## Authors of Forewords and Preface Essays

Achim Steiner (Germany) is Executive Director of the United Nations Environment Programme (UNEP) and Under-Secretary General of the United Nations. Following the nomination by the Secretary-General, the General Assembly, on 16 March 2006, elected Mr. Steiner unanimously as UNEP's fifth Executive Director for a four-year term. He was re-elected for a second term to commence on 15 June 2010. Prior he was the Director-General of IUCN - the World Conservation Union - the world's largest environmental network with over 1,000 members including states, government agencies, and non-governmental organizations in 140 countries. He has worked both at the grass-roots level and at the highest levels of international policymaking to address the interface between environmental sustainability, social equity, and economic development. His professional career has included assignments with governmental and non-governmental, as well as international organizations in different parts of the world. In Washington, where he was Senior Policy Adviser of the IUCN Global Policy Unit, he led the development of new partnerships between the environment community and the World Bank and United Nations system. In South-East Asia, he worked as Chief Technical Adviser on a programme for sustainable management of Mekong River watersheds and community-based natural resources management. In 1998, he was appointed Secretary-General of the World Commission on Dams, based in South Africa, where he managed a global programme of work to bring together the public sector, civil society, and the private sector in a global policy process on dams and development. In 2001, he was appointed Director-General of the World Conservation Union, one of the most influential and highly respected organizations in the field of conservation, environment and natural resources management. As Chief Executive, he has held responsibility for the management and oversight of 1,000 staff located in 42 countries, implementing the Union's global work programme. His professional track record in the fields of sustainable development policy and environmental management, his firsthand knowledge of civil society, governmental and international organizations, as well as his global experience spanning five continents make him an excellent choice to lead the United Nations Environment Programme. Mr. Steiner was born in Brazil in 1961 where he lived for 10 years. His educational background includes a Bachelor of Arts from the University of Oxford, as well as a Master of Arts from the University of London with specialization in development economics, regional planning, and international development and environment policy. He also studied at the German Development Institute in Berlin, as well as the Harvard Business School. He serves on a number of international advisory boards, including the China Council for International Cooperation on Environment and Development (CCICED).

Address: Mr. Achim Steiner, Executive Director of UNEP, United Nations Environment Programme Headquarters, United Nations Avenue, Gigiri, PO Box 30552, 00100.

Nairobi, Kenya.

*Email:* Nick Nuttall, Spokesperson, Office of the Executive Director <Nick.Nuttall@unep.org>.

Website: <a href="http://www.unep.org">http://www.unep.org</a>.

Konrad Osterwalder (Switzerland) has been the fifth Rector of the United Nations University and Under-Secretary-General of the United Nations since 1 September 2007. He was born in Frauenfeld, Thurgau, Switzerland in 1942. He studied at the Swiss Federal Institute of Technology (Eidgenössische Technische Hochschule; ETH) in Zürich, where he earned a diploma (1965) and a doctorate (1970) in theoretical physics. After one year with the Courant Institute of Mathematical Sciences, New York University, he accepted a research position at Harvard University in 1971, where he was promoted to assistant professor in 1973 and associate professor in 1976. In 1977, he returned to Switzerland as a full professor of mathematical physics at ETH Zürich. He served as head of the ETH Department of Mathematics (1986-1990); in 1995, he was appointed rector of ETH, a post he held for 12 years. From November 2006 through August 2007, he served concurrently as ETH president pro tempore. He has served as vice president of the Conference of Rectors of Swiss Universities, chair of the University Council of Darmstadt University and as president of the Conference of European Schools of Advanced Engineering Education and Research. His research focused on the mathematical structure of relativistic quantum field theory as well as on elementary particle physics and statistical mechanics. During his career, he has been a visiting fellow or guest professor at several prominent universities around the world, including the Institute des Hautes Études Scientifigues (IHES; Bures-sur-Yvette, France), Harvard University, the University of Texas (Austin), the Max Planck Institute for Physics and Astrophysics (Munich), Università La Sapienza (Rome), Università di Napoli, Gakushuin University, and the Weizmann Institute of Science (Rehovot, Israel). He was a fellow of the Alfred P. Sloan Foundation (1974-1978) and is a member of the Swiss Academy of Technical Sciences. He serves as a member of the Executive Committee of the Club of Rome, holds an honorary degree from the Helsinki Technical University, and is an honorary member of Riga Technical University. He has made contributions to quantum field theory. In 1973, jointly with Robert Schrader, he formulated a mathematical foundation of the Euclidean formulation of quantum field theory proving equivalence with the relativistic formulation. See: Osterwalder, Schrader, 1973: "Axioms for Euclidean Greens Functions", in; Communications in Mathematical Physics, part ı, vol. 31: 83-112; part 2, vol. 42: 281-305.

Address: Prof. Dr. Konrad Osterwalder, Rector, United Nations University, Shibuya-ku, Jingumae 5-53-70, Tokyo 150-8925, Japan.

*E-mail*: <mbox@unu.edu>.

Website: <a href="http://unu.edu/hq/rector">http://unu.edu/hq/rector</a> office/rector-cvL.html>.

