



**World Resources
Forum 2011**

September 19–21, 2011 • Davos Switzerland

Final Program
World Resources
Forum 2011
(Titelblatt ähnlich
wie Book of
Abstracts)



Sunday, September 18

15:00 - 18:00 ENTRANCE HALL	Registration and Informal Get-together at Davos Congress Center, Talstrasse 49a, Davos
12:00 – 19:00	StEP Summer School and UBA Factor X Meeting (<i>by invitation only</i>)

Monday, September 19

08:00 – 9:00	Registration at Davos Congress Center
09:00 – 10:30 DAVOS	HIGH-LEVEL OPENING SESSION – “What Do We Need to Achieve?”
09:00 – 09:10 DAVOS	Welcome Address Xaver Edelmann , President of the World Resources Forum, and Ulrich Suter , President SATW
09:10 – 09:30 DAVOS	Opening Address Bruno Oberle , Director of the Swiss Federal Office for the Environment, <i>“Reduce Ecological Footprint, Grow Green”</i>
09:30 – 09:50 DAVOS	Sylvie Lemmet , Director UNEP, Division of Technology, Industry and Economics, <i>„Resource Efficiency: Opportunities for Establishing a Green Economy”</i>
09:50 – 10:10 DAVOS	Janez Potočnik , European Commissioner for the Environment, <i>“Resource Challenges for Europe in an Open and Changing World”</i>
10:10 – 10:30 DAVOS	Alice Kaudia , Environment Secretary, Kenya, <i>“Resource Use Efficiency - a Poverty Eradication Framework for Growth and Development in Africa”</i>
10:30 – 11:00 FOYER A1	Coffee Break
11:00 – 12:30	PLENARY SESSION I – “Should We Limit the Use of Resources?”
11:00 – 11:10 DAVOS	Introduction by Session Chairs Ernst Ulrich von Weizsäcker , Co-Chair International Resource Panel, and Bruno Oberle , Director of the Swiss Federal Office for the Environment
11:10 – 11:15 DAVOS	Video Message, Katherina Reiche , Parliamentary State Secretary, Ministry of Environment, Germany
11:15 – 11:35 DAVOS	Mohan Munasinghe , Professor of Sustainable Development, SCI, Manchester Univ. UK, <i>“Millennium Consumption Goals are Essential to Complement the Millennium Development Goals”</i>
11:35 – 11:55 DAVOS	Jacqueline McGlade , Executive Director European Environment Agency, <i>“Promoting Sustainability and Resource Efficiency by Enabling Integration of Environmental Sciences and Economic Accounting”</i>
11:55 – 12:15 DAVOS	Mark Swilling , Academic Director, The Sustainability Institute, <i>“Africa’s Development Challenges in a Resource Constrained World”</i>
12:15 – 12:30 DAVOS	Questions from the Audience and Welcome Address by Gian-Luca Bona , Director Empa, Switzerland
12:30 - 14:00 FOYER A1	Lunch Break
13:00 - 14:00 DAVOS (small)	GLOBE Lunch Invitation for European Parliamentarians (organised by Claude Turmes , Member of European Parliament)



