

R'09



Twin World Congress

**World Resources
Forum 2009**

R'09 Twin World Congress and World Resources Forum, Davos, Switzerland, September 14 – 16, 2009

Plenary Lectures: Live Transmission
between Davos and Nagoya



www.r2009.org

www.worldresourcesforum.org

Final Program

as per September 3, 2009

Invited Plenary Speakers

- September 14: Dennis Meadows, Professor emeritus, Japan Prize Laureate
Hiroshi Esaki, Professor, University of Tokyo
Faye Duchin, Professor, Rensselaer Polytechnic Institute
Chettiyappan Visvanathan, Professor, Asian Institute of Technology
- September 15: Guibin Jiang, Professor, Chinese Academy of Sciences
Marina Fischer-Kowalski, Professor, Klagenfurt University
Shiro Saka, Professor, Kyoto University
Helga Weisz, Professor, Potsdam Institute for Climate Impact Research
- September 16: *World Resources Forum:*
Bruno Oberle, Director, Federal Office for the Environment (FOEN)
Bas deLeeuw, Secretary General, UNEP Resource Panel
Timo Mäkelä, Director, Directorate G. DG Environment, European Commission
Ashok Koshla, Co-President Club of Rome
Dennis Meadows, Professor emeritus, Japan Prize Laureate
Ernst-Ulrich von Weizsäcker, Co-Chair, UNEP Resource Panel
Anders Wijkman, Former Member European Parliament



Materials Science & Technology

SATW

Schweizerische Akademie der Technischen Wissenschaften
Académie suisse des sciences techniques
Accademia svizzera delle scienze tecniche
Swiss Academy of Engineering Sciences



Factor Ten Institute



Sunday, September 13

16:00 – 19:00 Foyer A2	Registration desk open at Davos Congress Centre
16:00 – 19:00 Foyer A1	Informal Get-together

Monday, September 14

07:30 – 08:30 Foyer A2	Registration (R'09 and WRF)
08:30 – 09:00 Theatersaal	Opening Session, Nagoya and Davos Chaired by Edelmann, Xaver / Ruf, Arthur (Davos) Chaired by Itoh, Hideaki / Hayashi, Kiichiro (Nagoya)
(Theatre Hall)	Welcome Address Davos Edelmann, Xaver , R'09 Twin World Congress Chairman, Empa, Switzerland
	Welcome Address Nagoya Itoh, Hideaki , R'09 Twin World Congress, Chair Local Organising Committee Japan
	Welcome Address Davos nn
	Welcome Address Nagoya Miyata Takashi , Professor, Vice President, Nagoya University, Japan
09:00 – 09:45 Theatersaal	Invited Plenary Lecture, Part I Chaired by Edelmann, Xaver / Ruf, Arthur (Davos)
DAVOS (live transmission to Nagoya)	Perspectives on Limits to Growth 37 Years Later Meadows, Dennis , Professor emeritus, President, Laboratory for Interactive Learning; Japan Prize Laureate
09:45 – 10:30 Theatersaal	Invited Plenary Lecture, Part II Chaired by Itoh, Hideaki / Hayashi, Kiichiro (Nagoya)
NAGOYA (live transmission to Davos)	Energy Saving with ICT – Green University of Tokyo Project Esaki, Hiroshi , Professor, University of Tokyo
10:30– 11:00 Foyer A1	Coffee Break
11:00 – 11:45 Theatersaal	Invited Plenary Lecture, Part III Chaired by Edelmann, Xaver / Ruf, Arthur (Davos)
DAVOS (live transmission to Nagoya)	Work and Everyday Life in a Resource-Constrained Global Economy Duchin, Faye , Professor, Rensselaer Polytechnic Institute
11:45 – 12:30 Theatersaal	Invited Plenary Lecture, Part IV Chaired by Itoh, Hideaki / Hayashi, Kiichiro (Nagoya)
NAGOYA (live transmission to Davos)	Resource Circulation in Asia: Practical Challenges in Setting up Recycling Industries Visvanathan, Chettiappan , Professor, Asian Institute of Technology

