ASCE Policy Statement 418

THE ROLE OF THE CIVIL ENGINEER IN SUSTAINABLE DEVELOPMENT

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Policy

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. To achieve these objectives; ASCE supports the following implementation strategies:

> 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.

Issue

ASCE recognizes the leadership role of engineers in sustainable development, and their responsibility to provide effective and innovative solutions in addressing the challenges of sustainability. The ASCE Code of Ethics requires civil engineers to strive to comply with the principles of sustainable development in the performance of their professional duties. ASCE will work on a global scale to promote public recognition and understanding of the needs and opportunities for sustainable development.

The demand on natural resources is fast exceeding supply in the developed and developing world. Moreover, the effects of human development on the environment are significant and expanding. Environmental, economic, social and technological development must be seen as interdependent and complementary concepts, where economic competitiveness and ecological sustainability are complementary aspects of the common goal of improving the quality of life.

Rationale

Engineers have a leading role in planning, designing, building and ensuring a sustainable future. Engineers provide the bridge between science and society. In this role, engineers must actively promote and participate in multidisciplinary teams with other professionals, such as ecologists, economists, and sociologists, to effectively address the issues and challenges of sustainable development.