14:00 - 15:30	PARALLEL SESSIONS (PS) & WORKSHOPS (WS)
DISCHMA	PS Topic 1: Security of Supply Chaired by Christian Ludwig / Armin Reller
	Resource Scarcity, Climate Change, and the Low-Carbon Economy – Doing Business in a Finite World Katy Roelich, United Kingdom
	On Utilization of Water Resources in Central Asia Khasan Karimov, Tajikistan
	How to Overcome Barriers to a Resource Efficient Economy? The Case of Eco-innovation Market Replication Projects Theodoros Staikos, Belgium
	From Invention to Application – Revealing the Unexpected Barriers for Time to Market of New Technologies Ludwig Hermann, Germany
	Urban Mining of Industrial Buildings in the Rhein-Main Area as a Source for Metallic Resources Carolin Wiesenmaier, Germany
	FLÜELA
<i>Introductory lecture:</i> Assessing Global Resource Utilization Efficiency in the Industrial Sector Marc Rosen, Canada	
Material Flows and Material Productivity: A Global Assessment Monika Dittrich, Switzerland	
How to Mine Urban Ore Efficiently and Effectively William Worrell, USA	
What Do Nanotechnologies Mean for Resource Efficiency? Claudia Som/Marcel Weil, Switzerland/Germany	
Eco-innovations for Waste Prevention – Best Practices, Drivers and Barriers Henning Wilts, Germany	
SERTIG	PS Topic 3: Assessment Methods, Resource Use Indicators and Targets Chaired by Stefan Andrew /Vlad Coroama
	Public Perception and Feedback Dynamics – Improving Policy Potential for Sustainable Development of New Renewable Resource based Energy technologies using Systems perspective Himanshu Ardawatia, Norway
	Discrete Mathematical Data Analysis Approach: A Valuable Assessment Method for Sustainable Chemistry Kristina Voigt, Germany
	Economic Value and the Sustainability of Water Resources: An Integrated Assessment Approach for Water and Forests Resources in the Sigi Catchment, Tanzania Aloyce Hepelwa, Belgium
	Towards a Dynamic Criticality Assessment: Linking Agent-based Demand with Material Flow Supply Modeling Approaches Christof Knöri, Switzerland
	SCHWARZHORN
SEEHORN	WS 2: Resource Impact Assessment in LCA / ecoinvent Database (part 1) , organised by PRé Consultants & ETHZ
WISSHORN	WS 3: Closing Resource Loops – Distinguishing Good From Bad in the Secondary Commodity Market (part 1) , organised by Empa
SANADA I	WS 4: The Rise of the Bio-economy: Chinese and European Approaches , organised by Rathenau Institute
SANADA II	WS 8: Resource-efficient Companies – Improving the Material Footprint of Products and Services , organised by SERI & Wuppertal Institute
Intergenerational Dialogue/Youth Caucus (Part of YES-Course)	
15:30 – 16:00 FOYER A1	Coffee Break



16:00 - 17:30	PARALLEL SESSIONS & WORKSHOPS (continued)
DISCHMA	PS Topic 1: Security of Supply Chaired by Hideaki Itoh / Heinz Böni
	Improving the Policy Application of Footprint Indicators to Support Europe's Transition to a One Planet Economy Katy Roelich, United Kingdom
	Economic Effects of Peak Oil Christian Lutz, Germany
	Peak Minerals & Resource Sustainability: A Cross Commodity Analysis Damien Giurco, Australia
	Secondary Resources and Recycling in Developing Countries Lakshmi Raghupathy, India
FLÜELA	PS Topic 2: Growth, Innovation, Decoupling, Efficiency and Sufficiency Chaired by Luciano Morselli / Florian Kongoli
	The Natural Change in Urban Architecture Hubert Rhomberg, Austria
	Resource Management and Technological Innovation Sascha Hermann, Germany
	EXIOPOL and CREEA: Towards a Global Multi-Regional Economic and Physical Supply and Use Tables with Environmental Extensions Arnold Tukker, Netherlands
	Cradle to Cradle – An Innovation Path Towards a Circular Economy – Product and Project Examples from Various Industries Albin Kälin, Switzerland
	Resource Productivity and Economic Wealth. A Theoretical Criticism of Europe 2020 Growth Policy Erich Hoedl, Austria
SERTIG	PS Topic 3: Assessment Methods, Resource Use Indicators and Targets Chaired by Stefan Andrew / Vlad Coroama
	Indicators and Targets for Implementing Resource Efficiency Policies in the Europe 2020 Strategy Stefan Giljum, Austria
	Resource Efficiency Potential of Selected Technologies, Products and Strategies Katrin Bienge, Germany
	Resource Efficiency Potential of Electricity Generation by Renewable Energies Klaus Wiesen, Germany
	Use of Wastewater in Agriculture - Approach to Sustainable Water Resource Management Anđelka Belic, Serbia
SCHWARZHORN	WS 1: Sustainable Resource Use and Poverty Eradication in Developing Countries (part 2) , organised by UBA/UNEP
SEEHORN	WS 2: Resource Impact Assessment in LCA / ecoinvent Database (part 2) , organised by PRÉ Consultants & ETHZ
WISSHORN	WS 3: Closing Resource Loops – Distinguishing Good From Bad in the Secondary Commodity Market (part 2) , organised by Empa
	Intergenerational Dialogue/Youth Caucus (Part of YES-Course)
17:30 – 18:00	PLENARY I: HIGHLIGHTS OF THE DAY
DAVOS	Video Impressions, Feedback from Parallel Sessions and Workshops, by Christian Ludwig , Chair Scientific Committee WRF 2011, moderated by Bas de Leeuw (Managing Director WRF)
18:30 – 20:00 FOYER A1	Welcome Reception with Welcome Address by Annemarie Meyer , Representative of Davos Community, and Vice-President of Davos Destinations-Organisation
20:00 – 22:00	“Parliamentarians Meet Academia & Industry Dinner” (by invitation only)



