

Conference Program

Day	Parallel I - Ebner	Parallel II - Schmidt	Parallel III - Zacks	Parallel IV - Belfer
Monday 30.5.05 Registration and coffee 8:00-9:00	Ebner Auditorium			
Opening Ceremony 9:00-9:30	Opening Ceremony: Minister of the Environment, Mr. Shalom Simchon. Weizmann President, Prof. Ilan Chet ISEEQS Chairman, Prof. Menachem Luria. Conference Chairman, Prof. Dan Yakir.			
Session I Plenary 9:30-10:15	K. Noone (Executive Director IGBP): Doing Earth system science: putting together the big picture			
10:15-10:45	Coffee Served in the parallel halls			
Session II Monday 30.5.05 10:45-13:15 Parallels	Aerosol chemistry and properties Chair: Y. Rudich (WIS) 1. S. Borrmann (MPI): In-situ, real-time mass spectrometric measurements of the chemical aerosol composition of traffic emissions 2. Y. Dubowski (Technion) Interaction of gas-phase ozone with unsaturated organic films: a new look at an old system 3. Y. Erel (HUJI)– Characterization of atmospheric dust particles - implications for air quality criteria 4. I. Schechter (Technion): Aerosol analytics. 5. Y. Derimian (BGU): The role of black carbon and dust in aerosol absorption	Effects on soils of wastewater irrigation and wastewater purification by products Chair: Y. Chen (HUJI) 1. B. Marschner, E. Juschke, J. Tarchitzky, and Y. Chen: Enrichment loss of organic matter in soils irrigated with reclaimed wastewaters. 2. B. Chefetz and T. Ilani: Sorption of pesticides to dissolved organic matter originated from treated wastewater and its effect on pesticides mobility. 3. S.Assouline, M. Ben-Hur & D. Russo (Volcani): The effect of the use of effluent for irrigation on the rainfall-runoff-erosion relationship and on the soil and runoff quality. 4. Y. Chen, O. Lerner, U. Shani, and J. Tarchitzky (HUJI): Hydraulic conductivity and soil hydrophobicity: Effects of irrigation with reclaimed	Recent changes in the Dead Sea environment Chair: Y. Yechieli & I. Gavrieli (IGS) 1. N. Lensky (GSI): The Dead Sea: Present trends and mass and energy balances. 2. Y. Enzel (HUJI): Dead Sea levels and Late Holocene climates in the Near East. 3. Y. Avni (GSI): Response of the geomorphic system to the drop in the Dead Sea level- present processes and future forecasts. 4. J. Laronne: Formation of micro-canyons resulting from the receding Dead Sea. 5. M. Abelson (GSI): The Dead Sea shrinkage and formation of thousand collapse-sinkholes.	Environmental education: theory and practice Chair: T. Tal (Technion) 1. C. Gayford (UK): The use of participatory methods to enable teachers to evaluate environmental aspects of science education 2. N. Orion (WIS): The development of environmental insight among school students 3. N. Avriel-Avni: Urban ecosystem as a framework for environmental education: my place in the web of life 4. T. Tal & Y. Kedmy (Technion): Decision making capability of non-science majors engaged in environmental controversies. 5. O. Asraf-Ben Zvi (BGU): The Development of System Thinking Skills in the Context of Earth System 6. U. Zoller (HU): Tandem Action Research & Teaching in STES Education for Sustainability

