

SUSTAINABLE DEVELOPMENT SUBCOMMITTEE

Luh-Maan Chang, CICHE

Introduction

World Council of Environmental Development (WCED) was commissioned in 1983 by the UN General Assembly with the concern of unbalance between economic development and environmental protection. WCED defined Sustainable Development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." This implies that environment needs to be protected while economic development is underway. The essence of any form of economic development should not diminish the prospects of future generations for enjoying a quality of life as we have.

Asia is the largest continent and has approximately 60% of world population. Currently, Asia generates around US\$18 trillion GDP. Abundant human and natural resources, improved manufacturing ability, and huge markets have made Asia the fastest growing economy on earth. Nevertheless, this fast growth places excessive demand on natural resources and strains the earth's environment and ecosystem. In addition, Asia is constantly experiencing floods, landslides, air and water pollution, earthquakes, tsunamis, typhoons and man-made disasters. With these facts, having sustainable development in Asia is necessary.

Therefore, ACECC member representatives had an Asian Summit on June 26, 2007 during the 4th CECAR in Taipei and collectively came up a resolution called ACECC Taipei Declaration on Sustainable Development. This resolution was declared in the world then-tallest building Taipei 101, the world tallest building at that time. In the declaration, ACECC members and other participants commit to improve the quality of life through use, innovation and discovery of appropriate technologies to meet the needs of diverse Asian populations and cultures. Meanwhile, They commit to work together for protecting and enhancing the environment, inspiring optimism, and creating a sustainable Asia as part of a sustainable world.

In keeping with the foregoing commitments, the followings are the brief summary of each ACECC member's follow-up actions obtained from each member society's webpage.

ASCE

- The American Society of Civil Engineers (ASCE) believes that sustainable development is the challenge of meeting human needs for natural resources, industrial products, energy, food, transportation, shelter and effective waste management while conserving and protecting environmental quality and the natural resource base essential for future development.

Sustainable development requires strengthening and broadening the education of engineers and finding innovative ways to achieve needed development while conserving and preserving natural resources.

- **THE ROLE OF THE CIVIL ENGINEER IN SUSTAINABLE DEVELOPMENT**
ASCE Policy Statement 418 Approved by the Policy Review Committee on March 9, 2007. Adopted by the Board of Direction on April 24, 2007
- Promote broad understanding of political, economic, social and technical issues and processes as related to sustainable development. Advance the skills, knowledge and information to facilitate a sustainable future; including habitats, natural systems, system flows, and the effects of all phases of the life cycle of projects on the ecosystem. Advocate economic approaches that recognize natural resources and our environment as capital assets. Promote multidisciplinary, whole system, integrated and multi-objective goals in all phases of project planning, design, construction, operations, and decommissioning. Promote reduction of vulnerability to natural, accidental, and willful hazards to be part of sustainable development. Promote performance based standards and guidelines as bases for voluntary actions and for regulations, in sustainable development for new and existing infrastructure.

ASCE SUSTAINABLE DEVELOPMENT ACTION PLAN

MAY 2, 2008, The ASCE Board of Direction

- The ASCE Vision for Civil Engineering in 2025 states that Civil Engineers will be “entrusted by society to create a sustainable world and enhance the quality of life...”
- "Received the ASCE Sustainable Development Action Plan as a broad-based Society-wide document for
- dissemination to the designated lead units and the Strategic Planning Committee, to consider and
- implement the action items as they relate to their specific areas of expertise and responsibility."

ASCE Purpose

- **PURPOSE**
- The ASCE Sustainable Development Action Plan is designed to fulfill the Society's commitment, as called for in "A Sustainable Future for the Planet", and to provide a strong, integrated, Society-wide program to help achieve ASCE's vision of creating a sustainable world.

ASCE-Sustainability Guidelines for ASCE Sections, Branches, and Student Chapters

- The report is packed with information, ideas and references that will assist these ASCE units in planning their local and regional programs and activities that address sustainable development principles and practice. The report includes:
- Ideas and suggestions for programs and activities that Sections and Branches can use in their own communities, including a case study example.

