

ABOUT THE CONTRIBUTORS

THOMAS B. COCHRAN is a nuclear physicist and a consulting senior scientist to the Natural Resources Defense Council (NRDC), where he began working in 1973. Prior to retiring in 2011, he was a senior scientist and held the Wade Greene Chair for Nuclear Policy at NRDC and was director of its Nuclear Program until 2007. He served as a consultant to numerous government and nongovernment agencies on energy, nuclear nonproliferation, nuclear reactor, and nuclear waste matters. He was a member of the Department of Energy's (DOE) Nuclear Energy Advisory Committee for 15 years and is currently on three of its subcommittees. He served on three DOE advisory boards and the Nuclear Regulatory Commission's Advisory Committee on the Cleanup of Three Mile Island (TMI) and the TMI Public Health Advisory Board. Dr. Cochran is the recipient of the American Physical Society's Szilard Award and the Federation of American Scientists' Public Service Award, both in 1987. He is the author of numerous books, articles, chapters, and working papers on nuclear weapons and nuclear energy. Dr. Cochran holds a Ph.D. in physics from Vanderbilt University.

CHARLES D. FERGUSON has been president of the Federation of American Scientists since 2010. Previously, at the Council on Foreign Relations (CFR), he served as the project director of the Independent Task Force on U.S. Nuclear Weapons Policy, chaired by William J. Perry and Brent Scowcroft. In addition to his work at CFR, he was an adjunct professor in the security studies program at Georgetown University. Dr. Ferguson has written numerous articles on energy

policy, missile defense, nuclear arms control, nuclear energy, nuclear proliferation, and nuclear terrorism. He has done scientific research at the Los Alamos National Laboratory, the Space Telescope Science Institute, the Harvard-Smithsonian Center for Astrophysics, and the University of Maryland, and consulted with the Oak Ridge and Sandia National Laboratories and the National Nuclear Security Administration. Dr. Ferguson graduated with distinction from the United States Naval Academy and served as a nuclear engineering officer on a ballistic-missile submarine. He holds a Ph.D. in physics from Boston University.

VICTOR GILINSKY is an independent consultant primarily on matters related to nuclear energy. He was a two-term commissioner of the U.S. Nuclear Regulatory Commission from 1975-1984, and before that he was Head of the Rand Corporation Physical Sciences Department. He is a member of the American Physical Society and the Institute of Electrical and Electronics Engineers. Dr. Gilinsky holds a Bachelors of Engineering Physics degree from Cornell University and a Ph.D. in Physics from the California Institute of Technology, which gave him a Distinguished Alumni Award.

OLLI HEINONEN is Senior Fellow at the Belfer Center for Science and International Affairs at Harvard University's Kennedy School of Government. Before joining the Belfer Center in 2010, he served 27 years at the International Atomic Energy Agency (IAEA) in Vienna, Austria. For the last 5 years, Dr. Heinonen was the Deputy Director General of the IAEA and head of its Department of Safeguards. He led the agency's efforts to identify and dismantle nuclear proliferation

networks, including the one led by Pakistani scientist A.Q. Khan, and he oversaw its efforts to monitor and contain Iran's nuclear program. Dr. Heinonen led teams of international investigators to examine nuclear programs of concern around the world, including nuclear facilities in South Africa, Iraq, North Korea, Syria, and Libya. He led the agency's efforts in recent years to implement an analytical culture to guide and complement traditional verification activities. Prior to joining IAEA, he was a Senior Research Officer at the Technical Research Centre of Finland Reactor Laboratory in charge of research and development related to nuclear waste solidification and disposal.

ALAN J. KUPERMAN is an Associate Professor of Public Affairs at the Lyndon B. Johnson (LBJ) School of Public Affairs at the University of Texas at Austin. At the LBJ School, he teaches courses in global policy studies and is Coordinator of the Nuclear Proliferation Prevention Project (www.NPPP.org). He also is the editor of *Nuclear Terrorism and Global Security: The Challenge of Phasing out Highly Enriched Uranium* (Routledge, 2014). During 2013-14, he was a Senior Fellow at the U.S. Institute of Peace in Washington, DC.

JODI LIEBERMAN is a veteran of the arms control, nonproliferation, nuclear terrorism, and nuclear safety trenches, having worked at the Departments of State, Energy, and the Nuclear Regulatory Commission. She has also served in an advisory capacity and as professional staff for several members of Congress in both the House of Representatives and Senate as well as the Senate Homeland Security Committee. Ms. Lieberman currently spends her time advocating for science issues and funding as the Senior Government Affairs Specialist at the American Physical Society.