Jean-François Bureau (France) has been Assistant Secretary General for Public Diplomacy of NATO since 2007. He is a graduate of the Institut d'Etudes Politiques de Paris (1974) and graduated in political science with a specialization on defence and foreign affairs at the Paris I Pantheon-Sorbonne University (1977). Prior to his NATO position he was Director for Information and Communication at the French Ministry of Defence (29 July 1998 to 1 August 2007) and spokesperson for the Ministry of Defence. His previous professional activities include: auditor at the 'Cour des comptes' in charge of defence affairs and head of the communication unit (1994-1998); head of the press office of the Presidency of the Republic (1991-1994); counsellor of the Minister of Defence for Information and Communication (1991); head of the Information and Public Relations Office (SIRP) of the Ministry of the Interior (1990-1991); general secretary of the Institute for Home Security Studies (IHE-SI) (1989-1990); Under-Prefect in the department Allier (1985-1989); counsellor of the Minister of Defence for Parliamentary, Information and Public Relations Affairs (1983-1985); parliamentary adviser (National Assembly) for defence affairs (1981-1983); research assistant at the Centre for Defence Policy Studies (CEPODE), Paris I Pantheon-Sorbonne University (1978-1981). In addition he was an auditor at the 'Comité des prix de revient des programmes d'armement' of the French Defence Ministry (1996-1998); professor at the Ecole spéciale militaire Saint-Cyr Coëtquidan (1995-1998) being in charge of the course on strategy and international relations; professor at the Ecole Nationale d'Administration (1984-1985) in charge of the seminar on French-German cooperation on defence and security issues; member of the United Nations group of experts (1982-1983) on different aspects of the conventional arms race and the disarmament related to these armaments and the armed forces (New York/Geneva). His publications include: "Defence communication", in: Défense nationale (May 2003); "The French picture of the foreign world", in: Politique Etrangère (Winter 2002-2003); "The French military reform: 'identity change'", in: Politique Etrangère (Spring 1997); "The European moment", in: Le Débat (September 1985); "Decision-making process and arms control in France", in: Brauch, H.G.; Clarke, D. (Ed.): Decision-making for arms limitation: Assessments and prospects (Cambridge, MA: Ballinger, 1983); "Political parties and pacifist contest in Europe", in: Lellouche, Pierre (Ed.): Pacifism and deterrence (Paris: IFRI, 1983); "From the essential equivalence to the balance of forces: the arms control crisis", in: Defence and Security (ARES, 1981); "The eurostrategic negotiation and NATO", in: Revue de Défense Nationale (July 1981); The establishment of an international fund of disarmament for development (New York-Geneva: UNIDIR, 1979); Issues and perspectives of the French-British cooperation in the nuclear military field (Paris: Ministry of Defence, 1979). He was awarded the following honours: Chevalier de la Légion d'Honneur (2000); Chevalier de l'Ordre du Mérite (1990); Officier de l'Ordre du Mérite (2008) Officier de l'Ordre du Mérite d'Allemagne fédérale (1986); since 1979 he has been a member of the Institut français des relations internationales (IFRI).

Address: M. Jean-François Bureau, Assistant Secretary General for Public Diplomacy of NATO.

Email: <bureau.jean-francois@hq.nato.int>.

Website: <a href="http://www.nato.int/cv/is/asg-pdd/bureau-e.html">http://www.nato.int/cv/is/asg-pdd/bureau-e.html</a>>.

U. Joy Ogwu (Nigeria), Ambassador, currently serves as the Permanent Representative of Nigeria to the United Nations. Prior to her appointment as Nigeria's Foreign Minister in August 2006 she served as the first female Director-General of Nigeria's Foreign Policy Think-Tank - the Nigerian Institute of International Affairs (NIIA). While at the NI-IA, she concurrently served as Chair of the Board of Directors of the Centre for Advanced Social Science (CASS) and Member of the United Nations Secretary General's Advisory Board on Disarmament Matters, from Janaury 2002, culminating in her appointment as the first African female Chairperson of the Secretary-General's Advisory Board for 2006. She has been a professor of Political Science and International Relations since 1993. She lectured on foreign policy and international affairs at the Command and Staff College, Jaji, the National War College and the *Institute for* Policy and Strategic Studies (NIPSS). In her academic studies, she focused on Latin America in particular on strengthening relations between Sub-Saharan Africa and Latin America. She lectured on South-South and Latin America's foreign relations. As a member of the Presidential Advisory Council on International Relations from October 2000 -2006, and now Permanent Representative to the United Nations, where she continues to contribute to the advancement of Nigeria's foreign policy. Ambassador Ogwu has written extensively on foreign policy issues. Her publications include: (Ed.): Nigerian Foreign Policy: Alternative Futures (Macmillan 1986); (Ed.): Nigeria's International Economic Relations; Dimensions of Dependence and Change (1988, Rev. 2005; The Economic Diplomacy of the Nigerian State (1992, 2001); The Nigerian Navy and the South Atlantic (1995); (Ed.): New Horizons for Nigeria in World Affairs (2005). She has contributed to scholarly journals and books and her publications have been translated into in Portuguese, Spanish, and French.

Address: Her Excellency Amb. Prof. Dr. Joy Ogwu, Permanent Mission of the Federal Republic of Nigeria to the United Nations, 828 Second Avenue, New York, NY 10017, USA.

E-mail: <ujogwu@aol.com>.

Website: <a href="http://www.un.int/nigeria/">http://www.un.int/nigeria/>.</a>

HRH Prince El Hassan bin Talal (The Hashemite Kingdom of Jordan) is a pluralist who believes in societies in which all peoples can live, work and function in freedom and with dignity. His Royal Highness has initiated, founded and is actively involved in a number of Jordanian and international institutes and committees. Some of the Jordanian institutes established by HRH include the Higher Council for Science and Technology, the Royal Scientific Society, the Arab Thought Forum, the Royal Institute for Interfaith Studies and the recently formed Regional Human Security Centre. Addressing the 36<sup>th</sup> Session of the United Nations in 1981, His Royal Highness proposed the establishment of the New International Humanitarian Order, which led to a