Tuesday, September 20

08:00 - 09:00	Registration at Davos Congress Center
09:00 – 10:30 DAVOS	PLENARY SESSION II – "How Can International and National Policies Establish a Resource Efficient Green Economy?"
09:00 – 09:15 DAVOS	Introduction by Session Chair, Jochen Flasbarth , President of German UBA, "Institutional Approaches for Resource Policies – What International Organisations Can Do"
09:15 – 09:30 DAVOS	Ashok Khosla , Co-President Club of Rome & President IUCN, "Basic Prerequisites for Sustainable Management of Natural Resources"
09:30 – 09:45 DAVOS	Dajian Zhu , Tongji University, Shanghai, "The Chinese Model of Circular Economy"
09:45 – 10:00 DAVOS	Walter Stahel , Vice Secretary General & Head of Risk Management Research, Geneva Association, Switzerland, "Continued Resource Ownership as a Strategy to Combat Resource Scarcity"
10:00 – 10:15 DAVOS	Markku Wilenius , Finland Futures Research Center, and Friedrich Schmidt-Bleek , Factor 10 Institute, "The Challenge of the Whole: Creating System Policies to Tackle Sustainability"
10:15 – 10:30 DAVOS	Questions from the Audience
10:30 - 11:00 FOYER A1	Coffee Break
11:00 – 12:30 DAVOS	PLENARY SESSION II ctd. "What Are Industry Solutions to Achieve a Resource Efficient Green Economy?"
11:00 – 11:10 DAVOS	Introduction by Session Chairs Jacqueline Aloisi de Lardere & Anders Wijkman
11:10 – 11:20 DAVOS	Masafumi Maeda , Vice President Tokyo University, Japanese Academy of Engineering, "The Japanese View of Resource Management – a Perspective of Industry and Science"
11:20 – 11:30 DAVOS	Klaus Hieronymi , Chairman of the Environmental Board, Hewlett Packard Europe, Middle East and South Africa, "Raw Materials, the View from an IT Manufacturer"
11:30 – 11:40 DAVOS	Hans Hess , President Swissmem, "The Contribution of Swiss Mechanical & Electrical Engineering Industries to Resource Efficiency"
11:40 – 11:50 DAVOS	Philip A. Hodges , Senior Vice President Supply Chain, Kraft Foods Europe, "Creating a More Delicious World – How Kraft Foods Is Conducting Business in a Way that Is Environmentally, Socially and Economically Responsible"
11:50 – 12:00 DAVOS	Juan F Gonzalez-Valero , Head Public Policy and Partnerships, Syngenta, "Planting Innovation – Harvesting a Green Economy"
12:00 – 12:30 DAVOS	Questions & Answers Panel
12:30 – 14:00 FOYER A1	Lunch Break