EDWIN S. LYMAN is a senior staff scientist in the Global Security program at the Union of Concerned Scientists (UCS) in Washington, DC. Before coming to UCS in May 2003, he was president of the Nuclear Control Institute, a Washington-based organization committed to nuclear nonproliferation. He is an active member of the Institute of Nuclear Materials Management. Dr. Lyman's research focuses on the prevention of nuclear proliferation and nuclear terrorism. He has published articles and letters in journals and magazines, including *Science*, *The Bulletin of the Atomic Scientists*, *Science and Global Security*, and *Arms Control Today*. Dr. Lyman has testified before Congress and the Nuclear Regulatory Commission, and has served as an expert witness for interveners in several NRC licensing proceedings. Dr. Lyman was a postdoctoral research associate at Princeton University's Center for Energy and Environmental Studies (now the Science and Global Security Program), and holds a doctorate in physics from Cornell University.

MATTHEW G. MCKINZIE joined the Natural Resources Defense Council's (NRDC) Nuclear Program in 1997 and has focused his advocacy in the areas of nuclear power and the consequences of nuclear accidents, nonproliferation, and arms control. His first major project for NRDC was to perform computer simulations of the U.S. nuclear war plan—research that introduced him to Geographic Information Systems (GIS). Since 2005, Dr. McKinzie has also been on the staff of NRDC's Lands and Wildlife Program, where he has applied GIS to NRDC's work on the impacts of oil and gas extraction on wilderness and wildlife in the Rocky Mountain region and utility-scale renew-

able energy siting in the American West. Dr. McKinzie was a postdoctoral associate at the Mario Einaudi Center for International Studies at Cornell University, where he was first introduced to public policy work, and holds a Ph.D. in experimental nuclear physics from the University of Pennsylvania.

RYAN A. SNYDER joined Princeton University's Program on Science and Global Security in August 2014 as a post-doctoral researcher. He is working on technical and policy questions related to the proliferation risk from the use of laser isotope separation for uranium enrichment and on improving international safeguards on the nuclear fuel cycle, and the future of nuclear power. He was previously a Fellow for Energy Studies at the Federation of American Scientists and an adjunct lecturer in physics at American University, both in Washington D.C. In graduate school he worked at the Thomas Jefferson National Accelerator Facility as part of a collaboration that used parity-violating electron scattering to measure the strange-quark contribution to the structure of the nucleon. He received a Ph.D. in nuclear physics from the University of Virginia and a B.A. in physics from Kenyon College.

DAVID SOKOLOW is a Senior Consultant at Booz Allen Hamilton. Previously, he served as a Rosenthal Fellow in the Office of the Secretary of Defense, and as a Research Assistant at the Center for Strategic and International Studies. He holds an M.A. in global policy studies from the Lyndon B. Johnson School of Public Affairs, University of Texas at Austin, and an A.B. in history from Bowdoin College.

HENRY D. SOKOLSKI is the Executive Director of the Nonproliferation Policy Education Center (NPEC). He previously served as Deputy for Nonproliferation Policy in the Department of Defense, and has worked in the Office of the Secretary of Defense's Office of Net Assessment, as a consultant to the National Intelligence Council, and as a member of the Central Intelligence Agency's Senior Advisory Group. In the U.S. Senate, Mr. Sokolski served as a special assistant on nuclear energy matters to Senator Gordon Humphrey (R-NH) and as a legislative military aide to Dan Quayle (R-IN). He was appointed by Congress to serve on both the Commission on the Prevention of Weapons of Mass Destruction Proliferation and Terrorism in 2008 and the Deutch WMD (weapons of mass destruction) Proliferation Commission in 1999. Mr. Sokolski has authored and edited a number of works on proliferation, including *Best of Intentions: America's Campaign Against Strategic Weapons Proliferation* (Praeger, 2001) and *Moving Beyond Pretense: Nuclear Power and Non-proliferation* (Strategic Studies Institute, 2014).

LEONARD WEISS is an affiliated scholar at Stanford University's Center for International Security and Cooperation (CISAC). He is also a national advisory board member of the Center for Arms Control and Non-Proliferation in Washington, DC. He began his professional career as a Ph.D. researcher in mathematical system theory at the Research Institute for Advanced Studies in Baltimore. This was followed by tenured professorships in applied mathematics and electrical engineering at Brown University and the University of Maryland. During this period he published widely in the applied mathematics literature.

In 1976 he received a Congressional Science Fellowship that resulted in a career change. For more than two decades he worked for Senator John Glenn as the staff director of both the Senate Subcommittee on Energy and Nuclear Proliferation and the Committee on Governmental Affairs. He was the chief architect of the Nuclear Nonproliferation Act of 1978 and legislation that created the Defense Nuclear Facilities Safety Board. In addition, he led notable investigations of the nuclear programs of India and Pakistan. Since retiring from the Senate staff in 1999, he has published numerous articles on nonproliferation issues for the *Bulletin of Atomic Scientists*, *Arms Control Today*, and the *Nonproliferation Review*. His current research interests include an assessment of the impact on the nonproliferation regime of nuclear trade with non-signers of the Nuclear Nonproliferation Treaty, and more generally the relationship of energy security concerns with nonproliferation.