request by the Secretary General to found and co-chair the Independent Commission on International Humanitarian Issues (ICIHI). In May 2008, HRH delivered the Inaugural Thematic Debate on Human Security at the UN General Assembly. He serves as a member of the Commission on Legal Empowerment of the Poor which published its report in June 2003. The West Asia-North Africa Forum which was initiated by HRH, held its inaugural meeting in April 2009. Prince Hassan initiated and hosted ongoing consultations with the Orthodox Centre of the Ecumenical Patriarchate at Chambesy, Switzerland, the Pontifical Council for Inter-religious Dialogue at the Vatican and the The Interfaith Foundation in the United Kingdom through the aegis of the St. George's House, Windsor. He is a founder and now President of the Foundation for Interreligious and Intercultural Research and Dialogue (FIIRD) which was established in Geneva in 1999. HRH has had a long and active engagement with environmentally focused organizations, in particular the Trans-Mediterranean Renewable Energy Cooperation (TREC) Network, which developed the DESERTEC concept that was introduced to the European Parliament by HRH in 2007. The Jordan-based Badia Research and Development Centre was established in 1992 as a result of the long-term vision of HRH to train and improve the livelihoods of the Bedouin population of Jordan for whom the desert is still their home. In July 2002, Prince Hassan founded the International Cultures Foundation with Professor Ihsan Doramaci, Chairman of the Board of Trustees of Bilkent University in Ankara. The Parliament of Cultures was then formed in 2004, to fulfil an agenda of promoting understanding among different cultures and enhancing dialogue between their thinkers and intellectuals. In July 2003, HRH launched Partners in Humanity as a joint initiative with John Marks from Search for Common Ground (SFCG), which aims to improve understanding, build positive relationships and promote dialogue between the Muslim and western worlds. Having been always interested in young people and believing in the importance of their input to the community, His Royal Highness has founded several youth organizations in Jordan and has supported youth activities around the world. Prince Hassan is a member of the Board of the Nuclear Threat Initiative and served on the Commission for Weapons of Mass Destruction. In November 2009 HRH became an Honorary Fellow of the Royal Society of Edinburgh.

HRH is a prolific contributor to newspapers, journals, magazines and periodicals, as well as specific publications on regional and international issues. Prince Hassan is also the author of nine books: A Study on Jerusalem (1979, English); Palestinian Self-Determination (1981, English, Arabic); Search for Peace (1984, English, Arabic); Christianity in the Arab World (1994, English, Arabic, French, Greek, Spanish, Russian, German, Swedish); (co-author with Alain Elkann): Essere Musulmano (2001, Italian, French, Spanish); To Be A Muslim (2003, English); Q and A: Contemporary Issues (2003, Arabic); Continuity, Innovation and Change: Selected Essays (2001); In Memory of Faisal I: The Iraqi Question (2003, Arabic); El Hassan bin Talal Collected Works, vol-1 (2007, Arabic). Prince Hassan was awarded many honorary doctoral degrees by Bošziçi University, Turkey (1981);

University of Durham, U.K. (1990); Spertus Institute of Jewish Studies, Chicago, U.S.A (1995); University of Ulster, Northern Ireland (1996); Moscow State Institute for International Relations, Russia (1997); University of Birmingham, U.K. (1999); Bilkent University, Turkey (1999); University of Hertfordshire, U.K. (2000); Faculty of Catholic Theology at the Eberhard-Karls-University, Tübingen, Germany (2001); University of Oklahoma, U.S.A. (2002); University of York, U.K. (2002); University of Portsmouth, U.K. (2002); International Islamic University of Islamabad, Pakistan (2005); School of Oriental and African Studies (SOAS) at the University of London, U.K. (2005); Medal of the World Academy from Old Dominion University, Norfolk, U.S.A (2005); Candido Mendes University (UCAM), Rio de Janeiro, Brazil (2006); Institute of Higher Education of Brasilia (IESB), Brazil (2006); Faculdades Metropolitanas Unidas (FMU), Sao Paulo, Brazil (2006); Brandeis University, Boston, U.S.A; Soka University, Tokyo, Japan (2006); Faculty of Humanities, University of Lund, Sweden (2007); Eötvös Loránd University, Hungary (2007); University of Calgary (2008).

Address: HRH Prince El Hassan bin Talal, Majlis El Hassan, Royal Palace, Amman, The Hashemite Kingdom of Jordan.

*Email:* <majlis@majliselhassan.org>. *Website:* <www.elhassan.org>.

Paul Crutzen (The Netherlands), Nobel Laureate for Chemistry in 1995; Member of the Max-Planck-Society for the Advancement of Science, Director Emeritus of the Atmospheric Chemistry Division, Max-Planck-Institute for Chemistry, Mainz, Germany (1980-2000); Executive Director, Max-Planck-Institute for Chemistry (1983-1985); partime professor, Department of Geophysical Sciences, University of Chicago, USA (1987-1991), Scripps Institution of Oceanography, University of California, La Jolla, USA (1992-2008), Utrecht University, Institute for Marine and Atmospheric Sciences, The Netherlands (1997-2000).

He was born in Amsterdam on 3 December 1933. His mother's parents moved to the Ruhr region from East Prussia being of mixed German and Polish origin. His father came from Vaals who had relatives in the Netherlands, Germany and Belgium. He studied civil engineering in Amsterdam (1951-1954). He worked with a Bridge Construction Bureau of the City of Amsterdam, Holland (1954-1958); a House Construction Bureau in Gaevle, Sweden (1958-1959). He conducted academic studies and research at the University of Stockholm (1959-1973) where he obtained a M.Sc. (Filosofie Kandidat), 1963; a Ph.D. (Filosofie Licentiat), Meteorology, 1968, D.Sc. (Filosofie Doctor), 1973 with the highest possible distinctions; held various computer consulting, teaching and research positions at the Department of Meteorology, University of Stockholm where he was promoted to a Research Associate Professor (1959-1974). From 1974 to 1977 he was research scientist in the Upper Atmosphere Project, National Center for Atmospheric Research (NCAR), and a Consultant, Aeronomy Laboratory, Environmental Research Laboratories, National Oceanic and Atmospheric Administration (NOAA) in Boulder, Colorado, USA. From 1977-1980 he was a Senior Scientist and Director of the Air Quality Division, NCAR and adjunct professor at the Atmospheric Sciences Department, Colorado State University, Fort Collins, Colorado (1976–1981). Among his main research interests have been: stratospheric and tropospheric chemistry, and their role in the biogeochemical cycles and climate.