14:00 - 15:30	PARALLEL SESSIONS AND WORKSHOPS
DISCHMA	<p>PS Topic 1: Security of Supply Chaired by Markus Reuter / Patrick Wäger</p> <p>Prospects of Nuclear Energy in Terms of Their Uranium Fuel Supply Nikolaus Arnold, Austria</p> <p>The End of Cheap Uranium Michael Dittmar, Switzerland</p> <p>Sustainable Governance of Scarce Metals: the Case of Lithium Tim Prior, Australia</p> <p>Sustainable Use of Phosphorus: A Finite Resource Roland Scholz, Switzerland</p>
FLÜELA	<p>PS Topic 2: Growth, Innovation, Decoupling, Efficiency & Sufficiency Chaired by Daniel Müller / Yonglong Lu</p> <p>Counterintuitive Solutions for Urban Water Resource Management In Developing Countries Karan Khosla, India</p> <p>Economic Growth, Decoupling and Urban Infrastructure Katherine Hyman, South Africa</p> <p>The Physical Economy of the USA in the Long Term Perspective Sylvia Gierlinger, Austria</p> <p>Model and Scenarios for Direct Energy Consumption and CO₂ Emissions of the Chinese Passenger Car Stock until 2050 Daniel Müller, Norway</p>
SERTIG	<p>PS Topic 3: Assessment Methods, Resource Use Indicators and Targets Chaired by Martin Charter / Claudia Binder</p> <p>Integrated Assessment of Nuclear Energy Scenarios in Europe Claudia Binder, Austria/Switzerland</p> <p>Country Pathways Along the Water-Greenhouse-Gas Nexus Bastian Schröter, Germany</p> <p>Resource-optimized Sustainable Biomass Production Alexa Lutzenberger, Germany</p> <p>A Framework for LCA-based System Optimization and Selection of Best Technologies and Examples from its Application to the Optimal Use of European Bioenergy Bernhard Steubing, Switzerland</p>
SCHWARZHORN	<p>PS Topic 4: The Social Dimension of Resources Chaired by Walter Stahel / Wolfgang Lohmann</p> <p><i>Introductory lecture:</i> Sustainable Economics Includes Taxation Walter Stahel, Switzerland</p> <p>The Other Side of the Coin: How Climate Change Mitigation in Rich Countries Might Impact Poorer Nations? Marco Sakai, United Kingdom</p> <p>Material Footprint of Poor Households – Approach for Defining a Decent Lifestyle? Michael Lettenmeier, Finland</p> <p>Become Sustainable! The Individual Transition Process as/is a Matter of Science Gerhard Frank, Austria</p>
SEEHORN	<p>WS 5: “Orchestrating Global Transition? Design and Implementation of Efficient Resource Policies” (part 1), organised by UBA and Technopolis Group</p>
WISSHORN	<p>WS 6: Practical Business Examples (part 1), organised by ÖBU</p>
SANADA I	<p>WS 7: Less Common Elements (part 1), organised by Council for Less Common</p>
	<p>Intergenerational Dialogue/Youth Caucus (Part of YES-Course)</p>
15:30 – 16:00 FOYER A1	<p>Coffee Break</p>



16:00 – 17:30	PARALLEL SESSIONS AND WORKSHOPS (continued)
DISCHMA	<p>PS Topic 1: Security of Supply Chaired by Markus Reuter / Patrick Wäger</p> <p>A More Sumptuous and Sustainable Source of Animal Protein than Macro Livestock: Edible Insects Tasneem Abbasi, India</p> <p>The Role of Raw Materials in Current and Emerging Energy Technologies Benjamin Achzet, Germany</p> <p>Surviving Global Environmental Threats: Is the Gandhian Model the Ultimate Resort? S.A. Abbasi, India</p> <p>CultNature. Transformation of Brownfields to Sustainable Urban Landscapes Franz Lehner, Germany</p>
FLÜELA	<p>PS Topic 2: Growth, Innovation, Decoupling, Efficiency and Sufficiency Chaired by Renato Bonora / Heinz Böni</p> <p><i>Introductory lecture:</i> Developing a Supply Cycle for Post-consumer Regenerated Materials (PCR) Chris Slijkhuis, USA/Austria</p> <p>Photovoltaic and Hydrogen – the Unlimited Energy Resource Michael Schubert, Austria</p> <p>Theory and Policy Applications – The Resource Curse: Case of South Africa – A Strategic Perspective Donald Henry Ah Pak, China</p> <p>Japanese Technology Attempts New Wave of Sustainable Material Use - "Use Abundant Material" Kohmei Halada, Japan</p>
SERTIG	<p>PS Topic 3: Assessment Methods, Resource Use Indicators and Targets Chaired by Fritz Hinterberger / Vlad Coroama</p> <p>Assessing the Biosphere's Natural Endowment and Human Resource Consumption through the Ecological Footprint: the Mediterranean Situation and its Implication for the Region's Competitiveness Alessandro Galli, Italy</p> <p>Calculating the Ecological Footprint of a Data Centre to Identify Hot-Spots of Energy and Resource Use Julia Haslinger, Austria</p> <p>Sustainable Resource Use Requires "Clean" Cycles and Safe "Final Sinks" Ulrich Kral, Austria</p> <p>The Contribution of Waste Prevention and Ecodesign to Material Productivity in the EU Adrian Tan, France</p>
SCHWARZHORN	<p>PS Topic 4: The Social Dimension of Resources Chaired by Walter Stahel / Wolfgang Lohmann</p> <p>Human and Resources: Sources of Devastation? Pastora M. Bello Bugallo, Spain</p> <p>Bio-Globalism and the Knowledge Commons Beyond Public Domain Takayuki Hiraki, Japan</p> <p>E-waste Management in United Arab Emirates Sethu Meenakshisundaram, United Arab Emirates</p> <p>Application of Resource Efficiency in Russia: Experiences and Potentials Olga Sergienko/Holger Rohn, Russian Federation / Germany</p> <p>Technological Innovation, Social Change and Human Capital for Sustainability. Lessons Learnt from The Industrial Technologies Theme of the EU's Research Framework Programme Jesús Alquézar Sabadie, Belgium</p>
SEEHORN	<p>WS 5: "Orchestrating Global Transition? Design and Implementation of Efficient Resource Policies" (part 2), organised by UBA and Technopolis Group</p>
WISSHORN	<p>WS 6: Practical Business Examples (part 2), organised by ÖBU</p>
SANADA I	<p>WS 7: Less Common Elements (part 2), organised by Council for Less Common Elements</p>
SANADA II	<p>UNEP: Discussion Panel on the Future Implications of Resource Use in Asia-Pacific and in Latin America, organised by UNEP</p>



