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"KEY ELEMENTS FOR A SUSTAINABLE WORLD: ENERGY, WATER AND CLIMATE CHANGE"

Sustainable Water Management in the University of Sonora, Mexico

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Abstract

Although water is an abundant resource in the planet, its quality has declined dramatically all over the world. Water pollution has affected oceans, rivers, lakes, and ponds, but mainly drinking water sources. Water scarcity is not only exacerbated by pollution but also by droughts. As a consequence, many countries around the world are experiencing water shortages and/or water crisis. Mexico is not the exception to this; neither does the state of Sonora which has been one of the most affected since its residents have suffered 12 years of drought and the effects of a growing urbanization. Therefore, water management has become a major challenge to sustain the economic growth in the region.

Most of water pollutants are originated from human activities; consequently, it is possible to avoid them by implementing cleaner production and pollution prevention principles.

With the purpose to take responsibility for conserving this resource, the University of Sonora, has implemented a Sustainability Management System (SMS) on campus which was third-party certified in July 2008. Thanks to this, the University of Sonora has become the first public higher education institution to get the ISO14001:2004 certification not only in Mexico but also in Latin America.

This higher education institution is the biggest, most important and most prestigious university in both the capital city of Hermosillo and the state of Sonora, at the northwestern region of Mexico. It is a public university with 31,830 students in five campuses in the state.

The purpose of the SMS is the protection of natural resources and the prevention, reduction and/or elimination of environmental and occupational risks generated by the members of the university community when using resources in order to fulfill its substantive functions of teaching, research, outreach & partnership, and stewardship.

Although this presentation focuses on the sustainable management of water, the reader must be aware that this effort is part of a wider strategy for transforming the University of Sonora in a sustainable university. Water consumption is one of the significant environmental aspects along with energy consumption, hazardous materials and non-hazardous materials use.

The aim of this presentation will be at describing a case study constructed through direct participation in the design, operation and maintenance of the University of Sonora's Sustainability Management System during the last six months. Updated qualitative and quantitative indicators will be available at the time of the presentation.

Findings of this presentation will provide more insights for enriching the actual debate about how to prevent, eliminate and reduce water use inefficiencies on campus, and in that way, contributing to the actual stock of knowledge towards achieving sustainability in universities.

Keywords: Water quality, Sustainability Management System, ISO 14001.