

Editorial

21st Century: Water and Its Sustainable Management in Latin America

This special issue of the journal *CLEAN – Soil, Air, Water (CLEAN)* comprises a selection of contributions from six Latin-American partner institutions involved in the “Exceed Project: Excellence through Dialogue – Sustainable Water Management in Developing Countries”, which since the fall 2009, has brought together more than 30 institutions from 25 countries around the world.

The aim of this Exceed Project is to form an international and academic network to allow interchange and cooperation between the partners. To attain this objective, its strategies consist of setting up specialized training programs in areas related to sustainable water management and organizing postgraduate student exchange programs to conduct research for short stays, as well as carrying out joint investigative studies between the partners and development of a Guest Professor Program at the Technical University of Braunschweig, which acts as the leading institution in the project.

In undertaking these activities, this project seeks to consolidate a specialist group which is able to address a central subject for discussion in the 21st Century: “Water and its sustainable management”.

This discussion is without doubt one of the key issues of global development, because it involves political, social and even religious factors. In addition, academic areas should also be examined since they will form the basis of future decisions in the political and social arena. In the same way, it is necessary to take into account the very important role played by science and engineering in achieving this objective.

Thus, this project encompasses four main axes in the study and development of sustainable water management:

- (i) Water Science & Engineering.
- (ii) Biological Aspects of Water, Health & Nutrition.
- (iii) Environmental & Anthropogenic Chemical Aspects.
- (iv) Socio-economic, Legal, Management, and International Aspects.

In the case of Latin America, there are serious problems that correspond to each of these four main axes. Given the extreme diversity of climate in the continent, that ranges from desert zones to dense forests, as well as permanent ice zones, situations including water chemical micro-pollutants and sanitation aspects as well as the study of climatic factors that influence agricultural practices and preventative measures against natural disasters, we think that this special Latin America Edition of *CLEAN*, provides a picture of everything that is represented in the Exceed project.

The studies examined here are mainly geared towards the areas of *Water Science & Engineering*, *Environmental & Anthropogenic Chemical Aspects*, and the *Biological Aspects of Water, Health & Nutrition* because these are high-priority concerns in certain regions. However, they deal indirectly with *Socio-economic, Legal, Management, and International Issues* as well.

The following are partner institutions involved in this special issue of *CLEAN* (and of course, in the Exceed Project):

- (i) University of Guadalajara (UdeG), (Satellite Center for Latin America), Mexico.
- (ii) National Autonomous University of Mexico (UNAM), Mexico.
- (iii) Federal University of Santa Maria (UFMSM), Brazil.
- (iv) Federal University of São Carlos (UFSCar), Brazil.
- (v) University of São Paulo (USP), Brazil.
- (vi) Pontifical Catholic University of Rio de Janeiro (PUC-Rio), Brazil.

The ten papers in this Focused Issue on Water Management in Latin America combine reviews with original articles, thus providing an overview of what is going on in Latin America in terms of sustainable water management.

There are two reviews: One on the state-of-the-art in wastewater treatment in Latin America and the other on Risk Prevention in Coastal Zones.

All papers represent particular cases that hinge on these two main subjects.

Another four papers on this topic submitted from the following institutions will be published later in regular issues due to time constraints:

- Universidad de Guadalajara – CUCEI, Mexico.
- Federal University of Pernambuco, Brazil.
- University of Brasília, Brazil.
- Pontifical Catholic University of Rio de Janeiro, Brazil.

We hope that this special issue of *CLEAN* will appeal to an international audience and in particular to the scientists in Latin America working on water-related issues.



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