	Intergenerational Dialogue/Youth Caucus (Part of YES-Course)
17:30 – 18:00 ASPEN	PLENARY II: HIGHLIGHTS OF THE DAY Video Impressions, Feedback from Parallel Sessions and Workshop Chairs, and Perspective from Youth, moderated by Bas de Leeuw (Managing Director WRF)
18:30 – 19:30 FOYER A1	COCKTAIL RECEPTION
19:30 – 20:00 DAVOS	MUMMENSCHANZ THEATRE PERFORMANCE
20:00 – 23:00 DAVOS (small)	CONGRESS BANQUET

Please notice:

For detailed [Workshop descriptions](#) and [Workshop speakers](#), please visit the updated WRF 2011 Program at <http://www.worldresourcesforum.org/workshop-side-event-overview>.



Wednesday, September 21

08:00 – 09:00	Registration at Davos Congress Center
09:00 – 10:30 DAVOS	PLENARY SESSION III – "Where Do We All Go from Here?"
09:00 – 09:05 DAVOS	Introduction by Session Chair Ashok Khosla , Co-President Club of Rome & President IUCN
09:05 – 09:25 DAVOS	Ernst Ulrich von Weizsäcker , Co-Chair International Resource Panel, "Policies and Technologies of Decoupling"
09:25 – 09:45 DAVOS	Marilyn Mehlmann , General Secretary Global Action Plan International, "A Hunger for Less"
09:45 – 10:05 DAVOS	Marina Fischer-Kowalski , Institute of Social Ecology Vienna, Vice Chair of European Society for Ecological Economics, Scientific Member UNEP International Resource Panel, "Sociometabolic Regimes, Revolutions and Transitions"
10:05 – 10:25 DAVOS	Reinhard Bütikofer , Member European Parliament, "Steps Towards a Sustainable Resource Management"
10:25 – 10:30 DAVOS	Questions from the Audience
10:30 - 11:00	Coffee break
11:00 – 12:30	PARALLEL SESSIONS & WORKSHOPS
DISCHMA	Topic 1: Security of Supply Chaired by Christian Ludwig / Tim Prior
	Potentials and Limits of Recycling in a Socio-metabolic Context Willi Haas, Austria
	A Footprint Family Extended MRIO Model to Support Europe's Transition to a One Planet Economy Alessandro Galli, Italy
	The Role of the Informal Sector in the Management of Secondary Resources – the Case of e-Waste in West Africa Mathias Schlupe, Switzerland
	Critical Materials and Dissipative Losses: a Screening Study Stefan Gössling-Reisemann, Germany
	Dissipation and the Need for Benign Design Klaus Kümmerer, Germany
FLÜELA	Topic 2: Growth, Innovation, Decoupling, Efficiency and Sufficiency Chaired by William Worrell
	Sustainable Use of Resources between Scientific Awareness and Implementation in Politics Ion Karagounis, Switzerland
	Ethical Water Stock Exchange Valérie Issumo, Switzerland
	New Horizons of Natural Resources in the Eurasia: Southeastern Anatolia Region and Southeastern Anatolia Project (GAP) in Turkey Bulent Acma, Turkey
	Sustainable Demand for Wood in Case of Increasing Demands for Renewables? Witold-Roger Pogonietz, Germany
	Renewable Energy Sources and the Control of Global Warming, Pollution S.A. Abbasi, India
SERTIG	Topic 3: Assessment Methods, Resource Use Indicators and Targets Chaired by Lorenz Hilty / Mathias Schlupe
	Global Life Cycles for Four Rare Earth Elements Xiaoyue Du, USA