		wastewater. 5. D. Minz (Volcani), T. Oved, A. Shaviv, T. Farkash, E. Jurkevitch, R. Halabi and L. Kautsky: Short and long term microbiological effects of wastewater irrigation. 6. A. Shaviv (Technion): Nitrogen transformations in effluent irrigated soils: experiments and modeling.		
Lunch 13:15-14:15	Cash bars			
Session III Monday 30.5.05 14:15-17:15	Urban Air Pollution (Dedicated to Eitan Shpitzer) Chair: M. Peleg (HUJI)	Above and Bellow Ground Ecological Complex in Desert Ecosystems Chair: Y. Steinberger (BIU)	The responses of Lake Kinneret and its hydrological system to anthropogenic and climate stresses Chair: A. Sukenik (ILI)	Environmental Dispute resolutions Chair: E. Feitelson (HUJI)
Parallels	1. R. Van Grieken (Univ. of Antwerp): At the interface of environmental and cultural heritage research for atmospheric particles. 2. C. Perrino (CNR Rome). The application of natural radioactivity continuous measurements for the interpretation of the urban air quality.	1. J. Thies (Cornell): Linking above- and below-ground ecosystem processes in the context of global change. 2. S.R. Zaragoza (Mexico): Population changes of protozoan groups in an arid soil system transiting from wet to dry season. 3. M. Shachak (BGU): Global Changes and the Role of Organisms as Ecosystem Engineers in Drylands. 4. M. Sternberg (TAU): Is home the best place to decompose? 5. B. Boeken(BGU): "Drought, resilience and response diversity of a semi-arid annual plant community".	1. D. Adams (SUNY Plattsburgh): Theoretical and practical aspects of greenhouse gases at the sediment-water interface in lakes and water reservoirs 2. A. Gasith: Benthic biological processes and responses to water level fluctuations. 3. T. Zohary: Recent trends in phytoplankton populations in Lake Kinneret. 4. B. Luz: Isotopic methodologies to estimate aquatic production" 5. D. Markel: Short term hydrological variations in the watershed area of Lake Kinneret.	1. M. Ben-Gal and D. Shmueli: Stakeholder Frames in Environmental Disputes: Application of Framing Typology to the Kishon Conflict Assessment 2. P. Lev-on and M. Lev-on (LEVON Group, LLC): Facilitated Processes for Avoiding and Resolving Environmental Conflicts: US Experiences 3. A. Wolf: Conflict and Cooperation over Shared Waters 4. I. Fischhendler: Escaping the "Polluter Pays" Trap: Financing Wastewater Treatment on the Tijuana-San Diego Border. 5. V. Brachya: TBA
Break 15:45:16:05	3. M. Luria (HUJI): Chemical composition of fine particles over Central Israel. 4. G. Kallos (Univ. of Athens): Anthropogenic and Natural Sources of PM in the Mediterranean: New Considerations. 5. H. Almog : Small particles (PM10, PM2.5) in the Tel-Aviv metropolitan area.			
ISEEQS 17:15-18:00	General Assembly			
Session IV Monday 30.5.05 18:00-21:30	Grand Poster Event - The big tent near Ebner (Sponsored by Ministry of the Environment) First drink (beer or soft) and refreshment free to registered participants. Cash bar, food stands, music Student prizes ceremony			
Tuesday 31.5.05 9:30-15:30	The Youth Forum for Environmental Education Including school children exhibition and contest and prize awarding ceremony At Wix Auditorium Donors for the Youth Forum for Environmental Education – 2005. Special suport by Pratt Foundation			
Session V Plenary Tuesday 31.5.05	R. Monson (UCB): Facing the Six Grand Challenges in Terrestrial Biosphere Research			