He was editor of the Journal of Atmospheric Chemistry, and member of its Editorial Board and of Tellus, Climate Dynamics, Issues in Environmental Science and Technology, Mitigation and Adaptation Strategies for Global Change, reviewing editor of Science (1993-1999); member, Advisory Board of the Institute for Marine and Atmospheric Research, Utrecht (1993-1997), of the STAP (Scientific and Technical Advisory Panel) Roster of Experts of the United Nations Environment Programme (1993-1998); Advisory Council of the Volvo Environment Prize (1993present); Prix Lemaitre Committee, Belgium (1994-present); of the Scientific Advisory Group of the School of Environmental Sciences, University of East Anglia, Norwich (1995present); Executive Board, Gesellschaft Deutscher Ärzte und Naturforscher (1995-2000), of ESTA (European Science and Technology Assembly) of the European Union, Brussels (1997-1999): Vice-Chairman of the Scientific Committee for the International Geosphere-Biosphere Project (IGBP) (1998-present); member, 'Global Change' Committee of the German Research Council and the Federal Ministry of Research and Technology, Germany (1998-1999); Fifth EU Framework Programme, External Advisory Group on 'Global change, climate and biodiversity' (1998-2000); co-chief scientist of the Indian Ocean Experiment (IN-DOEX), 1999.

He received numerous awards and honours, among them: Visiting Fellow of St. Cross College, Oxford, England (1969-1971); Outstanding Publication Award, Environmental Research Laboratories, NOAA, Boulder (1976); Special Achievement Award, Environmental Research Laboratories, NOAA (1977); Rolex-Discover Scientist of the Year (1984); tecipient, Leo Szilard Award for "Physics in the Publics Interest" of the American Physical Society (1985); elected fellow, American Geophysical Union and foreign Honorary Member of the American Academy of Arts and Sciences, Cambridge (1986); founding member of Academia Europaea (1988); recipient, Tyler Prize for the Environment (1989); corresponding member, The Royal Netherlands Academy of Science (1990); recipient, Volvo Environmental Prize; member, Royal Swedish Academy of Sciences, Royal Swedish Academy of Engineering and of Leopoldina, Halle (1991); Honorary Professor at the Johannes Gutenberg-University of Mainz (1993); Raymond and Beverly Sackler Distinguished Lecturer in Geophysics and Planetary Sciences, Tel Aviv University, Israel; recipient, Deutscher Umweltpreis, Umweltstiftung (German Environmental Prize of the Federal Foundation for the Environment) 1994; Foreign Associate, U.S. National Academy of Sciences; recipient, Max-Planck Research Prize (1994); Nobel Prize in Chemistry (with Dr. Molina and Dr. Rowland, U.S.A.); Global Ozone Award for "Outstanding Contribution for the Protection of the Ozone Layer" by UNEP (1995); Minnie Rosen Award for "High Achievement in the Service to Mankind", Ross University, New York; Louis J. Battan Author's Award (with Dr. T.E. Graedel), American Meteorological Society; Medail d'Or de la Ville de Grenoble, France; Election to the Global 500 Roll of Honour of the United Nations Environmental Programme (UNEP); "Commandeur in de Orde van de Nederlandse Leeuw"; Pontifical Academy of Sciences (Vatican); honorary member, International Ozone Commission; Honorary Member, European Geophysical Society (EGS); Bundesverdienstorden (Order of Merit of the Federal Republic of Germany); titular member, European Academy of Arts, Sciences and Humanities, Paris (1996); honorary member, American Meteorological Society, European Geophysical Society (EGS); Erasmus Lecturer and Medalist of the Academia Europeae, Gent, Belgium; member, Accademia Nazionale dei Lincei, Roma, Italy (1997); Ceremonial Lecture at the Annual Assembly, Deutsche Physikalische Gesellschaft (German Physical Society), Regensburg; honorary member, Commission on Atmospheric Chemistry and Global Pollution (CACGP) 1998; foreign member, Russian Academy of Sciences; H. Julian Allen Award 1998, for outstanding scientific paper (co-authored) of 1998 at NASA Ames Research Center (1999); honorary member, Swedish Meteorological Society (2000); Karamanlis Institute for Democracy, Athens, Greece, for outstanding contributions to science and society; member, Council, Pontifical Academy of Sciences; honorary chairman, Climate Conference 2001, 20-24 August, Utrecht, The Netherlands (2001); Worldwide most cited author in the Geosciences with 2911 citations from 110 publications during the decade 1991-2001, ISI (Institute for Scientific Information, Philadelphia, USA), issue Nov./Dec. 2001; honorary member, World Innovation Foundation, WIF (2002).

He obtained Honorary Doctoral Degrees, i.a. from York University, Canada (1986); Université Catholique de Louvain, Belgium (1992); University of East Anglia, Norwich, UK (1994); Aristotle University, Thessaloniki, Greece (1996); University of Liège, Belgium; University of San José, Costa Rica; Tel Aviv University, Israel; Oregon State University, Corvallis, USA; University of Chile, Santiago, Chile; Université de Bourgogne, Dijon, France (1997); University of Athens, Greece (1998); Democritus University of Thrace, Greece (2001); Nova Gorica Polytechnic, Slovenia; University of Hull, UK (2002).

Address: Prof. Dr. Paul Crutzen, Max Planck Institute for Chemistry, Department Atmospheric Chemistry, Joh.-J.-Becher-Weg 27, 55128 Mainz, Germany.

Email: <Paul.Crutzen@mpic.de>.

Website: <a href="http://www.mpch-mainz.mpg.de/">http://www.atmosphere.mpg.de/enid/aaf662be6cd123f4c54c4d9od24b1373,o/er.html">http://www.atmosphere.mpg.de/enid/aaf662be6cd123f4c54c4d9od24b1373,o/er.html</a>.

Amb. Jayantha Dhanapala (Sri Lanka), has been President of the Pugwash Conferences on Science and World Affairs since November 2007. From 1998 to 2003 he was Under Secretary-General of the United Nations for Disarmament when he piloted the UN role in arresting the proliferation of small arms and light weapons, anti-personnel landmines, conventional weapons, and weapons of mass destruction while reinforcing existing norms and norm-building in other areas such as missiles. He launched managerial initiatives in gender mainstreaming, innovated the exchange of

weapons for a development programme, and linked disarmament with development, the environment and peace education programmes. He served as a member of the International Weapons of Mass Destruction Commission (Blix Commission) and of the Canberra Commission on the Elimination of Nuclear Weapons (1996). He was President of the 1995 Review and Extension Conference of the Treaty on the Non-Proliferation of Nuclear Weapons. He was Permanent Representative of Sri Lanka to the United Nations in Geneva (1984-1987). In 1987, he became director of the United Nations Institute for Disarmament Research (UNIDIR). After returning to his country's Foreign Ministry in 1992 he was Additional Foreign Secretary and served as Sri Lanka's Ambassador to the United States, with concurrent accreditation to Mexico (1995 to 30 April 1997).