Monday, September 14



12:30 – 14:00 Foyer A1	Lunch Break
14:00 – 16:00 Sanada I	A1 Renewable Energy and Energy Efficiency Chaired by Sharma, Vinod Kumar / Notter, Dominic
	EU Policy and Initiatives in Renewable Energy and Energy Efficiency - Results and Outlook Turmes, Claude, Luxemburg
	Limits to global energy efficiency Allwood, Julian, United Kingdom; Speaker: Cullen, Jonathan M, United Kingdom
	Biogas Enrichment and Bottling for Cleaner and Efficient Application in Transport Vehicles – An Indian Case Vijay, Virendra Kumar, India
	Exergoenvironmental Analysis of Electricity Production via a High-temperature Solid Oxide Fuel Cell (SOFC) with Integrated Allothermal Biomass Gasification Process Buchgeister, Jens, Germany
	High Quality Biodiesel and Glycerin from Acid Waste Fats Kolomaznik, Karel, Czech Republic; Speaker: Michaela Barinova
	Fine Particle Formation from Combustion of Industrial and Municipal Waste in FBC - a Focus on Fuel Quality, Ash Forming Matter and Trace Metals Zevenhoven-Onderwater, Maria, Finland
14:00 – 16:00 Sanada II	B1 Technologies for Materials Recycling and Re-Integration Chaired by Kongoli, Florian / Gmünder, Simon
	Phosphorus Recycling from Sewage Sludge Ash and Meat and Bone Meal by Thermochemical Treatment Vogel, Christian, Germany
	Mechanical Characterisation of Hydraulically Bound Mixtures for Road Foundations Made with Bottom Ash from Municipal Solid Waste Incineration (MSWI) Pasetto, Marco, Italy
	Optimized Metal Recovery from Waste Incineration Bottom Ash with Dry Extraction System - Successful Full Size Plant Experience Morf, Leo, Switzerland
	Immobilization of Hazardous Elements in Waste-Containing Building Materials Sulovsky, Petr, Czech Republic; Speaker: Leber, Pavel, Czech Republic
	Consistent Metal Recovery with Innovative Sorting Technology Weippert, Roland, Switzerland
14:00 – 16:00 Jakobshorn	C1 Safe Disposal and Future Waste Generation Chaired by Ruf, Arthur / Welz, Tobias
	Estimating Future Municipal Waste Generation for Urban and Rural Regions Beigl, Peter, Austria
	The Study on Reclamation of the Low Radioactive Waste by Chemical Processes Dovbysheva, Tatjana, Belarus
	Recovery of Wastes by Pyrolysis: Effect of Experimental Conditions Paradela, Filipe, Portugal
	Recycling, Waste Treatment and Clean Technology in Construction Industry Sircar, Arun Kumar, India
	Turning Organic Waste into a Resource: A Concept for a New Way in Waste Treatment in Doha, Qatar Huwiler, Theo, Switzerland



