Aiming for an Economic Society that Generates Zero Emissions


Masatsugu Taniguchi, Environmental Issues from the Perspective of Resource Mining - For Increasing Resource Productivity, 2001

Yoshisaka Oyabashi, Green Strategy of the Construction Industry - From Zero Emissions to Global Warming Countermeasures, 2002

Koichi Sueyoshi, Challenges for Zero Emissions at Kitakyushu Eco-town - Environment Conservation and Industrial Promotion, 2002


Yakushima Project Working Group, Yakushima Project on Achieving Zero Emissions, 2004

Hiroyuki Fujimura, Biomass: the Ultimate Zero Emissions - How to Utilize Biomass Resources to Establish a Sustainable Society, 2004

* This is also available in English. (Published by Kaizosha)

1. Development of the Zero Emissions concept

The concept of "Zero Emissions", born at the United Nations University (Tokyo, Japan), in 1994—following from Agenda 21, the path breaking product of the 1992 Rio Earth Summit—is becoming one of the major leading principles as well as a methodology towards achievement of a sustainable society as an alternative to the current mass consumptive society. A fundamental concept of Zero Emissions underlines the effective utilization of the Earth's limited resources and the minimization of human impacts on the natural environment. Zero Emissions promotes a shift from the traditional industrial model in which wastes are considered the norm, to integrated systems in which everything has its use. In other words, we aim to establish a sustainable socio-economic system that is harmonized with nature, based on a Zero Emissions industrial cluster that enables the optimization of resource use among different sectors—just like the natural ecosystem where no waste is emitted.

UNU has facilitated to foster Zero Emissions related activities through the UNU Zero Emissions Forum (ZEF) that promotes practical approaches to environmental sustainability and the application of science and technology with participation from academia, local governments, business and citizens. ZEF has made significant efforts since its birth in spring 2000 to disseminate the concept of Zero Emissions and enhance this innovative and flexible tripartite cooperation throughout Japan from a multilateral standpoint.

Zero Emissions has been diversified and elaborated both in terms of concept and means over the last ten years. Our missions now include the dissemination of this Japan-made Zero Emissions practice to the rest of the world, in particular, the Asian nations.
Major activities

< Symposia >

1994 United Nations University Research Initiative (ZERI) was started.
1995 The 1st World Conference on Zero Emissions, Tokyo (Japan)
1996 The 2nd World Conference on Zero Emissions, Chattanooga (USA)
1997 The 3rd World Conference on Zero Emissions Jakarta (Indonesia)
1998 The 4th World Conference on Zero Emissions, Namibia
1999 The Zero Emissions International Conference “Philosophy of a Sustainable Society and Self-sustained Corporations and Local Communities”
2000 UNU Zero Emissions Forum (ZEF) was founded.
The First Lecture Meeting “Realizing a Resource-recycling Society by development of networking among industry, local governments and academia”
Zero Emissions Symposium 2001 “Zero Emissions Economy and Utilization of Biological Resources”
2002 The 3rd Annual Symposium
International Symposium, “IT and the Environment”
2004 the 5th Annual Symposium “Towards the Establishment of a Zero Emissions Society”
Zero Emissions 10th Anniversary Symposium “Towards a Global Model of a Sustainable Society”

< Joint Forums with Local Governments >

1994 The 1st Zero Emissions Round Table
The 1st Zero Emissions Round Table
1996 The 1st Zero Emissions National Network Conference
The 2nd Zero Emissions Network UNU Conference
ZEF in Mishima City, “Development of a Zero Emissions Society by Realizing Resource-recycling Systems within a Community”
2004 ZEF in Miyagi, “Zero Emissions and Eco-Business” (Miyagi Pref.)
ZEF in Itabashi, “How to teach the Environmental issues at School” (Itabashi Ward)
ZEF in Iwate, “The Benevolent Cycle of Ecology and Economy at Regional Communities” (Iwate Pref.)
ZEF in Kawasaki, “Towards a Sustainable Society by Implementing Zero Emissions” (Kawasaki City)

< Cooperative Studies to Projects Funded by the Education Ministry >

Chief Researcher: Prof. Motoyuki Suzuki
2001-2004 Special Coordination Fund for Comprehensive Joint Research (MEXT)
“Development of a Yakushima Model of Sustainable Society System”
Chief Researcher: Prof. Motoyuki Suzuki
1997-present Japan Society of the Promotion of Science Zero Emissions No. 168 Committee
Chair: Prof. Motoyuki Suzuki

< Seminars and Workshops >

Fiscal Year 2001
Special Seminar on “Environment ISO + Zero Emissions (Co-organizer: JETRO and JMA)”
Venue: Osaka, Naha, Chiba, Nagano, Joetsu, Oita, Kagoshima, Kochi, Kawasaki, Amagasaki, Yamagata, Hamamatsu
Workshop on “Towards a Sustainable Resource-recycling Society- Promoting Recycling and Enhancing Public Awareness” (7 workshops)
Fiscal Year 2002
Workshop on “Methods for Realizing of a Sustainable Society at Regional Communities” (5 workshops)
Fiscal Year 2003
Academic Seminar on “Socio-Economic System of a Sustainable Society on the Theoretical Economics” (5 workshops)
ZEF Summer Seminar in Kyoto, “ZE Technologies and Case Studies”

< Overseas Researches and Symposia >

2000 Empirical Pre-study and International Workshop on Synergies and Cooperation in Integrative Approaches towards Eco-structuring together with Factor 10 Institute, Carnoules (France)
German-Japanese symposium on integrated approaches towards sustainability at the Fraunhofer Society and with support from German-Japanese Cooperation Council on High-technology and Environmental Techniques, Munich (Germany)
2001 UNU Zero Emissions Mission to Tianjin (China)
2002 Zero Emissions Seminar in Tunisia, Tunis (Tunisia)
ZEF in Mishima City, “Development of a Zero Emissions Society by Realizing Resource-recycling Systems within a Community”
2004 Workshop on “Solving the E-Waste Problem” during the International Conference Electronic Goes Green 2004+ in Berlin (Germany)
ZEF in Miyagi, “Zero Emissions and Eco-Business” (Miyagi Pref.)
ZEF in Itabashi, “How to teach the Environmental issues at School” (Itabashi Ward)
ZEF in Iwate, “The Benevolent Cycle of Ecology and Economy at Regional Communities” (Iwate Pref.)
ZEF in Kawasaki, “Towards a Sustainable Society by Implementing Zero Emissions” (Kawasaki City)

< Partnerships with Other Institutions >

The Natural Step International (TNSi), Korea National Cleaner Production Center (KNCPC), University of Thessaloniki, Indonesian UNDP, the German Ministry of Education and Research (BMBF), the Austrian government
(Including those under discussion)