He received a BA (Honours) degree from the University of Peradeniya in Sri Lanka (1961); studied Chinese at the School of Oriental and African Studies of the University of London (1966-1967); and obtained a MA in international studies at the American University in Washington, D.C. (1976). He joined Sri Lanka's foreign service in 1965 and held diplomatic appointments in London, Beijing, Washington, D.C., and New Delhi, in addition to being Director of the Non-Aligned Movement Division of the Foreign Ministry during Sri Lanka's chairmanship (1965-1993). He represented Sri Lanka at the United Nations General Assembly and at conferences of the Non-Aligned Movement and of the Commonwealth. In mid-2004 he was invited to manage the peace process in Sri Lanka and he served until November 2005.

He has been active internationally as a member of the Governing Board of the *Stockholm International Peace Research Institute* (SIPRI); the International Advisory Group of the *International Committee of the Red Cross* (ICRC, 2003-2007); the United Nations University Council (until 2010); the Geneva Centre for the Democratic Control of Armed Forces; the Advisory Council of the Stanford Institute for International Studies; the International Board of the Bonn International Center for Conversion; the International Advisory Board of the James Martin Center for Non-proliferation Studies, Monterey Institute of International Studies; and as Honorary President of the International Peace Bureau (2003-2007).

He published four books and several articles in international journals, and has lectured in many countries. He was awarded a MacArthur Foundation grant to research and write his book on "Multilateral Diplomacy and the NPT: An Insider's account" published by UNIDIR (2005). He received several awards including the Trainor Award for Distinction in the Conduct of Diplomacy by the Edmund A. Walsh School of Foreign Service in Georgetown University, Washington, D.C., the Monterey Institute of International Studies, the Ploughshares Fund and the School of International Service of American University, Washington D.C. for his work in diplomacy and disarmament, and was the Global Security Institute's first recipient of the Alan Cranston Peace Award in 2002. He was nominated Sri Lankan of the Year 2006 by the Sri Lankan business journal 'Lanka Monthly Digest'. He received several honorary doctor degrees by the University of Peradeniya, Sri Lanka (2000), the Monterey Institute of International Studies, U.S.A. (2001), the University of Southampton, U.K. (2003), the Sabaragamuwa University, Sri Lanka (2003), and from the Dubna International University of Nature, Society and Man in Russia (2009). In November 2007 the International Peace Bureau awarded him the Sean MacBride Prize. He was invited to deliver several keynote lectures including the Olof Palme Memorial lecture at SIPRI in 1999 and the Dorothy Hodgkin Memorial Lecture to Pugwash in 2003.

Address: Amb. Jayantha Dhanapala, 25/6 Pepiliyana Road, Nugegoda. Sri Lanka.

Email: <jdhanapala@yahoo.co.uk >.

Website: <a href="http://www.jayanthadhanapala.com/ehome.html">http://www.jayanthadhanapala.com/ehome.html</a>>.

Ulrich Beck (Germany) is Professor for Sociology at the University of Munich, and has been the British Journal of Sociology LSE Centennial Professor in the Department of Sociology since 1997. He has received Honorary Doctorates from several European universities. He currently studies modernization, ecological problems, individualization, and gobalization. His most recent research activities include a long-term empirical study of the sociological and political implications of 'reflexive modernization', which explores the complexities and uncertainties of the process of transformation from first to second modernity. Specifically he is working on unpacking cosmopolitanism for the social sciences: a research agenda. He has contributed a number of significant new concepts in international sociology, including 'risk society', 'individualization', 'reflexive modernization', 'methodological nationalism' and 'methodological cosmopolitanism'. Since 1992 he has been professor for sociology and director of the Institute for Sociology of Munich University. He is also the British Journal of Sociology Professor at the London School of Economics and Senior Research Fellow at Harvard. He is married to the German sociology professor Elisabeth Beck-Gernsheim. He has received many international prizes and honors. Since 1999 he has been the speaker of the DFG research programme on 'Reflexive Modernity'. He is the editor of the sociological journal Soziale Welt (since 1980), editor of the book series on Second Modernity at Suhrkamp, the author of some 150 articles in reviewed journals, and author or editor of more than 40 books, translated in more than 40 languages including: Risk Society: Towards a New Modernity (1992); (co-author with Anthony Giddens and Scott Lash): Reflexive Modernization. Politics, Tradition and Aesthetics in the Modern Social Order (1994); (with E. Beck-Gernsheim): The Normal Chaos of Love (1995); Ecological Enlightenment (1995); Ecological Politics in an Age of Risk (1995); The Reinvention of Politics. Rethinking Modernity in the Global Social Order (1996); Democracy without Enemies (1998); World Risk Society (1998); What Is Globalization? (1999); The Brave New World of Work (2000); (with Barbara Adam and Joost Van Loon): The Risk Society and Beyond: Critical Issues for Social Theory (2000); (with E. Beck-Gernsheim): Individualization: Institutionalized Individualism and its Social and Political Consequences (2000, 2002); (with Johannes Willms): Conversations with Ulrich Beck (2003); Power in the Global Age (2005); Cosmopolitan Vision (2006); (with Natan Sznaider): "Unpacking cosmopolitanism for the social sciences", in: British Journal of Sociology, 57,1 (2006): I-23; (with Edgar Grande): Cosmopolitan Europe (2007); World at Risk (2008); (with Edgar Grande): "Varieties of Second Modernity - Extra-European and European Experiences and Perspectives", in: British Journal of Sociology, 61,3 (2010).

Address: Prof. Dr. Ulrich Beck, Institut für Soziologie Ludwig-Maximilians-Universität München, Sekretariat Almut Kleine, Konradstr. 6, 80801 München, Germany. Email: <u.beck@lmu.de>.