<p>14:00 – 16:00 Pischa</p>	<p>D Green Production, Cleaner Production Chaired by Strange, Kit / Gottschalk, Fadri</p>
	<p>Depolymerization of Kraft Lignin for the Production of Chemicals Rudolf von Rohr, Philipp, Switzerland; Speaker: Werhan, Holger</p>
	<p>Utilization of Non Edible Oil Seed Waste for Development of Biopesticides Sharma, Satyawati, India</p>
	<p>Trace Elements in the Flue Gas of a Scrap Wood Combustor Wellinger, Marco, Switzerland</p>
	<p>A Comparative Global Study of Pollutants Emission Values in the Minerals Industry Bello Bugallo, Pastora M., Spain</p>
<p>14:00 – 16:00 Parsenn</p>	<p>F1 Life Cycle Thinking, Material Flows and Environmental Assessment Chaired by Ludwig, Christian / Hirschler, Roland</p>
	<p>Phosphorus in Switzerland - Material Flows, Targets, Options, P-Recovery Schenk, Kaarina, Switzerland; Speaker: Fahrni, Hans-Peter, Switzerland</p>
	<p>Results and Analysis of the Global Stainless Steel Cycles for 2000 and 2005 Reck, Barbara K., U.S.A.</p>
	<p>Environmental Effects of the Introduction of Active Disassembling Fasteners Made of Hydrogen Storing Materials into Electric and Electronic Home Appliances: A Hybrid LCA of DfD based on WIO Nakamura, Shinichiro, Japan</p>
	<p>When Carbon is Not Enough: Comprehensive Ecological Rucksack Indicators for Products Burger, Eva Maria, Austria; Speaker: Hinterberger, Fritz, Austria</p>
	<p>Environmental Significance of Rare Metals: Strategies and Measures for their Sustainable Management Koch, Kristine, Germany</p>
<p>14:00 – 16:00 Rinerhorn/Strela</p>	<p>G1 Economics and Policies for the Management of Materials, Natural Resources and Emissions Chaired by de Groot, Hans / Ruddy, Thomas</p>
	<p>Ecodesign and Rebound Effects Simon, Franz-Georg, Germany</p>
	<p>Towards Systemic Changes in Resource Use - Finnish Natural Resources Strategy Process Hellström, Eeva, Finland</p>
	<p>Methodology to Formulate the Energy Sourcing Strategy Trevino, Luis, Switzerland</p>
	<p>Roadmap Environmental Technologies 2020: Technology Foresight for Innovations Regarding the Enhancement of Resource Efficiency Hartlieb, Nicola, Germany</p>
	<p>The Application of the EPR Principle for Waste Streams in Portugal Tomé De Andrade, Isabel Maria, Portugal; Speaker: Carrola, Ana Cristina, Portugal</p>



14:00 – 16:00 Aspen I	H1 Electrical and Electronic Waste Chaired by Hagelüken, Christian / Schlupe, Mathias
	Market Potential of Sustainable E-Waste Recycling Technologies in Developing Countries Schlupe, Mathias, Switzerland
	Analysis of Policy Proposals for E-waste Management in Latin America and the Caribbean Garces, Daniel I., Chile
	Manual Disassembly of Computers and Peripherals in Medellin, Colombia, as a Social Pilot Project for Sustainable E-Waste Management and Recycling in a Latin American Context Cadavid, Carlos Fernando, Colombia
	E-waste –A Major Challenge to Sustainable Development in Africa Osibanjo, Oladele, Nigeria
	E-waste Management Practices in the Arab States Allam, Hossam, Egypt
	Assessment of E-waste Flows: A Probabilistic Approach to Quantify E-waste Based on World ICT and Development Indicators Mueller, Esther, Switzerland
14:00 – 16:00 Aspen II	I International Trade, Political and Social Issues Chaired by Bassan, Mario / Som, Claudia
	Bad Products vs. Good Services – Is it Really that Simple? Lettenmeier, Michael, Germany
	Information Guidance on Waste Prevention at Source Kempainen, Sari, Finland
	Global Dimensions of Sustainable Growth in Europe. Exploring the World-Wide Implications of a European Environmental Tax Reform Lutz, Christian, Germany
	Tracking Embodied Environmental Factors in the Global Trade System: The Case of CO ₂ Emissions and Material Flows Giljum, Stefan, Austria
	Eco-Communities in Major Cities of Bolivia Lang, Benjamin, Switzerland
	Staying Cool in Metro Manila: Towards a Deeper Understanding of Household Consumption Patterns Sahakian, Marlyne, Switzerland
16:00 – 16:30 Foyer A1	Coffee Break
16:30 – 18:00 Sanada I	A2 Renewable Energy and Energy Efficiency Chaired by Sharma, Vinod Kumar / Notter, Dominic
	Heat Transfer of a Hydrothermal Flame in Supercritical Water towards Rock Used for Contact-Free Drilling Rudolf von Rohr, Philipp, Switzerland; Speaker: Schuler, Martin
	Direct Application of Bio-residues as Fuel in Pyrometallurgical Production Sokolov, Vladyslav, Ukraine
	Application of Desiccant in Modern Air Conditioning Systems Salarian, Hesameedin, Iran



