



2017 IANAS SMART VILLAGES SYMPOSIUM



BIOS



Dr. Rodolfo Lacy, Undersecretary of Planning and Environmental Policy at the Mexican Ministry of Environment and Natural Resources

Having served in the public and private sectors as an environmental specialist and scholar, Dr. Lacy's career spans more than 30 years. He was coordinator of programs and projects at the Mario Molina Center for Strategic Studies on Energy and the Environment; a founding member of the Colegio de Ingenieros Ambientales de México, A. C.; and was a managing partner of Especialistas Ambientales. Dr. Lacy has taught at the Autonomous Metropolitan University and the Center for Higher Studies of the State of Sonora, and has given international lectures on sustainable development, climate change, green growth, and air and water pollution. Dr. Lacy holds a Ph.D. in Environmental Sciences and Engineering from the Universidad Autónoma Metropolitana and a master's degree in Urban Studies and Planning from the Massachusetts Institute of Technology.



Dr. John Holmes, Project Co-Leader of the Smart Villages Initiative

Dr. Holmes is an independent consultant and senior research fellow at the University of Oxford, concerned with enhancing the use of science in environmental policy making. The early part of his career was focused on technology assessment and research management of clean coal technologies. He later worked in the nuclear industry at the science and engineering levels for the United Kingdom's radioactive waste disposal program. Dr. Holmes also served as head of the science program at the Environment Agency, the environmental regulatory group for England and Wales, and as secretary to the energy program at the European Academies Science Advisory Council. He holds a degree in Natural Sciences from Cambridge University, an MBA from Brunel University, and a Ph.D. in Mechanical Engineering from Imperial College London.



Dr. Bernie Jones, Project Co-Leader of the Smart Villages Initiative

Based in Oxfordshire, Dr. Jones works on projects in the science-policy-development-communications nexus. He was formerly media program director for the Biosciences for Agriculture in Africa (B4FA) project, and has extensive experience working with international science academies. He was head of international policy at the Royal Society, executive director of the European Academies Science Advisory Council, and interim executive director of the InterAcademy Panel and InterAcademy Medical Panel. He also worked in the non-profit sector as international director of the Shaw Trust, and in the business sector in a variety of positions with British Airways. Dr. Jones is a graduate of Cambridge and Edinburgh Universities where he studied Computer Science, Experimental Psychology, and Cognitive Science.



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Dr. Neal R. Armstrong, Regents Professor, Chemistry/Biochemistry/Optical Sciences & Associate Vice President of Research, Discovery and Innovation, University of Arizona

Dr. Armstrong's current research focus is developing measurement science required to understand and control the chemical, physical, and electrical properties of interfaces between electrical contacts and new electro-optical materials at nanometer length scales. His studies underpin the development of emerging energy conversion technologies (solar cells and photoactive nanocrystalline materials for light-to-fuel formation) and new active layers for light emission. Through his research, he explores the challenges and seeks solutions for creating scalable energy conversion technologies that are inexpensive and easily integrated into other technology platforms. Dr. Armstrong has a bachelor's degree in Chemistry from the University of New Mexico and a Ph.D. in Analytical Chemistry from the University of New Mexico. He has also served as a postdoctoral fellow at the Ohio State University.



Dr. Manfred Horn, Professor of Physics and Former Dean of Science, National Engineering University, Lima, Peru

Dr. Horn's research examines solid state physics and materials for solar energy conversion. Pilot projects include consultations in renewable energy, energy planning, and the environment. Dr. Horn is also interested in the development and transfer of renewable energy technologies, particularly solar drying of agricultural products and photovoltaics for rural electrification. He also serves as the coordinator of the Iberoamerican Network for Sustainable Applications of Photovoltaic Energy, and is the former president of the Peruvian Solar Energy Association. He holds a Ph.D. in Physics from the University of British Columbia, UBC, in Vancouver; an honorary doctorate from the National University of Tacna, Peru; and is an honorary professor of the National University of Cuzco, Peru.



Dr. Claudio A. Estrada, Director of UNAM-Tucson, Center for Mexican Studies

In addition to overseeing the Tucson branch of the National Autonomous University of Mexico (UNAM-Tucson), Dr. Estrada works as a researcher for the Institute of Renewable Energies at UNAM where he examines transport phenomena in solar concentration systems. He was previously director of the Center for Energy Research at UNAM where he helped launch a Bachelor of Engineering in Renewable Energy program. One of the foremost promoters of solar energy in Mexico, Dr. Estrada is on the board of directors of the International Solar Energy Society, and previously served as president of the Mexican Association of Solar Energy. Currently a member of the National System of Researchers and an associate editor for the *International Journal of Solar Energy*, Dr. Estrada has published more than 170 research papers. He has a bachelor's degree in Physics from UNAM and a Ph.D. in Mechanical Engineering from New Mexico State University.



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Oliver Fröhling, SURCO

Originally from Germany, Dr. Fröhling did most of his academic work in the United States, first in Nebraska and then in Kentucky. In 1966, he traveled to Oaxaca, Mexico to start his doctoral research on indigenous autonomy and quickly became part of several social processes and movements. This culminated in the founding of several NGOs, among them SURCO, a center for autonomous education and local activism. He also has connections to the United Kingdom as director of a geography summer program that allows students to participate in SURCO activities while learning about social and environmental justice. Much of Dr. Fröhling's work in Oaxaca is focused on using academic tools and connections for social movements. One of his initiatives currently under development is establishing ways for academic research to contribute more to communities and social movements.