁾, Alessandro D'Annibale⁽²⁾
⁽¹⁾Estación Experimental del Zaidín (C.S.I.C.), Granada, Spain, ⁽²⁾University of Tuscia, Viterbo, Italy, ⁽³⁾University of Perugia, Italy.
- 16:40: *Evaluation of microbial communities involved in the composting process of olive mill waste by traditional and molecular approaches.* **Ermanno Federici**⁽¹⁾, Alessandro Esposito⁽²⁾, Tan Nair⁽³⁾, Giovanni Cenci⁽¹⁾, Roberto Altieri⁽²⁾ ⁽¹⁾Dipartimento di Biologia Cellulare e Ambientale, University of Perugia, Italy, ⁽²⁾Consiglio Nazionale delle Ricerche (CNR), Institute for Agricultural and Forest Mediterranean Systems, Perugia, Italy; ⁽³⁾Centre for Plants and the Environment, University of Western Sidney (Australia)
- 16:55: *Adding value to the two-phase olive-mill waste ("alperujo") through composting for production of humic fertilizers and amendments for soil bioremediation.* **Juan Cegarra**, Jose Antonio Alburquerque, Germán Tortosa, Carlos de la Fuente, Rafael Clemente, María Pilar Bernal -Centro de Edafología y Biología Aplicada del Segura, CSIC (Spain)

- 17:10: *Ecological behavior of selected antagonist bacteria and their effects on repressiveness of bacteria-enriched olive by-product composts*, **Giuseppe Lima**, Domenico Vitullo, Gabriele Alfano, Filippo De Curtis and Giancarlo Ranalli Dipartimento di Scienze Animali Vegetali e dell'Ambiente, University of Molise, Italy
- 17:25: *Functional vermicomposts from olive and winery wastes for biological restoration of agro-ecosystems contaminated by pesticides and hydrocarbons*, **Emilio Benítez**, Esperanza Romero, Rogelio Nogales - Departament of Environmental Protection, Estación Experimental del Zaidín - CSIC, Spain
- 17:40-18.00: Discussion and concluding remarks.

Friday 30th October, 9.30 am - 1.30 pm and 2.30 pm - 6.00 pm Ravezzi Room 2, South Foyer
Research into integrated waste management through new intervention hierarchies, ecodesign and validation procedures

By the **University of Bologna - Rimini Campus** and **Ecomondo**

While updating and simplifying waste management policy, the new Framework Directive 2008/98/CE redefines the intervention hierarchy, strengthens prevention and introduces the innovative concept of ecodesign. This policy must be put into practice from the point of view of an Integrated Waste Management system resulting from a process of environmental and economic sustainability, and social acceptability. At the same time, an IWM system must satisfy criteria of validation expressed by the instruments of Industrial Ecology, Ecodesign, Integrated Environmental Monitoring System, Life Cycle Assessment and Risk Analysis, researches and instruments that intervene to support the organization, management and economic aspects at environmental and territorial level. Applications.

I Session Chairmen: Gian Franco Saetti, Manager, Emilia Romagna Region Waste and Site Remediation Service, Bologna and e Edolo Minarelli - Hera SpA, Rimini
 Edolo Minarelli, Hera SpA, Rimini

Program

- 10:20 *Plenary*, Mariella Maffini - Presidenza Consiglio dei Ministri, struttura Sottosegretario di Stato Emergenza Rifiuti Campania – Rome, IT
- 10:50 Fabio Musmeci - ENEA ACS – Rome, IT
- 11:10 *Coffee break*
- 11:30 Sara Cavaggion -Hera Rimini srl – Rimini, IT
- 11:50 Serenella Sala, Bicocca University – Milan, IT
- 12:10 *Aerobic solid-state processes to mitigate greenhouses gas emission in municipal solid waste management*, Barbara Scaglia, DiProve – Milan University Studi – Milano, IT
- 12:30 *E-waste sustainable management by means of characterisation and valorisation*, Isabella Lancellotti, University of Modena and Reggio Emilia – Modena, IT