16:30 – 18:00 Sanada I	Fluid Dynamic Investigation of an Internal Circulating Fluidized Bed Gasifier by Cold Model Freda, Cesare, Italy
	Solar Water Heating and Cooling System Msherbesh, Hayel, Jordan
16:30 – 18:00 Sanada II	B2 Technologies for Materials Recycling and Re-Integration Chaired by Kongoli, Florian / Gmünder, Simon
	Steel, Aluminium and the Carbon Targets: Alternative Strategies for Meeting the 2050 Carbon Emission Targets for Steel and Aluminium Allwood, Julian, United Kingdom
	Automotive Shredder Residue (ASR) and End-of-life Vehicle (ELV) Processing in Finland Zevehoven, Ron, Finland
16:30 – 18:00 Jakobshorn	C2 Safe Disposal and Future Waste Generation Chaired by Ruf, Arthur / Welz, Tobias
	Modeling the Stream of Construction Waste in Switzerland: Newest Results and Policy Implications Quartier, Robin, Switzerland
	Potentiality and Reality on Recycle of Nuclear Rare Metals as a New Resource for the Next Generation Ozawa, Masaki, Japan
	Studies on Rapid Composting of Municipal Organic Waste Inoculating Efficient Microbes and Earthworms Sharma, Satyawati, India
	Activating New Companies Networks where New Flows of Material Generate Internal Connections Ceppa, Clara, Italy
16:30 – 18:00 Pischa	E Information and Communication Technologies Chaired by Strange, Kit / Gottschalk, Fadri
	Lithium, a Strategic Metal for Emerging Technologies – Scarce or Abundant? Weil, Marcel, Germany
	New Options for Material Flow Accounting in theecoinvent Database Weidema, Bo, Switzerland
	Challenges and Opportunities for Long-Term Tin Resource Management Mueller, Daniel, Norway
	Considering Recycling and Disposal Issues of Future Hi-Tech Products During the Innovation Process – the Case of Electronic Textiles Köhler, Andreas R., Sweden
	Recycling Management by Interdependencies of Cooperation and Competition Eicher, Carsten, Switzerland
	Managing Global Value Chains – Linking Emerging and Developed Markets with Knowledge-Based Web-Portals Kreeb, Martin, Germany
16:30 – 18:00 Parsenn	F2 Life Cycle Thinking, Material Flows and Environmental Assessment Chaired by Ludwig, Christian / Hischier, Roland
	Policy Making with LCA Egli, Norbert, Switzerland
	Energy Optimisation in Waste Treatment Plants Srinivasan, S.V., India




16:30 – 18:00 Parsenn	Primary and Secondary Supply Options for Lithium and their Contribution to the Environmental Impact of a Lithium-ion Battery Stamp, Anna, Switzerland
	The Impact of Different Pre-Processing Routes on the Metal Recovery from PCs Meskers, Christina E.M., Belgium
16:30 – 18:00 Rinerhorn/Strela	G2 Economics and Policies for the Management of Materials, Natural Resources and Emissions Chaired by de Groot, Hans / Ruddy, Thomas
	Sustainable Chemistry, Sustainable Pharmacy: Vital Topics in the Sustainability Debate Voigt, Kristina, Germany
	Sustainable Public Procurement Venanzoni, Eveline, Switzerland
16:30 – 18:00 Aspen I	H2 Electrical and Electronic Waste Chaired by Hagelüken, Christian / Schlupe, Mathias
	Technology Challenges to Recover Precious and Special Metals from Complex Products Hagelüken, Christian, Germany
	Recycling of Plastics from Waste Electrical and Electronic Equipment (WEEE) Wäger, Patrick A., Switzerland
	Product Lifetimes and Copper Content of Selected Obsolete Electric and Electronic Products Goessling-Reisemann, Stefan, Germany
	Stop Wasting Gold – How a Better Mining of End-of-life Electronic Products Would Save Precious Resources Chancerel, Perrine, Germany
16:30 – 18:00 Aspen II	J Materials and Energy Efficiency in Specific Industries Chaired by Bassan, Mario / Morselli, Luciano / Som, Claudia
	Technologies with Resource Efficiency Potentials – Results from Current Research Studies in Germany Rohn, Holger, Germany
	The Use of Recycled Aggregate Concrete to Produce Precast Prestressed Structural Elements Bassan, Mario, Italy
	Optimising Material Efficiency Through New Materials and Nanotechnology – Potential and Examples for Applications in Industry Pastewski, Nico, Germany; second Speaker: Lang-Koetz Claus, Germany
	End-of-Life Vehicles (ELVs) Supply Chain. Material and Energy Recovery Efficiency Santini, Alessandro, Italy; Speaker: Morselli, Luciano, Italy
	Integrated Project to Introduce Sustainability Principles into Building Maintenance Activities of Existing Building Stock Allione, Cristina, Italy
	Assessing the Integral Resource Consumption of Specific Pharmaceutical Production Processes Van Der Vorst, Geert, Belgium
18:00 – 19:30 Foyer A1	Welcome Reception