-
- * Information on sustainability activities at selected universities that Student Chapters can consider and promote at their own institutions.
- * An electronic venue for information exchange and sharing ideas on sustainability issues and developments.
- * Selected references on popular sustainability readings.
- * Selected appendices, including key ASCE policy documents that reflect ASCE's leadership role in sustainable development.
- To view or download a copy of the 25 page report follow the link below:
- The Web site, www.ASCE-susdev.org, includes the ASCE Sustainable Development Action Plan, which was released in May together with the report Sustainability Guidelines for ASCE Sections, Branches, and Student Chapters.
- In addition to summarizing past efforts, the plan proposes a number of new measures. Past and future measures are placed in six categories: policy, practice, education, research, outreach and information sharing, and international.
- In the policy category, ASCE has modified its Code of Ethics to include sustainable development and has adopted policies on the role of the engineer in sustainable development (Policy 418), in capacity building (Policy 506), and in using science and engineering (Policy 517) to raise the standard of living in underdeveloped countries.
- All of ASCE's official policies may be accessed at www.asce.org/pressroom/news/policy.cfm. The Committee on Sustainability's plan recommends that all ASCE policies be periodically reviewed "to ensure consistency with the sustainability principles and actions of the Society."

CICHE

Sustainable Public Infrastructure

Characteristics of Sustainable Public Infrastructure

- Public safety
- High-performance
- Durable and long-service life
- Economy
- Resources and energy efficiency
- Preservation of natural environment and cultural heritage
- Equality of regional economic development

Implementation and Action Plans

- Develop framework for sustainable assessment indicators
 - Environmental stewardship
 - Social responsibility
 - Economic prosperity
- Evaluate and improve public Infrastructure Review and Approval Process
 - Energy saving and carbon reduction measures
 - Life-cycle cost evaluation

- Establish SPI Label System
 - To promote and certify a public works project that has incorporated good energy saving and carbon reduction measures
- Promote Technology Transfer Initiatives
 - Develop an integrated knowledge system
 - Conduct workshops and training courses
- Add a new “Energy Saving and Carbon Reduction” award category to the Annual Public Infrastructure Gold Medal Award Program

Assessment Indicators

JSCE

Society towards global sustainability

- Issues
- Climate change
- Resource and waste problems
- Ecosystem damage, Loss of biodiversity
- Special Committee for Action Plans Against Global Warming
- Advisory Board²⁸
- Subcommittee for Mitigation Measures
- Subcommittee for Adaptation Measures
- Subcommittee for Impact Estimation
- 28 Existing Research Committees in JSCE

EA

- Society for Sustainability and Environmental Engineering (SSEE)
- Engineering Sustainability SSEE2007, the international conference of the Society for Sustainability and Environmental Engineering, was held at the Sheraton Hotel in Perth, WA from 31 October - 2 November 2007. The conference was planned and executed as an environmentally sustainable event.
- Sustainability Portal
- SSEE accepted a task from Engineers Australia's Sustainability Committee to manage the initial development of a Sustainability Portal for all engineers to use. The purpose of the portal is to provide EA members with current information about sustainability and environmental matters.

PICE

- DISASTER MITIGATION AND PREPAREDNESS STRATEGIES
- PICE being a huge organization with nationwide reach, through its 95 chapters in all the regions, and being an organization of technology professionals, is able and willing

to advance volunteerism at the community level to help mitigate and prepare for disasters.

- PICE members shall become volunteers not only as responders but also as planners.

Vietnam Federation of Civil Engineering Associations

- The sustainable poverty reduction project which will be implemented in 61 poorest districts will encourage the poor to get directly involved in building poverty reduction plans.
- The Ministry of Labour, Invalids and Social Affairs (MOLISA) in coordination with the United Nations Development Programme (UNDP), held a round table discussion in Hanoi on October 13 to mark World Poverty Reduction Day and Vietnam's Day for the Poor (October 17).

Vietnam Federation of Civil Engineering Associations

- Seminar pushes for sustainable urban development Domestic and foreign experts in urban development, architecture, housing, transport, finance and environment fields met in Hanoi on April 22 for a seminar on sustainable urban development.
- The harmony between socio-economic development and environmental protection was necessary to obtain a sustainable development, said Deputy Minister of Construction Nguyen Van Lien.

The Government strategy on Vietnam's sustainable development is a framework of directions for ministries, agencies and localities to implement, as well as Vietnam's commitment to achieve the target, he said.

[No Information on Webpages](#)

- EI-Indonesia,
- KSCE,
- MACE,