II Session Chairmen: Fabio Tatàno – DiGeoTeCA, University of Urbino “Carlo Bo” – Urbino, IT and Michele Notarnicola – Politecnico of Bari – Bari, IT

Program

- 14:30 *Plenary: Preventing Waste at Source through Sustainable Consumption Prerequisite: retail trade enhances product range with sustainable products*, Gerhard Vogel, Vienna University of Economics and Business – Vienna, A
- 15:00 Alessandro Abbà, University of Pavia – Pavia, IT

15:20 *Monitoring and evaluation of landfill gas emission fluxes with the accumulation chamber method: multiyear experience at Fano sanitary landfill site*, Fabio Tatàno, DiGeoTeCA University of Urbino "Carlo Bo" – Urbino, IT
15:40 Massimo Pera, Gesenu spa – Perugia, IT
16:00 *Numix Project*, Alessandra Passaro – CETMA Brindisi – Brindisi, IT
16:20 Michele Notarnicola, Politecnico of Bari – Bari, IT

Friday 30th October 2009, 11.00 am - 1.00 pm, Giglio Room, Hall B4

Workshope: Environmental benefits of remanufactured cartridges

By Ecomondo

Friday 30th October 2009, 3.00 pm - 5.00 pm, Giglio Room, Hall B4

European conference: Aftermarket and GPP in Italy and Europe

By Ecomondo

Industrialization has created the environmental disaster but also the preconditions to overcome it. Competition and cooperation can coexist: Burden and Responsibility share.

The 4 r's European Union: a reduction of materials, reuse, recycling and energy recovery push to identify other four guidelines.

Operational responsibilities, the expectations of management in business sector, leaving the State the task of control, being willing to change norms and attitudes and the search for consensus should be the basic rules for reversal virtuous and shared by both recyclers and end users of toner/inkjet cartridges to reduce the production of printing consumables that landfill at the end of life.

Chair: Giovanni Ravelli - SSSCP

Christian Wernhart - Etira European Toner Ink Remanufacturer Association

Enzo Mietta - Armor Italy

Piero Cardile - Conad

Claudia Di Benedetto - Consip

Daniel Sarmiento and Diego Tagle - Powervip Spain



Thursday 29th October 9.30 am - 2.00 pm Gold Blu Room, Hall C1

Aspects of managing the integrated water cycle with particular reference to distribution and quality control

In collaboration with **Federutility** and **IWA Italian Section**

In the biological purification plant sector, the application of control/automation strategies seems to be the solution for ensuring the standards requested for discharge, which are also stringent as a consequence of the application of BAT in the industrial sectors subject to IPPC discipline, or simply with reference to hazardous substances.

In the urban wastewater treatment sector too, the attention focussed on some specific pollutants (for example endocrine disruptors) or on nutrients requires specific process control which can no longer be entrusted to the ordinary work of the duty operator alone.

The application of appropriate control strategies allows excellent management of the systems/plants with consistent savings in terms of operating costs. There is also a series of peculiarities that characterize the treatment plants, justifying an accurate process control:

- the amount of water to be treated daily is variable, unless adequate equalization units are available, with negative consequences on process efficiency;
- process efficiency
- an efficient separation of the biomass from the purified effluent is not always easily achieved.

The session held will feature the state of the art regarding instruments, with particular reference to sensors, and to the strategies available for the control of the purification plants, and advantages that can be obtained with their application will be illustrated. Particular attention will be dedicated to the sludge line, which in many cases forms the bottleneck in plant management. There will also be a focus on the role of mathematical models combined with computerized control systems as a means of management support in order to achieve a reduction in costs and an increase in efficiency.

The most interesting applications at full-scale plant level will also be presented.

