



Academia Panamericana  
de Ingeniería  
Pan American Academy  
of Engineering

## **Declaration of Mexico**

### **Pan American Forum. Contributions of Engineering to the Improvement of the Environment**

**Palacio de Minería - Mexico City**

**September, 29<sup>th</sup> 2009**

*The participants, on the occasion of the Pan American Forum organized by the Pan American Academy of Engineering, the Mexican Federation of Engineering Societies (UMAI), the Mexican Academy of Engineering, and sponsored by the Pan American Federation of Engineers Societies, (UPADI), stressed that climate change is presented as one of the most serious threats that faces the population of the planet for his potential to alter substantially the conditions of the environment, with considerable economic and social effects.*

*Facing these challenges, the role of engineering is to imagine, develop and implement solutions for the benefit of society and prevent or minimize the loss of environmental goods and compensate the loss of them, as well as implement projects and adaptation actions for counteract the negative effects of the climate change.*

*We are in a critical time to influence, and positively contribute to the objective of sustainable development. It is therefore essential that the global warming is kept below levels that allows with no doubt the achievement of that objective. There is an increasing agreement on the international scientific community that we need to act quickly and with decision in the course of this and the following generations, to prevent irreparable damage to the environment.*

*The Forum addressed various issues related to the impact of the climate change and the vulnerability of physical and social systems facing that change, as well as the necessary adaptation and mitigation measures for minimize and maximize, respectively, their negative and positive effects.*

*To this respect, it is necessary to take into account that virtually all actions related to the environment, that does not take into account adequately the political and economic variables will have difficulties to be materialized or to do so, efficiently. All this, regardless, that technology and engineering are indispensable in the conception and realization of any action.*

*This Forum has been an opportunity for different actors to disseminate and make emphasis on actions that, on our continent, are planned and are being carried out to address the problem of climate change.*

### **General conclusions**

*In the countries of Latin America, is already common the society perception and concern on the need to care for the environment as an essential element of the sustainable development. The agreement has also been increased gradually about the dangers that can arise from climate change.*



*The scientific and technological communities are actively participating in the dissemination of scientific and technological knowledge, necessary to alleviate the negative effects of this phenomenon, and are already beginning to take concrete actions in that sense, that it is necessary to intensify.*

*In the particular case of Mexico it has been a continuous policy for more than a decade, the attention to the issue of climate change, its potential effects and the necessary measures related. Particular importance has the recent publication of the Special Programme for Climate Change.*

*It is essential to achieve in the shortest possible timeframe, the transition to the use of clean energy with the use of renewable sources and emphasize its conservation and efficient use. In that sense, it is necessary to revalue the possible safe use of nuclear energy in electricity generation.*

*Because fossil fuels will continue to have, in the coming decades, an important role in the generation of energy it is necessary the development of carbon capture and storage technologies to achieve the reduction of the emission of greenhouse gases in the atmosphere.*

*It is necessary to promote international agreements, that allows exploiting the hydroelectric potential of international basins.*

*By the other hand, water is a resource that must be managed with comprehensive conservation policies and environmental protection, with the active participation of all actors, integrating technologies and making the legal and regulatory modifications required to meet the social and production needs.*

*The climate change will have a particular serious effect on the hydrological cycle. It is a priority to carry out adaptation actions in relation to the availability and efficient use of resources in all its uses. Particularly, it is a serious concern regarding the extreme weather phenomena and its influence in droughts and floods.*

*The health sector is particularly important to the design and implementation of adaptation to the climate change, that probably will amend the spatial distribution of morbidity.*

*The scientific and technological development is essential to address the challenges presented by sustainable development. This requires the allocation of financial resources, public and private, adequate and timely, as well as innovative schemes for his application. We need to adopt, develop and implement economic and financial measures and innovative mechanisms to support technological research and development by assigning sufficient resources for this purpose.*

*The 21<sup>st</sup> century engineer must be an efficient participant in the work of creating a sustainable world, its planning, design and implementation, directing actions designed to meet the needs of society, the protection of the environment and its resources, innovating and integrating ideas and technology with a multi and interdisciplinary approach.*



Academia Panamericana  
de Ingeniería  
Pan American Academy  
of Engineering

*The Engineer must be a leader in the analysis and related decision-making policy related with environmental protection and its improvements. Engineering Education Systems, must conform, where appropriate, for the development of these features.*

*It is the responsibility of the National Academies of Engineering and Technology of the continent and the world to alert their Governments and citizens of the dangers existing, and work actively to develop technological and Engineering solutions.*

*It is a hope that all these proposals and initiatives be considered in the next and transcendental 15Th International Conference on Climate Change in Copenhagen where leaders of the world will define future international strategies in the matter.*

*We are convinced that this Pan American Forum was an evident demonstration of the degree of cooperation of our engineering academies and that, in future, they could be coordinated more closely for progress towards the common goal which is the conservation and improvement of our environment.*