Tuesday, September 15

07:00 – 08:00 Foyer A2	Registration (R'09 and WRF)
08:00 – 08:30 Theatersaal	Opening Session, Nagoya and Davos Chaired by Edelmann, Xaver / Ruf, Arthur (Davos) Chaired by Itoh, Hideaki / Hayashi, Kiichiro (Nagoya)
08:30 – 09:15 Theatersaal	Invited Plenary Lecture, Part V Chaired by Itoh, Hideaki / Hayashi, Kiichiro (Nagoya)
NAGOYA (live transmission to Davos)	Environmental Pollution of New POPs in China: Challenges and Research Highlights Jiang, Guibin , Professor, Chinese Academy of Sciences
09:15 – 10:00 Theatersaal	Invited Plenary Lecture, Part VI Chaired by Edelmann, Xaver / Ruf, Arthur (Davos)
DAVOS (live transmission to Nagoya)	A Hundred Years of Resource Use of the World Economy – Dynamics, Drivers, Impacts Fischer-Kowalski, Marina , Professor, Klagenfurt University
10:00 – 10:30 Foyer A1	Coffee Break
10:30 – 11:15 Theatersaal	Invited Plenary Lecture, Part VII Chaired by Itoh, Hideaki / Hayashi, Kiichiro (Nagoya)
NAGOYA (live transmission to Davos)	Recent Progress in Second Generation Biofuels Technology Development Saka, Shiro , Professor, Kyoto University
11:15 – 12:00 Theatersaal	Invited Plenary Lecture, Part VIII Chaired by Edelmann, Xaver / Ruf, Arthur (Davos)
DAVOS (live transmission to Nagoya)	The Link between Resource Management and Climate Change Helga Weisz, Dr. , Potsdam Institute for Climate Impact Research
10:30 – 12:00 Studio	UNEP Resource Panel World Resources Forum Side Event Speakers: Bas de Leeuw, Werner Bosmans, Stefan Bringezu, Marina Fischer-Kowalski, Mark Swilling
12:00 – 14:00 Foyer A1	Lunch Break
14:00 – 14:15 Theatersaal	Poster Award Chaired by Edelmann, Xaver, Switzerland
14:15 – 14:30 Theatersaal	German Program for E-Energy Karg, Ludwig, Germany
14:30 – 16:00 Sanada I	A3 Renewable Energy and Energy Efficiency Chaired by Sharma, Vinod Kumar / Notter, Dominic
	Controlling the Materials Cycles in a New Process for Resource Efficient Fuel Production from Microalge Haiduc, Anca, Switzerland
	Design and Optimization of a Biomass Entrained Flow Gasifier Using Aspen Plus Bello Bugallo, Pastora M., Spain; presented by Garcia Ares, Maria T.
	Biogas Digester with Built-in Solar Reverse Absorber Heater Karimov, Khasan, Pakistan
	Modernization of an Existing Ammonia Plant Using Pollution Prevention and Climate Change Criteria Bello Bugallo, Pastora M., Spain