Session Chairmen

Franco Cecchi – University of Verona

Roberto Ramadori - Cnr-Irsa, Rome

Speeches scheduled

Purification plant control strategies, Maria Concetta Tomei - Cnr-Irsa

In-line spectral sensors for advanced nutrient removal control, Wolfgang Lettl - s::can Vienna

Instrumentation, Control and Automation (ICA) for nutrient removal, Joris Roels - Aquafin

Integrated management of a water network and purification as an instrument for economic and management choices, Gimmi Trombetta - Siemens

Urban wastewater purification plants. National case studies of process control for the reduction of energy consumption and removal of nutrients, E.M. Battistoni, A.L. Eusebi and P. Battistoni - Ingegneria Ambiente srl, & Univpm – Ancona

Process control for the reduction of the production of purification sludge. Case study, A.L. Eusebi, G. Carletti, C. Troiani and P. Battistoni - Ingegneria Ambiente srl & Univpm – Ancona

Intelligent in-line control for the efficient sustainable management of urban wastewater treatment plants. Case study: SBR on a pilot scale Luca Luccarini – Enea

Monitoring bacteria activity in active sludge treatment plants: a field analyzer for the automation of pH/DO-STAT techniques, Davide Nascetti - HERA SpA, Simone Mariani - SPES scpa, Fabriano

Friday 30th October 9.30 am - 6.00 pm Gold Blu Room, Hall C1

Recycling, recovery and re-use of water: Issues and prospects for achieving advanced objectives for the cleansing, re-use and recycling of water resources, also with reference to application of the IPPC rules.

In collaboration with the **Cnr - Water Research Institute** and **Enea**

Chairmen

Antonio Lopez – Cnr Irsa, Bari

Davide Bixio - European Commission, Brussels (B)

Costantino Nurizzo - Milan Polytechnic

Alfredo Pini – Ispra, Rome

Speeches scheduled

Water reuse in Mediterranean Sea coastal waters prone to draught with emphasis on European policies, Davide Bixio - European Commission, Brussels (B)

Irrigation with recycled water: past and future, Valentina Lazarova – Suez, Le Pecq, France

Water reclamation technologies for managed aquifer recharge, Thomas Wintgens - Institute für Verfahrenstechnik der Rhein West Techn. Hochschule Aachen 52056, Germany

Re-using wastewater: quality and technical recovery requisites, Costantino Nurizzo - Milan Polytechnic

Re-use of wastewater for irrigation in Apulia, Antonio Lopez and Michele Vurro - Cnr-Irsa, Bari, Maria Antonietta Iannarelli – Apulia Regional Government, Bari

Recycling water in industry in order to apply the IPPC directive, Alfredo Pini – Ispra, Rome and Giuseppe Mininni Cnr – Irsa, Rome

Re-using wastewater by means of MBR (Membrane bio reactor) technologies, Giacinto Cornacchia - Enea

Strategies and technologies for the re-use of water in the textile industry, Davide Mattioli - Enea

Experiences of the use of water recycling in the textile industry zone of Prato, Riccardo Valeri and Claudio Bassetti - GIDA SpA Prato

MBR technology for the re-use of wastewater, Tullio Montagnoli - A2A Brescia

Speeches from the Call for Papers

Friday 30th October 9.30 am - 6.00 pm Diotallevi Room 2, South Foyer

WATERPIPE EC Funded Project Final Conference

How Innovation can Assist in the Management of Water Distribution Assets"

Presentazione e discussione dei risultati del progetto di ricerca europeo WATERPIPE-An Overview and Discussion on the Results of the WATERPIPE Research Project
ECOMONDO, Rimini (Italy)

Opening session

9:20 am –Welcome address

Rosario Mazzola, Nicola Bazzurro - IRIDE AcquaGas Genova IT

Angelos Amditis - ICCS University of Athens GR

9:35 am – Key Note Speech: How Innovation can Assist in the Management of Water Distribution Assets

Bambos Charalambous –past Chair Water Loss Task Force of IWA. CY

WATERPIPE Project to assist Management of Water Distribution Networks

Chairman: Rosario Mazzola – IRIDE AcquaGas Genova IT

10:00 am –WATERPIPE project: Background and Overview

Angelo Amditis – ICCS National Technical University of Athens GR

10:15 am - WATERPIPE Methodology for the Structural Assessment of Damaged Water Mains

Vassilis Kallidromitis Tecnic S.p.A. Italy Deterministic Assessment

Guenter Becker RISA GmbH Germany Probabilistic Assessment

10:30 am- WATERPIPE Methodology for the Probabilistic Assessment of Water Quality in a Water Main that has Lost its Structural Integrity