9:00-9:45				
<p>Session VI</p> <p>Tuesday 31.5.05</p> <p>10:00-13:00</p> <p>Parallels</p> <p>Break 11:00-11:30</p>	<p>Climatic effects of aerosols</p> <p>Chair: Z. Levin (TAU)</p> <p>1. M. Jacobson (Stanford): The effects of particulate black carbon/organic matter and diesel/gasoline vehicles on climate/air pollution</p> <p>2. U. Dayan (HUJI) - influence of atmospheric circulation types on PM10 and Visibility in Israel.</p> <p>3. C. Erlick (HUJI)- The Influence of Absorbing Aerosols on Clouds and the Climate</p> <p>4. Y. Kaufman (NASA) - Natural and anthropogenic aerosol - global distribution and effect on cloudiness.</p> <p>5. I. Koren (NASA): Aerosol effects on cloud structure – propagation from microphysics to dynamics.</p>	<p>Ecology/Diversity</p> <p>Chair: T Dayan (TAU)</p> <p>1. D. Simberloff (Tennessee): Interactions among global changes: Biological invasions and the other Big 3.</p> <p>2. D. Saltz: Are desert ungulates sensitive to global warming? Predicting the future dynamics of reintroduced Asiatic wild ass under environmental stochasticity.</p> <p>3. M. Goren: Impact of climate change on fish biodiversity in the Jordan River basin.</p> <p>4. S. Kark: Do urbanization and biotic invasions generate biotic homogenization or biodiversity hotspots in Israel?</p> <p>5. Y. Carmel (Technion): A comparison of two approaches for identifying key areas for biodiversity conservation</p>	<p>Quaternary paleoclimate based on sea-land-atmosphere correlations</p> <p>Chair: M. Bar-Matthews (IGS)</p> <p>1. K. C-Emeis, (Germany): Eastern Mediterranean sea surface temperatures and delta 18O in the late Quaternary</p> <p>2. Y. Rosental (Rutgers): Paleo-ENSO: clues from the past and a look to the future</p> <p>3. M. Bar-Matthews (IGS): Speleothems throughout the world, what do they tell us about climate and the timing of climate change?</p> <p>4. A. Landais (HUJI): Phasing between temperature and methane and the link with ice sheet size</p> <p>5. A. Almogi-Labin (GSI): Paleo sea-land connection in the Mediterranean region.</p>	<p>Challenges in water and wastewater purification</p> <p>Chair: C. Dozoretz (Technion)</p> <p>1. Hans-Curt Flemming, FB Chemie - Biofilm Centre, (Univ. Duisburg-Essen, Duisburg): Biofouling and anti-fouling strategies.</p> <p>2. O. Lev, (HUJI): Indicators for the efficacy of drinking water treatments.</p> <p>3. Y. Kashi (Technion): Vibrio cholerae is transported to water bodies by adult, flying chironomids.</p> <p>4. V. Freger, Zuckerber (BGU): Removal of organic substances by RO and NF composite membranes: mechanism and limitations.</p> <p>5. M. Sheintuch (Technion): Process development of catalytic water denitrification: from atomic scale computations to lab scale reactors.</p>
Lunch 13:00-14:00	Cash Bars			
<p>Session VII</p> <p>Tuesday 31.5.05</p> <p>14:00-17:00</p> <p>Parallels</p> <p>Break 17:00-17:30</p>	<p>Climate dynamics and prediction</p> <p>Chair: H. Gildor (WIS) & Nili Harnik (TAU)</p> <p>1. M. Ghil (Ecole Normale Superieure): The Nile River records revisited: How good were Joseph's predictions?</p> <p>2. P. Alpet (TAU): Recent climatic trends over the Mediterranean and future projections-GLOWA Jordan River Project</p> <p>3. N. Paldor (HUJI): Recent observations and theoretical advances regarding the zonal phase speed of planetary waves</p> <p>4. M. Cane (Columbia Univ.): Drought In The American West During The Past Millennium</p> <p>5. Y. Feliks (IIBR): Low-frequency oscillations in the mid-latitude baroclinic atmosphere induced by an oceanic thermal front</p>	<p>Global change and ecosystems</p> <p>Chair: Y. Carmel (Technion)</p> <p>1. D.Schimel (NCAR): Patterns of carbon exchange in terrestrial ecosystems: model-data fusion for quantifying fluxes.</p> <p>2. J. Kigel (HUJI): Productivity and diversity along a climatic gradient: testing effects of precipitation reduction scenarios.</p> <p>3. R. Nathan (HUJI): Forecasting changes in the distribution and abundance of plants in response to climate change.</p> <p>4. J. Gruenzweig (HUJI): Terrestrial ecosystems in a high-CO2 atmosphere.</p> <p>5. R. Avissar (Duke Univ.): Effects of land use changes on regional and global climate.</p>	<p>Aquifer Protection and Remediation</p> <p>Chair: E. Graber/B. Berkowitz (WIS)</p> <p>1. A. Guadagnini, M. Riva and X. Sanchez-Vila (Univ. Milan): Analysis of time-related well capture zones using statistical methods.</p> <p>2. H.Gvirtzman (HUJI): Salinization and Contamination Processes in the Coastal Aquifer.</p> <p>3. D. Ronen (BGU): The coastal plain aquifer - past, present and...Future?</p> <p>4. A. Vengosh (BGU): An isotopic approach for elucidating the sources of nitrate and chloride contamination in the Mediterranean coastal aquifer of Israel</p> <p>5. S. Assouline and U. Shavit (ARO): Effects of management policies, including artificial recharge, on the salinization process in the Coastal Aquifer</p>	<p>Diesel vehicle emission in Israel: present and prospective status.</p> <p>Chair: E. Sher (BGU)</p> <p>1. Gutman, M., Tartakovsky, L., Aleinikov, Y., Baybikov, V., Veinblat, M., and Zvirin, Y., (Technion): Estimation of air pollution from airport tractors.</p> <p>2. Moshel, A. (Ministry of Env.): The Ministry of the Environment 's efforts in reducing air pollution from mobile sources.</p> <p>3. Persiko-Karakash, H. and Sher, E. (BUG): Evaluation of Various Strategies for Continuous Regeneration of Particulate Filters in Heavy Vehicles.</p> <p>4. Flor, A., (Ministry of Transportation): Future Diesel Vehicle technologies and Ministry of Transport's Requirements.</p> <p>5. Katoshevski, D., (BGU): Coupling between Grouping and Evaporation of Fuel Droplets in Internal Combustion Engines</p> <p>6. Vinogradov, J., Sher, E. (BGU): Cold plasma technology for NO_x removal from diesel</p>