<p>14:30 – 16:00 Forum</p>	<p>W2 Workshop: Hands-on: Creation of Individual LCI Datasets for theecoinvent Database, Part I Chaired by Weidema, Bo / Hirschler, Roland</p>
	<p>An important factor for a successful application of the tool LCA is the use of transparent and consistent life cycle inventory (LCI) data. During the practical part of this workshop, the attendees learn how to create own datasets that are consistent with the content of a background LCI database like ecoinvent and get familiar with the EcoSpold-software that supports the creation of EcoSpold LCI files; files that can be easily imported in most LCA software tools. Attendees are asked to bring along their own Laptop and unit process LCI data examples of their daily LCA work.</p>
<p>14:30 – 16:00 Sanada II</p>	<p>W3 Workshop: E-waste Management in Developing Countries, Part I Chaired by StEP / Empa</p>
	<p>The workshop elaborates on opportunities and means for developing countries to achieve sustainable management of e-waste. Moderated by the "Solving the e-Waste Problem" initiative StEP, the workshop receives input from several global e-waste programmes in developing countries and the "NVMP - StEP e-Waste Summer-School".</p>
<p>14:30 – 16:00 Jakobshorn</p>	<p>World Resources Forum: Preparatory Workshops </p> <p>WRF-1 Global Resource Use Chaired by Lehmann, Harry / Ruddy, Thomas Bringezu, Stefan, Director, Material Flows and Resource Management Wuppertal Institute; Member UNEP Resource Panel Giljum, Stefan, Head, Research Group Sustainable Resource Use SERI Kernegger, Lisa, GLOBAL 2000 Friends of the Earth Austria, presents the "Global resource report". DeLeeuw, Bas, Head, Integrated Resource Management of UNEP</p>
<p>14:30 – 16:00 Pischa</p>	<p>WRF-2 Dematerialization: A Global Perspective Chaired by Egler, Hans-Peter / Caduff, Marloes Zhu, Dajian, Professor, Department of Economics and Management Tongji University, Shanghai Revi, Aromar, Director, Indian Institute for Human Settlements Schausberger, Barbara, IGLO Hinterberger, Fritz, Sustainable Europe Research Institute (SERI)</p>
<p>14:30 – 16:00 Parsenn</p>	<p>WRF-3 Eco Innovation Chaired by Miedzinski, Michael / Som, Claudia Yordi, Beatriz, Head of Unit, Executive Agency for Competitiveness and Innovation (EACI) Fichter, Klaus, Founder and Director, Borderstep Institute for Innovation and Sustainability Cheng, Yi-Heng, CEO, Quanta K&M Co.</p>
<p>14:30 – 16:00 Rinerhorn/Strela</p>	<p>WRF-4 Limits to Resource Consumption Chaired by Weis-Gerhardt, Stephanie / Welz Tobias Galli, Ale, Global Footprint Network Meadows, Dennis, President, Laboratory for Interactive Learning; Japan Prize Laureate Weisz, Helga, Potsdam Institute for Climate Impact Research</p>
<p>16:00 – 16:30 Foyer A1</p>	<p>Coffee Break</p>