Seval Sozen - Istanbul Technical University Turkey

10:45 am – The GPIR Developed in the WATERPIPE project

Manthos Bimpas – ICCS National Technical University of Athens GR

11:00 am – WATERPIPE Project: Risk-Based Rehabilitation Decisions for the Water Mains

Corrado Sanna - - Assessment of the Feasibility of Rehabilitation Options for Water Mains

Guenter Becker RISA GmbH Germany Probabilistic Assessment

Stefanos Camarinopoulos - ERRA Greece - GIS-Based Rehabilitation Planning for Water Mains

11:15 am - WATERPIPE Case Studies: Results achieved

Sophie Kanellopoulou – Eydap Athens, GR, Nicola Bazzurro - IRIDE AcquaGas Genova, IT, Kalman Koncz – Aquaserv, RO

11:30 am -12:00 am - Coffee Break

Management of Water Distribution Networks

Chairman: Bambos Charalambous, CY - past Chair Water Loss Task Force of IWA

12:00 am - Current Methodologies for Leakage Detection

Stuart Hamilton – Hydrosave UK, Marco Fantozzi, Studio Fantozzi IT

12:20 am- Asset Management: state of the art

Jo Parker – Watershed Associates UK

12:40 am - Asset Management and WSSTP: Strategic Agenda, Urban Pilots and issued reports

Mike Farrimond – UKWIR London UK, Nicola Bazzurro – Fondazione AMGA IT

01:00 pm – 02:30 pm – Lunch break and Practical Demonstration of WATERPIPE

Afternoon session

Tools and Methodologies for Asset Management: International Experiences in Application of Radar Tools and Decision Support Systems

Chairman: Gordon Watt – PipeHawk UK

02:30 pm –GPR Developed by the Univerdidad Politecnica de Valencia *Rafael Pèrez Garcia – UPV ES*

02:50 pm –GPR Developed by the Politecnico di Milano *Maurizio Lualdi, Marco Ciano – POLIMI IT*

03:10 pm – Optimised Radar to Find Every Utility in the Street: ORFEUS Project *Guido Manacorda – IDS*

03:30 pm- A methodology for Deciding Priorities in A.M.: the Hydroplan Project *Angelo Gallea – AMAT Imperia IT*

03:50 pm- Leakage Detection Radar Developed in Project LEAKING

Manthos Bimpas ICCS National Technical University of Athens Greece

Round Table: Research Needs and Gaps still to be Filled in the Management of Water Distribution Assets and How GPIR Applications Might Help

Chairman: Angelos Amditis, - Research Director, ICCS National Technical University of Athens GR

04:15 pm-5:00 pm

*Angelos Amditis Research Director, ICCS National Technical University of Athens GR , Rosario Mazzola - IRIDE AcquaGas Genova IT, Jo Parker – Watershed Associates UK, Bambos Charalambous -past Chair Water Loss Task Force of IWA CY
Gordon Watt – PipeHawk UK*

17:00 pm – 17:30 pm – Networking Coffee



Thursday 29th October 9.30 am - 1.30 pm Reclaim Expo Room, Hall C3

Round table: “Reclamation in Europe: is Italy in line with the other member states

By the Ministry of the Environment, Land and Sea Protection and the Ministry of Economic Development

A European Directive is being drawn up (Proposal COM2006/232) on the matter of “soil protection” which also faces the problem of the contamination of the soil. This directive has been under discussion for approximately two years, but is still meeting with a certain opposition on behalf of some member states. During the round table, the reasons for this opposition will be examined, as will the essential contents of this directive, above all regarding the identification by member states of the polluted sites and methods for managing so-called “orphan” sites.

During the round table, the Italian situation regarding remediation will also be examined, comparing it with the objectives and methods contained in the Directive proposal on this matter and with the current situation in other member states.

The participation of the Ministry for the Environment and Economic Development will enable to identify the methods for re-launching the remediation of contaminated sites of national interest or not, in order to ensure that Italy is in line with the new European standards.