	6. Y. Kushnir (Columbia): The global hydrological cycle response to El Nino and its influence on the Atlantic thermohaline circulation			
Movie, Open to the public 17:30-18:20	Movie at Ebner Auditorium: "Global Dimming". The super charged BBC documentary about climate change and little known Israeli contribution to it.			
Session VIII Evening program 18:30-19:30	Panel discussion, Open to public and Media: Global Change: Relevance and public awareness.			
Session IX Wednesday 1.6.05 Plenary 9:00-10:00	J. Schwartz (Harvard): Air Pollution and Human Health: What have we learned? Where are we going? (Sponsored by Air Water Products Inc.)			
Session X Wednesday 1.6.05 10:00-13:00 Break 11:00-11:30 Parallels	Meteorological aspects of air pollution Chair: U. Dayan (HUJI) 1. D. Lamb (Pennsylvania): Cycles and Trends in the Atmospheric Deposition of Sulfate and Nitrate. 2. B. Bornstein: Mesoscale meteorological modeling for urban air quality: applications with application to Israel, California, Huston and NY City. 3. Y. Mahrer: On the Merging of Chemical and Meteorological Models for a Better Assessment of the Air Quality in Israel. 4. M. Diamond (Univ. of Toronto): Urban contaminant dynamics: processes and impacts. 5. Y. Mamane (Technion): Contribution of natural and anthropogenic sources to fine and coarse particle fractions in the East Mediterranean.	Environmental change and microbial communities Chair: Y. Hadar (HUJI) 1. B. Bohannon (Stanford): Response of soil bacteria to multifactorial global change. 2. A. Oren (HUJI): Long-term and short-term changes in the microbial communities in the Dead Sea. 3. E. Rosenberg (TAU): Microbial aspects of coral health and disease 4. D. Minz, S.J. Green, E. Inbar, P. Bucki, M. Offek and Y. Hadar (HUJI): How does compost affect the microbial community in the rhizosphere? 5. E. Jurkevitch, A. Behar, B. Yuval (HUJI): The Mediterranean fruit fly (<i>Ceratitis capitata</i>) harbors a dynamic and diverse gut bacterial population of active diazotrophs.	Marine ecology Chair: Z. Dubinsky (BIU) 1. Max M. Tilzer (Univ. of Constance): Nutrient versus Energy Limitation in the Sea: The Red Sea and the Southern Ocean as extreme case-studies. 2. J. Erez (HUJI): Biomineralization in the oceans and the effects of increasing atmospheric CO ₂ . 3. I. Berman Frank (BIU): Programmed Death of phytoplankton blooms at Sea: implications for Carbon Export. 4. D. Chernov (HUJI): Elevated sea surface temperatures instigate a dichotomy of cellular responses in hermatipic corals-a pathway for survival or on the edge of extinction? 5. B. Lazar (HUJI): The consequences of mariculture on the ecosystem of the Northern Gulf of Eilat	Porsim Kanaf-The Raptor Adoption Project. (Sponsored by the Electric Com.) Chair: D Weihs (Technion) 1. E. Elad (IEC): Introduction 2. O. Bahat (Scientific Director, Raptors Adoption Project): Raptor adoption project – 10 years of industrial-conservationist cooperation. 3. U. Motro (HUJI): Recent studies of Griffon Vultures (<i>Gyps fulvus</i>) in Israel. 4. Y. Leshem (TAU): Griffon vultures and raptors as a tool in promoting education, conservation, and public awareness. 5. Z. Segev (Israel Electric Corp.): protection of middle voltage poles against electrocution of large birds. 6. D. Weihs (Technion): Vulture flight energy budget as a basis for ecological considerations.
Lunch 13:00-14:00	Cash Bars			
Session XI Wednesday 1.6.05 Plenary 14:00-15:00	Peter Brimblecombe, (Chief Editor Atm. Environ): "Air pollution history with some interest in the Ancient Mediterranean"			