	<p>Developing Countries Must Look Inwards to Move Outward: An Analysis on Efficient Resource Utilization Sridhar Mynepalli, Nigeria</p> <p>Visualization of Inter-industry Material Flow and Impurities in Iron and Steel Scrap along the Supply Chain of a Passenger Car Yasushi Kondo, Norway</p> <p>Stochastic Approach using Monte Carlo Simulation for LCI Applied to the ArcelorMittal Steel Poland S.A. in Krakow, Poland Steel Process Chain Case Study Boguslaw Bieda, Poland</p> <p>Analysis of the Slaughterhouses in Galicia (NW Spain) Pastora M. Bello Bugallo, Spain</p>
SCHWARZHORN	<p>Topic 5: Communication and Education Chaired by Markku Wilenius</p>
	<p>Resource Efficiency and Culture - Workplace Training for Small and Medium Sized Enterprises Holger Rohn, Germany</p>
	<p>Visual Creativity for Sustainability Communication Helmut Langer, Germany</p>
	<p>REdUSE Global Resource Report I – the Relation between Resource Extraction and Water Use Stephan Lutter, Austria</p>
	<p>Application of the Ecological Backpack for the Communication on Sustainable Production-Consumption Systems Michael Lettenmeier, Finland</p>
	<p>Application of Resource Productivity for Higher Education in Food and Nutrition Petra Teitscheid, Germany</p>
	<p>Communication and Education Educate Women through Community Radio on Sustainable Resource Management Dharma S. Samaranyake/H.M.L.C. Jayawardhana, Sri Lanka</p>
WISSHORN	<p>WS 9: Economic and Social Aspects of Resources (tbc)</p>
SANADA I	<p>Film special: "The Light Bulb Conspiracy" by Cosima Dannoritzer</p>
ASPEN	<p>Game special: UCS Creative Simulation Game</p>
SANADA II	<p>Special Briefing UNEP Resource Panel</p>
	<p>Intergenerational Dialogue/Youth Caucus (Part of YES-Course)</p>
<p>12:30 – 14:00 FOYER A1</p>	<p>Lunch break</p>
<p>14:00 DAVOS</p>	<p>CONFERENCE SUMMARY AND CLOSING</p>
<p>14:00 – 14:15 DAVOS</p>	<p>Introduction by Session Chairs Michel Monteil, Swiss Ministry for the Environment and Xaver Edelmann, President WRF</p>
<p>14:15 – 14:45 DAVOS</p>	<p>Highlights Congress, Video Impressions, Perspective from Youth, Bas de Leeuw, Managing Director World Resources Forum</p>
<p>14:45 – 15:15 DAVOS</p>	<p>Presentation of Conference Summary, List of Recommendations by Shaoyi Li, UNEP Resource Panel</p>
<p>15:15 - 15:45 DAVOS</p>	<p>Closing Panel, moderated by Harry Lehmann, UBA</p>
<p>15:45 – 15:50 DAVOS</p>	<p>Special Announcement by Yonglong Lü, Chinese Academy of Sciences</p>
<p>15:50 – 16:00 DAVOS</p>	<p>Closing Remarks by Xaver Edelmann, President World Resources Forum</p>
<p>16:00 FOYER A1</p>	<p>FAREWELL COCKTAIL</p>



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