Hania Zlotnik (Mexico) is Director of the Population Division of the United Nations, where she worked previously as Chief of the Mortality and Migration Section and Chief of the Population Estimates and Projections Section, having joined the Division in 1982 as Population Affairs Officer. Before joining the United Nations, she worked for the Committee on Population and Demography of the US National Research Council. She holds a Ph.D. in Statistics and Demography from Princeton University and is a graduate of the Universidad Nacional Autónoma de México (UN-AM). Her work has spanned the field of demography, covering the analysis of fertility, mortality and migration with special emphasis on their quantitative aspects. She has prepared manuals on demographic estimation techniques and on the collection of international migration statistics. She has edited or written reports published by the United Nations on a variety of topics, including international migration and development, female migration, levels and trends in urbanization, population distribution and migration, population ageing, health and mortality, and population estimates and projections. Her work also includes over 35 articles in books or refereed journals. As Director of the Division, she was responsible for the substantive preparation of the High-level Dialogue on International Migration and Development that the General Assembly of the United Nations conducted in 2006. She has been an active member of professional associations, serving as Board Member for the Population Association of America and as Vice-President of the International Union for the Scientific Study of Population (IUSSP).

Books she has co-authored include: Bilsborrow, Richard E.; Hugo, Graeme.; Oberai, A.S. (Eds.): International Migration Statistics (Geneva: International Labour Office, 1997); Kritz, Mary M.; Lim, Lin L. (Eds.): International Migration Systems: A Global Approach (Oxford: Clarendon Press, 1992); Step-by-Step Guide to the Estimation of Child Mortality (New York: United Nations, 1990); Manual X: Indirect Techniques for Demographic Estimation (New York: United Nations, 1983); Computer Programs for Demographic Estimation: A Users Guide (Washington, DC: National Academy Press, 1981). Some of her published papers are: "Does population matter for climate change?", in: Guzman, Jose Miguel et al. (Eds.): Population Dynamics and Climate Change (New York, UNFPA and IIED, 2009); "Demographic Trends", in: Caballero, Benjamin; Popkin, Barry M. (Eds.): The Nutrition Transition (Amsterdam: Academic Press, 2002); "International migration 1965-96: An overview", in: Population and Development Review, 24,3 (1998): 429-468; "Migration to and from developing regions: A review of past trends", in: Lutz, Wolfgang (Ed.): Alternative Paths of Future World Population Growth: What Can We Assume Today? (London: Earthscan Publications Ltd., 1996).

Address: Dr. Hania Zlotnik, Director, Population Division, United Nations, DC2-1950, 2 United Nations Plaza, New York, NY 10017.

Email: <Zlotnik@un.org>.

Website: <a href="http://www.un.org/esa/population/unpop.htm">http://www.un.org/esa/population/unpop.htm</a>>.

Christoph Müller (Germany) is a geoecologist and holds a Ph.D. from Potsdam University and the International Max Planck Research School on Earth System Modelling in Hamburg, Germany. He held positions at the Max Planck Institute for Meteorology in Hamburg (Germany), the Netherlands Environmental Assessment Agency (PBL, The Netherlands), and at the Potsdam Institute for Climate Impact Research (PIK). His work focus is on land-use dynamics in an earth-systematic context: drivers of land-use change, impacts on food security and climate as well as on carbon- and water cycles. He is working with numerical simulation models, including climate models, dynamic vegetation models, crop models, land-use models, and integrated assessment models. He is associate lecturer at Potsdam University. Among his major publications are: (with Lotze-Campen, H.; Bondeau, A.; Rost, S.; Popp, A.; Lucht, W. 2008): "Global food demand, productivity growth and the scarcity of land and water resources: a spatially explicit mathematical programming approach", in: Agricultural Economics, 39,3: 325-338; (with Eickhout, B.; Zaehle, S.; Bondeau, A.; Cramer, W.; Lucht, W. 2007): "Effects of changes in CO2, climate, and land use on the carbon balance of the land biosphere during the 21st century", in: Journal of Geophysical Research - Biogeosciences, 112, G02032; (with Lucht, W. 2007): "Robustness of terrestrial carbon and water cycle simulations against variations in spatial resolution", in: Journal of Geophysical Reserach -Atmospheres, 112, Do6105; (with Bondeau, A.; Lotze-Campen, H.; Cramer, W.; Lucht, W. 2006): "Comparative impact of climatic and nonclimatic factors on global terrestrial carbon and water cycles", in: Global Biogeochemical Cycles, 20; (with Heistermann, M.; Ronneberger, K. 2006): "Land in Sight? Achievements, Deficits and Potentials of Continental to Global Scale Land-Use Modeling", in: Agriculture, Ecosystems and Environment, 114,2-4: 141-158.

Address: Dr. Christoph Müller, Potsdam Institute for Climate Impact Research, Telegraphenberg A 31, P.O. Box 601203, D-14412 Potsdam, Germany.

*Email:* <christoph.mueller@pik-potsdam.de>.

Website: <www.pik-potsdam.de/members/cmueller>.

Hermann Lotze-Campen (Germany) studied Agricultural Sciences and Agricultural Economics in Kiel (Germany), Reading (UK) and Minnesota (USA). He holds a Ph.D. in Agricultural Economics from Humboldt University Berlin. In a previous position at Astrium/InfoTerra, a European space company, he has developed applications of satellite remote sensing information for agricultural statistics and large-scale modeling, precision farming and forestry. At the Potsdam Institute for Climate Impact Research he is lead-

ing a research group on the interactions between climate change, agriculture and food production, land and water use, and adaptation options through biomass energy production and technological change. Among his major publications are: (with Schellnhuber, H. J. 2009): "Climate impacts and adaptation options in agriculture: what we know and what we don't know", in: Journal für Verbraucherschutz und Lebensmittelsicherheit (Journal for Consumer Protection and Food Safety) 4: 145-150; (with Müller, C.; Bondeau, A.; Rost, S.; Lucht, W. 2008): "Global food demand, productivity growth and the scarcity of land and water resources: a spatially explicit mathematical programming approach", in: Agricultural Economics, 39,3: 325-338; (with Reusswig, F.; Stoll-Kleemann, S. 2008: "Integrated Socio-Ecological Monitoring of Biodiversity Change - Building upon the World Network of Biosphere Reserves", in: GAIA, 17,S1: 107-115; (2008): "The role of modelling tools in Integrated Sustainability Assessment (ISA)",in: International Journal for Innovation and Sustainable Development, 317,1-2: 70-92; (with Welp, M. 2007): "More food with less water: the role of efficiency gains, lifestyles and trade"; on: Lozán, J.L.; Graßl, H.; Hupfer, P.; Menzel, L.; Schönwiese, C.D. (Eds.): Global change: Enough water for all? (Hamburg: Universität Hamburg): 306-309.