Session XII 15:00-18:00	Gas Phase Atmospheric Chemistry	Environmental Remote Sensing in drylands	Global changes in the marine environment - with eyes to the future	Renewable energy and the Environment
Break 16:00-17:00	Chair: Y. Mamane (Technion)	Chair: A. Karnieli (BGU)	Chair: E. Spanier / M. Fine (HU)	Chair: J. Karni (WIS)
Parallels	<ol style="list-style-type: none"> U. Platt (Univ. of Heidelberg): Special distribution of halogen oxides in the Dead Sea Basin. Y. Rudich (WIS): Interaction of Saharan dust particles with organic compounds and HNO₃ A. Gertler (Univ. of Nevada): Sources of atmospheric pollutants leading to declining water clarity in high altitude. M. Peleg (HUJI): Model simulation of BrO chemistry at the Dead Sea, Israel D. Pedersen (HUJI): Observations of nitrate radicals in a semi-arid atmosphere. 	<ol style="list-style-type: none"> G. Asner. (Global Ecol. CIW, Stanford): 21st century approaches to the global land degradation monitoring problem B. Su. (ITC, Enschede, The Netherlands): Multiscale Observations of land-atmosphere exchanges of water, energy and carbon dioxide in a semi-arid heterogeneous environment M. Shoshany (Technion): Generalizing patch dynamics along climatic gradients T. Svoray (BGU): Determinants of shrub-grass ratio in the desert fringe: spatial modeling approach A. Karnieli (BGU): Spatial and temporal analysis of vegetation degradation in Mongolia. 	<ol style="list-style-type: none"> O. Hoegh-Guldberg (Univ. of Queensland): Climate change and coral reefs - the burning issues E. Rosenberg (TAU): Bacterial bleaching of corals. A. Shemesh (WIS): Long term trends in the isotopic composition of Eilat's corals Amit Huppert (TAU): A potential bias in sea surface temperature reconstruction using corals. Y. Artzy-Randrup & L. Stone (TAU): Regulating processes and stability of open marine systems. 	<ol style="list-style-type: none"> Mark Z. Jacobson: Global windpower and its potential effects on the hydrogen economy Dan Zaslavsky: Did the cave man leave the atone age because he ran out of stone or should we revert to the use renewable energy? J. Koch, U. Dayan, M. Yanai, R. Aboudi: Trends in emissions of greenhouse gases in Israel as compared to developed countries J. Karni: Emerging methods of solar energy utilization D. Freeman: "Renewable Energy as an Alternative to Oil for Transportation"