16:30 – 18:00 Sanada I	W1 Workshop: Sustainable Governance of Scarce Chemical Elements Chaired by Wäger, Patrick / Lang, Daniel
	Functionalities of emerging technologies from the energy-, information and communication- or mobility sectors are significantly based on geochemically scarce elements such as Gallium, Indium, Platinum Group Elements (PGE), Rare Earth Elements (REE), Tantalum or Tellurium. Though these elements often only occur at small concentrations in a single device, their mass distribution has led to a significant increase in demand over the last few years, which has induced discussions about potential supply restrictions. Based on an expert input, the present workshop aims at elaborating on implications of potential geochemically scarce elements' supply restrictions for different societal levels (i.e. company, branch, state, international community), and on the resulting requirements for governance structures on and among these levels.
16:30 – 18:00 Forum	W2 Workshop: Hands-on: Creation of Individual LCI Datasets for theecoinvent Database, Part II Chaired by Weidema, Bo / Hirschler, Roland
16:30 – 18:00 Sanada II	W3 Workshop: E-waste Management in Developing Countries, Part II Chaired by StEP / Empa
16:30 – 18:00 Jakobshorn	World Resources Forum: Preparatory Workshops  WRF-5 Towards a New Economic Framework Chaired by Meyer, Bernd / Welz, Tobias Lutz, Christian, GWS Osnabrueck Edahiro, Junko, Chief Executive of Japan for Sustainability Duchin, Faye, Professor, Department of Economics at Rensselaer Polytechnic Institute
16:30 – 18:00 Pischa	WRF-6 Sustainable Financing in a Resource Efficient World Chaired by Onischka, Mathias / nn Rüter, Kristina, oekom research, Research Director Ganse, Joachim, Deloitte & Touche, Director Corporate Responsibility & Sustainability Luks, Fred, Bank Austria, Sustainability Management
16:30 – 18:00 Parsenn	WRF-7 Sustainable Companies – Resource Efficient Product Service Systems Chaired by Lettenmeier, Michael and Rohn, Holger / Caduff, Marloes Greis, Manfred, Viessmann Werke GmbH & Co KG Hölzl, Franz, SPAR Österreichische Warenhandels-AG Wögerbauer, Clemens, Manager, Alternative Resources Business Development, Holcim
16:30 – 18:00 Rinerhorn/Strela	WRF-8 Resources and Risks Chaired by Ammann, Walter / nn Croll, Peter, Director BICC Lees, Martin, Secretary General, The Club of Rome Warner, Koko, Head, Environmental Migration, Social Vulnerability, and Adaptation Section, UNU-EHS Oberle, Bruno, Director, Swiss Federal Office for the Environment (FOEN) Wildmann, Ronald, CEFA, Basisinvest Ltd. Zurich
19:30 – 23:30 Theatersaal	Congress Banquet Dinner Speech by Schmidt-Bleek, Friedrich , President, Factor 10 Institute, and Van Dieren, Wouter , President, IMSA Short Welcome Address by Minister Fukagawa , Embassy of Japan, Berne, Switzerland



Wednesday, September 16



World Resources Forum 2009
September 16, 2009 • Davos Switzerland



Materials Science & Technology

SATW

Schweizerische Akademie der Technischen Wissenschaften
Académie suisse des sciences techniques
Accademia svizzera delle scienze tecniche
Swiss Academy of Engineering Sciences



08:00 – 08:30 Foyer A2	Registration WRF
08:30 – 09:40 Theatersaal	Opening Addresses WRF Chaired by Edelmann Xavier , Board of Directors Empa
DAVOS (live transmission to Nagoya)	Oberle, Bruno , Director, Federal Office for the Environment (FOEN) Gabriel, Sigmar , Federal Minister for the Environment, Nature Conservation and Nuclear Safety Germany (video message) Khosla, Ashok , Co-President, Club of Rome and President IUCN Meadows, Dennis , President Lab. for Interactive Learning; Japan Prize Laureate Mäkelä, Timo , Director, Directorate G. DG Environment, European Commission DeLeeuw, Bas , Head, Integrated Resource Management of UNEP
09:50 – 10:30 Theatersaal (live transmission to Nagoya)	Session 1 Why a World Resources Forum von Weizsäcker, Ernst-Ulrich , Professor, Co-Chair UNEP Resource Panel Chaired by Fischer-Kowalski, Marina , Professor, Klagenfurt University
10:30 – 11:00 Foyer A1	Coffee Break
11:00 – 12:30 Theatersaal (live transmission to Nagoya)	Session 2 Regional Perspectives - Meeting the Challenges, Part I Revi, Aromar , Director, Indian Institute for Human Settlements Gardner, Gary , Senior Researcher, Worldwatch Institute Lehmann, Harry , General Director, German Federal Environmental Agency Jin, Zhouying , Professor, Chinese Academy of Social Sciences "Beyond Climate Change – FLOW" (Movie, UBA Berlin) Chaired by Khosla, Ashok , Co-President, Club of Rome and President IUCN Report of WRF Symposium from Japan by Hayashi, Kiichiro , Professor, Nagoya University, EcoTopia Science Institute (live transmission)
12:30 – 14:00 Foyer A1	Lunch Break
14:00 – 15:00 Theatersaal	Session 2 Regional Perspectives - Meeting the Challenges, Part II Flavin, Christopher , President, Worldwatch Institute Lehmann, Harry , General Director, Environment Planning and Sustainability Strategies, German Federal Environmental Agency Chaired by Khosla, Ashok , Co-President, Club of Rome and President IUCN
15:00 – 16:00 Theatersaal	Session 3 Future Scenarios and Strategies Lutz, Wolfgang , Leader of the IIASA World Population Program Ekins, Paul , Professor, Energy Institute, University College London Chaired by Meyer, Bernd , Professor, Department of Economics, University of Osnabrueck
16:00 – 16:30 Foyer A1	Coffee Break
16:30 – 17:30 Theatersaal	Session 4 Call for Action Chaired by Wijkman, Anders , Former Member of European Parliament
17:30 – 19:30 Foyer A1	Farewell Party