Address: Dr. Hermann Lotze-Campen, Potsdam Institute for Climate Impact Research, Telegraphenberg A 31, P.O. Box 601203, D-14412 Potsdam, Germany. *Email:* <a href="mailto:lotze-campen@pik-potsdam.de">lotze-campen@pik-potsdam.de</a>.

Website: <www.pik-potsdam.de/~hlotze>.

Veronika Huber (Germany) works at the Potsdam Institute for Climate Impact Research (PIK) as a Scientific Assistant to the Director. She holds a Ph.D. in Ecology from the University of Potsdam. Most of her research has focused on the responses of freshwater systems to anthropogenic disturbances, especially climatic change. Lately, her interests have shifted to the dynamics happening at the interface between climate change science and politics. Previous to joining PIK, she worked at the Leibniz Institute for Freshwater Ecology and Inland Fisheries (IGB) and at Kellogg Biological Station (KBS) in Michigan, USA. During an internship at the United Nations Environment Programme in Nairobi, she gained experience in the field of climate policy. She studied biology and ecology at Ecole normale supérieure in Paris and at the Universities of Konstanz and Potsdam. Among her major publications are: (with Adrian, R.; Gerten, D., 2008): "Phytoplankton response to global warming modified by trophic state", in: Limnology and Oceanography, 53: 1-13; (with Steiner, C.F.; Schwaderer, A.S.; Klausmeier, C.A.; Litchman, E., 2009): "Periodically forced food chain dynamics: model predictions and experimental validation", in: Ecology 90,11: 3099-3107; (with Breyer, C., 2008): "Ursachen und Folgen des Klimawandels", in: Creutzig, F.; Goldschmidt. J.C. (Eds.): Energie, Macht, Vernunft - Der umfassende Blick auf die Energiewende (Aachen: Shaker Media); (with Thebault, E.; Loreau, M., 2007): "Cascading extinctions and ecosystem functioning: constrasting effects of diversity depending on food web structure", in: Oikos, 116,1: 163-173; (with Gaedke, U., 2006): "The role of predation for seasonal variability patterns among phytoplankton and ciliates", in: Oikos, 114,2: 265-276.

Address: Dr. Veronika Huber, Potsdam Institute for Climate Impact Research, Telegraphenberg A 31, P.O. Box 601203, D-14412 Potsdam.

Email: < huber@pik-potsdam.de >.

Website: < http://www.pik-potsdam.de/members/vhuber>.

Alexander Popp (Germany) is a Research Fellow at the Potsdam Institute for Climate Impact Research (PIK) and head of the working group on land use management in Research Domain III - Sustainable Solutions. His scientific work concentrates on potential and limitation of bioenergy, avoided deforestation in tropical countries, vulnerability of the agricultural sector to climate and land use change, mitigation in the agricultural sector and climate policy as a component of fair globalization and sustainable poverty reduction. Among his major publications are: (with Vogel. M.; Blaum, N.; Jeltsch, F., in press): "Scaling up eco-hydrological processes - the role of surface water flow in water limited landscapes", in: Journal of Geophysical Research -Biogeosciences in press; (with Domptail, S.; Blaum, N.; Jeltsch, F., 2009): "Land use experience does qualify for adaptation to climate change", in: Ecological Modelling, 220,5: 694-702; (with Blaum, N.; Jeltsch, F., 2009): "Ecohydrological feedback mechanisms in arid rangelands: Simulating the impacts of topography and landuse", in: Basic and Applied Ecology, 10: 319-329; (with Lotze-Campen, H.; Müller, C.; Bondeau, A.; Rost, S.; Lucht, W., 2008): "Food demand, productivity growth and the spatial distribution of land and water use: a global modelling approach", in: Agricultural Economics, 39,3: 325-338; (with Schwager M.; Blaum N.; Jeltsch F., 2007): "Simulating the impact of vegetation structure on the occurrence of a small mammalian carnivore in semi-arid savanna rangelands", in: Ecological Modelling, 209,2: 136-148.

Address: Dr. Alexander Popp, Potsdam Institute for Climate Impact Research, Telegraphen-berg A 51, P.O. Box 601203, D-14412 Potsdam.

*Email:* <popp@pik-potsdam.de>.

Website: <a href="http://www.pik-potsdam.de/members/popp">http://www.pik-potsdam.de/members/popp</a>>.