Session Chairmen; Marco Lupo - Director General Manager, Quality of Life, Ministry for the Environment and Luca Montanarella, Joint Research Centre – European Commission

Speeches scheduled

The European situation, Representative of the European Commission, Representative of the European Environment Agency

The state of the art in remediation, Representative of the Italian Ministry for the Environment, representative of the State/Regions Conference, ISPRA representative, ISS representative, SOGESID representative.

Productive and economic upgrading, representative of the Ministry for Economic Development

Speech TBA, Representative, Manufacturing Area Development, Italy

Requirements and commitments from the enterprise world for remediation and upgrading, Confindustria/UPI representative;

The role of research and development, CNR representative, ENEA representative

A limited number of members of the public can take part (seats must be booked)

Conclusions

Marco Lupo - Director General Manager, Quality of Life, Italian Ministry for the Environment

Friday 30th October 9.30 am - 1.30 pm, Reclaim Expo Room, Hall C3

Contaminated sediments in Italy: state-of-the-art, strategies for their management and remediation and success cases

Coordinated by **SusChem Italy, ISPRA, Italian Ministry for the Environment and Land and Sea Protection**

Several organic pollutants and heavy metals are accumulating in freshwater and marine sediments, through which they enter the food chain, where can exert relevant toxic effects. The contamination of sediments is widespread in the Italian coastal areas hosting industrial activities. Contaminated sediments thus form one of the main environmental problems that Italy has to face during coming years. They are currently managed mainly via dredging operations and transfer of the material obtained to dedicated dump sites, e.g. via very expensive and poorly environmental sustainable approaches. The sector therefore needs management and remediation strategies that are more effective and economically, environmentally and socially sustainable compared to current ones, such as those relying on the exploitation of modern biomonitoring and bioremediation techniques. The aim of the conference is to provide Researchers from Universities and public and private Research Centres and Delegates from central and local Government Institutions an updated state-of-the-art insight on legislation, characterization and remediation strategies currently available in USA, Europe and Italy in this sector. Some cases of remediation conducted or in progress on contaminated Italian marine areas will be also presented.

Section Chairs: Fabio Fava – *Alma Mater Studiorum*-University of Bologna, Bologna & SusChem Italy and Luciano De Propris – ISPRA, Rome

Planned talks

Management of contaminated sediments: a global priority and challenge

9.40 am *Innovative approaches to the management and remediation of contaminated sediments*, Enric Stern - EPA II, New York, USA

10.20 am *New EU approaches to sustainable innovative management of contaminated sediments and related guidelines*. UE or SEDNET (invited)

10.45 am *Contaminated sediments in Italy: state of the art and strategies for their sustainable management and remediation*, Luciano De Propris - Ministry for the Environment and ISPRA

Contamination of marine, estuary and freshwater areas: real cases and proposed solutions

11.10 am *Contaminated sediments on sites of major relevance: state of the art, perspectives and solutions*, Massimo Gabellini - ISPRA Rome

11.25 am *Assessment of heavy metal contamination in the costal area of Taranto and adopted remediation approaches*, Nicola Cardellicchio - CNR - Istituto per l'Ambiente Marino Costiero, Taranto

11.40 am *The Orbetello lagoon: characterisation activities and remediation plans*. Commissioner appointed for the emergency – University of Siena

11.55 am *Quality and state of river sediments in potentially contaminated Italian areas*, Gianni Andreottola – University of Trento

Case studies

12.10 pm *Bagnoli area remediation plans* Donato Carnea – Superintendent of Public Works, Naples

12.25 pm *“Infrastructures” and Environment: synergetic cooperation. Piombino’s new PRP*. Luciano Guerrieri – President, Port of Piombino

12.40 pm *Maddalena military site: the ALLU solidification/stabilization method for remediation of the marine area and site upgrading*, Walter Barbara - ICOP

12.55 pm *The HPSS method for the remediation of contaminated sediments: the cases of Rada di Augusta and Venice Lagoon*. Giorgio Ferrari - MAPINTEC

Other two presentations will be given by authors of papers selected among those submitted to the section.