Conf. Dinner	20:00-22:00 at San Martin
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Special All-Day Symposium Wednesday 1.6.05 Susmann Building	<p style="text-align: right;">Netanya Academic</p> <p>Legal Section, Living With Environmental Change: Challenges in Environmental Sciences Moderator, Dr. Richard Laster</p> <p>Trends in Environmental Law 9:00 - 10:30 Chair: Professor Marcia Gelpe and Ruth Rothenberg</p> <p>Professor Dan Tarlock, Professor, Kent College of Law, Chicago, USA: <i>Is a Substantive Environmental Law Possible?</i></p> <p>Michael Jeffery, QC, - Macquarie University, Australia: <i>Environmental Governance Issues in the Context of Domestic and International Environmental Law: An Australian Perspective</i></p> <p>David Schorr: <i>Environmental Law and Distributive Justice in the 21st Century</i></p> <p>Dr. Michael Graber <i>The Important Role of MEAS in the 21st Century</i></p> <p>Tom Page <i>The Legal Regulation of Environmental Risk in the EU and the United States: Innovation, Bureaucracy, and Democracy at a Crossroads</i></p> <p>Water Law 11:00 – 12:30 Chair: Dr. Robbie Sabel, and Ms. Rachel Adam</p> <p>Professor Joseph Dellepenna, Professor Villanova University (Pennsylvania, USA), <i>The Berlin Rules on Water Resources: The New Paradigm of International Water Law</i></p> <p>Dr. Iyad Hussein, Senior Water Resources Engineer (Amman, Jordan) <i>Integrated Drought Management: Jordan</i></p>
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The Honourable Justice Dennis Cowdroy – Chief Justice, Land and Environment Court of New South Wales, Australia. *Environmental Courts for the 21st Century Environment*

Valentina Nelin, Adv.

IS ISRAELI LAW SUITABLE FOR SUSTAINABLE DEVELOPMENT IN BUILDING?

Dr. Fadia Daibes-Murad, *Is Palestinian-Israeli Cooperation on Shared Water Resources Needed? Possible? A Palestinian Perspective*

Nuclear Power 13:30 – 15:30

Chair: Dr. Avner Cohen, Senior Research Scholar, Center for International and Security Studies at Maryland

Dr. Richard Laster, *Finding the Achilles Heel in Worker Compensation Cases Against Nuclear Research Facilities*

Environmental Rights

Professor Marcia Gelpe, Netanya College of Law, *Environmental Regulation, Property Rights, and Freedom of Occupation in Israel*

Dr. Boaz Shnoor, Hebrew University, *Environmental Law: From Public to Private Enforcement*

16:00-18:00 – Workshop: Instruction in Environmental Law Led by Professor Marcia Gelpe

List of invited speakers from abroad:

PLENARY

- Kevin Noone, Executive director [IGBP](#)
- Russell K. Monson, University of Colorado, USA
- Peter Brimblecombe, Editor, Atmospheric Environment, UK
- Joel Schwartz, Harvard University, USA

ATMOSPHERE

- Stephan Borrmann, MPI, Germany
- Mark Z. Jacobson, Stanford University, USA
- Yoram Kaufman, NASA, USA
- Michael Ghil, Ecole Normale Supérieure, France
- Dennis Lamb, Pennsylvania State University, USA
- Bob Su, ITC, The Netherlands
- Alan Gertler, University of Nevada
- Cinzia Perrino, CNR, Italy
- Ulrich Platt, Rupert-Karls-Universität, Germany
- Rene Van Grieken, University of Antwerp, Belgium
- Miriam Diamond, University of Toronto

LAND

- Greg Asner, Stanford University, USA
- Brendan Bohannon, Stanford University, USA
- Daniel Simberloff, University of Tennessee, USA
- David S. Schimel, NCAR, USA
- Roni Avissar, Duke University, USA
- Janice Thies, Cornell University, USA
- Bernd Marschner, Ruhr-Universität Bochum, Germany
- David S. Schimel, NCAR, USA
- Salvador Rodriguez Zaragoza, UNAM, Mexico

WATER

- Mark Cane, Columbia University, USA
- Ove Hoegh-Guldberg, University of Queensland, Australia
- Alberto Guadagnini, Politecnico di Milano, Italy
- Donald Adams, SUNY, USA

- Kay C-Emeis, University of Hamburg, Germany
- Yair Rosenthal, Rutgers University, USA
- Max M. Tilzer, University of Constance, Germany
- Peter B. Demenocal, Columbia University, USA
- Yochanan Kushnir, Columbia University, USA

TECHNOLOGY AND HUMAN PERSPECTIVES

- Chris Gayford, University of Reading, UK
- David Eaton, University of Texas, USA
- Aaron Wolf, Oregon State University, USA
- Miriam Lev-On, USA
- David Freeman, California, USA
- Hans-Curt Flemming, University of Duisburg, Germany