Anastasia Svirejeva-Hopkins (Russia/Canada/Germany) has initially studied soil science and geography at the Moscow State University. Afterwards, she has completed M. Phil. degree at the Cranfiled University, UK in eco technology and ecological modelling of watersheds. She also has M.Sc. from the University of Toronto in physical geography and GIS, and worked at the Environment Canada on the development of the GIS based expert system for the control of water pollution from different types of the land use. After moving to Germany in 1999, she started working at PIK; she has received her Ph.D. in 2004 in modelling of the dynamics of carbon emissions from urbanization. She has spent two years for her post doc at the University of Lisbon, Portugal, where he has continued to work on urbanization and urban biochemistry. She is going to be working on her habilitation thesis and her research interests at the moment are modelling of urban dynamics processes and nitrogen cycling in the cities of Europe. Among her major publications are: (with all names please, 2004): "Urbanised territories as a specific component of the Global Carbon Cycle", in: Ecological Modelling, 173: 295-312; (with Schellnhuber, H.-J., 2006): "Modelling carbon dynamics from urban land conversion: fundamental model of city in relation to a local carbon cycle", in: Carbon Balance and Management, 1,8 (15 August); at: <a href="http://www.cbm">http://www.cbm</a> journal.com/ >; (2008): "Urban expansion and its contribution to the regional carbon emissions: Using the model based on the population density distribution", in: Ecological Modelling, 216,2: 208-216; (with Svirehev, Yu.M., 2008): "Biosphere: Vernadsky's concept", in: Jørgensen, S. E.; Fath, B. (Eds.): Encyclopedia of Ecology; Vol. 1: Global Ecology (Amsterdam: Elsevier): 467-471; (2008): "Urbanization as a global ecological process", in: Jørgensen, S. E.; Fath, B. (Eds.): Encyclopedia of Ecology; Vol. 5: Global Ecology (Amsterdam: Elsevier): 3672-3678.

Address: Dr. Anastasia Svirejeva-Hopkins, Potsdam Institute for Climate Impact Research, Telegraphenberg A 31, P.O. Box 601203, D-14412 Potsdam, Germany.

Email: <hopkins@pik-potsdam.de>.

Website: <a href="http://www.pik-potsdam.de/members/hopkins/">http://www.pik-potsdam.de/members/hopkins/</a>>.

Michael Krause (Germany) has been employed as Research Associate at the Potsdam Institute for Climate Impact Research (PIK) since 2007. He currently works on his PhD in economics of global land use under climate change scenarios in a non-linear optimization model. He holds a Master's and a Bachelor's degree in Forest Sciences from Dresden University of Technology and specialized in international forest policy, non-conventional forestry and natural resource economics. Previous research was conducted, inter alia, at the Institute of International Forestry and Forest Products, Dresden University of Technology, the Department of Development Economics, Migration and Agricultural Policy, University of Kassel, the Ethiopian Agricultural Research Organisation and Xuan Mai Forestry University Vietnam in the fields of social forestry and behavioral decision making, agricultural policy and environmental and resource economics. He gained experience in the field of climate policy during his specialization phase at Dresden University of Technology and his employment as lecturer in agricultural policy at University of Kassel.

Address: Mr. Michael Krause, Potsdam Institute for Climate Impact Research, Telegraphenberg A 31, P.O. Box 601203, D-14412 Potsdam, Germany.

Email: <michael.krause@pik-potsdam.de>.

Website: <a href="http://www.pik-potsdam.de/members/mkrause/">http://www.pik-potsdam.de/members/mkrause/</a>>.

Hans Joachim Schellnhuber (Germany) has been Director of the *Potsdam Institute for Climate Impact Research* (PIK) since its foundation in 1992 and Professor for Theoretical Physics at Potsdam University since 1993. He is chairman of the German Advisory Council on Global Change (WBGU) and was appointed Chief Government Advisor on Climate and Related Issues by the German Federal Government for the G8 and EU presidencies in 2007. As a member of the High Level Expert Group he also advises the President of the European Commission, José Manuel Barroso, on energy and climate change issues. He is a longstanding member

of the Intergovernmental Panel on Climate Change (IPCC) who was awarded the Nobel Peace Prize in 2007. Born 1950 in Ortenburg, Germany, he studied Physics and Mathematics at the University of Regensburg. After he had obtained his Ph.D. in Theoretical Physics he spent several research periods abroad at the University of California among other institutions. In 1989 he became Professor at the Interdisciplinary Centre for Marine and Environmental Sciences at the University of Oldenburg and later the centre's managing director. From 2001 to 2005 he was also engaged as Research Director of the British Tyndall Centre for Climate Change Research. He is member of the editorial boards of several scientific journals and of scientific associations, inter alia, the German National Academy of Sciences (Leopoldina), the U.S. National Academy of Sciences and the Max Planck Society. He authored and co-authored about 210 articles and more than forty books on Theoretical Physics, Environmental Analysis and Sustainability Science. In 2004, he was awarded the title 'Commander of the Most Excellent Order of the British Empire' (CBE) by Queen Elizabeth II. In 2007, he received the German Environment Prize for his scientific work in the field of climate impact research and its dissemination to politicians and the public, and in 2008 he was awarded the Order of Merit of the State of Brandenburg. Since 2010 Schellnhuber is External Professor at the Santa Fe Institute.

Among his major publications are: (with Rahmstorf, S., 2006): Der Klimawandel. Diagnose, Prognose, Therapie (München: C.H. Beck); (with Lenton, T.M., 2007): "Tipping the scales. Nature Reports", in: Climate Change, I, 97; (with Lenton, T.; Held, H.; Kriegler, E.; Hall, J.; Lucht, W.; Rahmstorf S., 2008): "Tipping elements in the Earth's climate system", in: Proceedings of the National Academy of Sciences of the United States of America, PNAS, 105: 1786-1793; (2008): "Global warming: Stop worrying, start panicking?", in: PNAS, 105: 14239-14240; (with Hall, J.; Held, H.; Dawson, R.; Kriegler, E., 2009): "Imprecise probability assessment of tipping points in the climate system", in: PNAS, 106: 5041-5046; (with Hofmann, M., 2009): "Ocean acidification affects marine carbon pump and triggers extended marine oxygen holes", in: PNAS, 106:3017-3022; (Ed.): "Tipping Elements in Earth Systems Special Feature", in: PNAS, 106, 20561-20621; (Coed. with Molina, M.; Stern, N.; Huber, V.; Kadner, S., 2010). Global Sustainability - A Nobel Cause (Cambridge: Cambridge University Press).

Address: Prof. Dr. Hans Joachim Schellnhuber, Potsdam Institute for Climate Impact Research, Telegraphenberg A 31, P.O. Box 601203, D-14412 Potsdam, Germany.

Email: <director@pik-potsdam.de>.

Website: <a href="http://www.pik-potsdam.de/institute/director">http://www.pik-potsdam.de/institute/director</a>>.