Organization Davos

Steering Committee	Chair: Edelmann, Xaver, xaver.edelmann@empa.ch
Scientific Committee	Chair: Hilty, Lorenz, lorenz.hilty@empa.ch
Industrial Committee	Chair: Ruf, Arthur, arthur.ruf@satw.ch
Local Organizing Committee Davos	Chair R'09: Lehmann, Martin, martin.lehmann@empa.ch Chair WRF: Birtel, Martin, martin.birtel@empa.ch
Technical Committee	Chair: Coroama, Vlad, vlad.coroama@empa.ch
Congress Secretariate	Meier, Therese, therese.meier@empa.ch Schönenberger, Maria, maria.schoenenberger@empa.ch

Organizers of the R'09 Twin World Congress Davos and Nagoya and the World Resources Forum 2009



Empa - Swiss Federal Laboratories for Materials
Testing and Research
St. Gallen and Dübendorf
Switzerland



EcoTopia Science Institute - Nagoya University
Chikusa-ku, Nagoya
Japan



Factor 10 Institute
Carnoules
France



SATW - Swiss Academy of Engineering Sciences
Zurich
Switzerland



Co-Organizers and Partners



Acatech - German Academy of Science and Engineering
Germany



BAFU / FOEN
The Federal Office for the Environment
Berne, Switzerland



Cisco Systems, Inc



ETH Zurich – Swiss Federal Institute of Technology
Zurich
Switzerland



German Federal Environment Agency
Germany



Global Footprint Network



GRF – Global Risk Forum Davos



PSI – Paul Scherrer Institut
Villigen, Switzerland



SERI - Sustainable Europe Research Institute
Vienna
Austria



Switch
Zurich
Switzerland



UNEP Resource Panel – International Panel for Sustainable Resource Management



Wuppertal Institute
Germany



Sponsors



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Federal Office for the Environment FOEN

Swiss Agency for Development and Cooperation SDC

State Secretariat for Economic Affairs SECO

BAFU / FOEN

The Federal Office for the Environment

Berne, Switzerland

DEZA / SCD

SDC - Swiss Agency for Development and Cooperation

Berne, Switzerland



Canton Graubünden

Chur
Switzerland



Cisco Systems, Inc



Destination Davos Klosters

Switzerland



ETH Board

Board of the Swiss Federal Institutes of Technology

Zurich and Berne, Switzerland



LANDSCHAFT DAVOS GEMEINDE

Landscape of Davos

Davos
Switzerland



Mercator Foundation Switzerland

Zurich
Switzerland



Net4U GmbH

Zurich
Switzerland

SATW

Schweizerische Akademie der Technischen Wissenschaften
Académie suisse des sciences techniques
Accademia svizzera delle scienze tecniche
Swiss Academy of Engineering Sciences

SATW - Swiss Academy of Engineering Sciences

Zurich
Switzerland



SQS - Swiss Association for Quality and Management Systems

SWITCH
Serving Swiss Universities

Switch

Zurich
Switzerland