

BIO: Dr. Hans Rudolf Herren

Dr. Herren's main interests and experience are in the area of integrated and sustainable development. He has hands-on experience in research, capacity development, management of research organizations and now moved to the policy level, to assure that knowledge, science and technology do contribute effectively to sustainable development by informing development policies at national (i.e., MDGs), regional and global levels. Special emphasis is given to an integrated, holistic and systemic approach by including the economy, society and the environment into a single analytical framework, the Threshold 21 (T21) model. Dr. Herren's 27 years experience in Africa are key in supporting the model development, implementation and scenario analysis, which highlight the development policies impact, and also the consequences (intended and unintended) that accompany any policy choice.

Professional Background:

- Millennium Institute (MI) USA: President and CEO since May 2005. MI provides "Development Intelligence" tools (system dynamics models such as the T21) and capacity development services to empower developing countries in the design and ex ante evaluation of their own sustainable development strategies and supporting policies for the medium and long term. SD tools are also developed to support the private sector and development agencies in their long term planning.
- International Centre of Insect Physiology and Ecology (ICIPE) Kenya: Chief Executive and Director General, 1994 - 2004. ICIPE deals with research and capacity development in insect and ecosystem sciences as relevant to human, animal, plant and environmental health in support of sustainable development.
- International Institute of Tropical Agriculture (IITA) Nigeria: Director Biological Control Program 1979 -1991; Director Plant Health Management Division 1992 to 1994. Developed and implemented one of the world's largest and most successful biological control programs ever carried out. The cassava mealybug biological control program has resulted in a cost-benefit ratio of 1 to 243, saving over 20 million lives and the livelihood of 200 million people in the African cassava belt, from Senegal to Mozambique.
- Co-Chair of the International Assessment of Agricultural Science and Technology for Development (IAASTD)
- President of the International Association for the Plant Protection Sciences (IAPPS) 1999 to 2007.
- President Biovision Foundation for Ecological Development, Switzerland (HRHrren's own Foundation)
- Member of the CGIAR Science Council
- Member Scientific Advisory Committee EPFL- Switzerland

Education background:

- University of California, Berkeley, Biological Control Division. Post-Doctoral position in entomology/agronomy with Prof's. R. van den Bosch and A.P. Gutierrez 1977 - 1979.
- Federal Institute of Technology, Zürich, Switzerland 1969 - 1977. MSc in plant breeding and entomology; PhD in biological control of insect pests.

Main Awards and Honors:

- Sir and Lady Rank Prize for Nutrition. Awarded 28 February 1991 by Mrs. M. Thatcher in London.
- Kilby Award for Extraordinary Contribution to Society through Science, Technology, Innovation, Invention, and Education. Dallas, May 1995.
- **World Food Prize** 1995, awarded in recognition for having advanced human development by improving the quality, quantity and availability of the world's food supply, October 1995.
- **Member US National Academy of Sciences (1999)**
- Brandenberger Preis (2002) for guiding contributions and improvement of the living standards of rural population in Africa through development of agricultural production methods in harmony with the environment.
- 2003 Doctor es Science Honoris Causa, Kenyatta University, Nairobi, Kenya
- 2004 Honorary Professor, Hubei University, Wuhan, PRC

- **Tyler Prize** (2003), The World Prize for Environmental Achievement. Awarded for outstanding contributions to the field of environmental health.
- **Member Third World Academy of Sciences (2005).**

Selected publications:

- Herren, H.R.**, 1987. Africa-wide biological control project of cassava and cassava green mites: A review of objectives and achievements. *Insect Science and Application*, 8:837-840.
- Herren, H.R.**, P. Neuenschwander, R.D. Hennessey & W.N.O. Hammond, 1987. Introduction and dispersal of *Epidinocarsis lopezi* (Hymenoptera: Encyrtidae), an exotic parasitoid of the cassava mealybug, *Phenacoccus manihoti* (Homoptera: Pseudococcidae), in Africa. *Agricultural Ecosystems and Environment*, 19:131-144.
- Gutierrez, A.P, B. Wermelinger, F. Schulthess, J.U. Baumgärtner, **H.R. Herren**, C.K. Ellis & J.S. Yaninek, 1988. Analysis of biological control of cassava pests in Africa: I. Simulation of carbon, nitrogen and water dynamics in cassava. *Journal of Applied Ecology*, 25:901-920.
- Herren, H.R.**, Neuenschwander, P. 1991. Biological control of cassava pests in Africa. *Annual Revue of Entomol* 36:257-283.
- Herren, H.R.** 2003. Genetically engineered crops and sustainable agriculture, in: *Methods for Risk Assessment of Transgenic Plants*, 35, IV. Biodiversity and Biotechnology. K. Ammann, Y. Jacot and R. Braun (eds), 2003 Birkhäuser Verlag Basel/Switzerland
- Herren, H.R.** 2003. The War against Poverty: the Way Forward. In *Resource Management for Poverty Reduction: Approaches and Technologies, Selected Contributions to Ethio-Forum 2002*. Aseffa Abreha, Getachew Tikubet and Johann Baumgaertner (eds). Published by the Ethiopian Social Rehabilitation Fund
- Fritz J. Häni, Laszlo Pinter and **Hans R Herren**. 2007. Sustainable Agriculture: from common principles to common practices. Proceeding and outputs of the first symposium of the international forum on assessing sustainability in agriculture. March 16, 2006, Bern, Switzerland. Edited by Fritz J. Häni, Laszlo Pinter and Hans R Herren. Published by IISD.
- Leif Christian Stige, Jørn Stave, Kung-Sik Chan, Lorenzo Ciannelli, Nathalie Pettoelli, Michael Glantz, **Hans R. Herren**, and Nils Chr. Stenseth. From the Cover: The effect of climate variation on agro-pastoral production in Africa. *PNAS* 2006 103: 3049-3053
- Rémy S. Pasquet, Alexis Peltier, Matthew B. Hufford, Emeline Oudin, Jonathan Saulnier, Lénaïc Paul, Jette T. Knudsen, **Hans R. Herren**, and Paul Gepts. 2008. Long-distance pollen flow assessment through evaluation of pollinator foraging range suggests transgene escape distances. *PNAS* Vol. 105, no. 36, 13456-13461.
- Hans R. Herren, J. Wakhungu, R. Watson.** 2009. Co-Chairs and Director: *Agriculture at a Crossroads*. Island Press
- Andrea M. Bassi, A. Drake, E.L. Tennyson and **H.R. Herren**. 2009. "Evaluating the Creation of a Parallel Non-Oil Transportation System in an Oil Constrained Future", TRB Conference: Annual Conference of the Transportation Research Board of the National Academies of Science, Engineering, and Medicine, January 11-15, 2009, Washington DC, USA.

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