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## **FOREWORD**

By

**Engr. Ch. Ghulam Hussain<sup>1</sup>**

On

### **WORLD ENVIRONMENT DAY 16<sup>th</sup> JUNE-2011**

This publication of the Pakistan Engineering Congress comprises papers presented by engineers and scientists on the World Environment Day observed on 16th June, 2011, the theme being “Forests – Nature at Your Service”.

The authors have documented occurrence of Forests and their varieties around the globe in general and Pakistan in particular. Research material has been presented on various herbs and medicinal plants. The herbal system of medicine is centuries old in the sub-continent and has successfully served the ailing mankind.

Man has benefited from the forests in many other ways as well. Forest wood was used for building shelters, furniture was fabricated for comfort, wood was used as fuel for lighting fire for cooking and heating purposes. Ocean going ships were built for inter-continental trade and also for warfare. Many other products and byproducts are made from the forest resources. It is indeed impossible to count the uses for which the forests are being exploited in the world today.

The over-exploitation of forests is threatening sustainable healthy global environment. Thick forests in several countries are being cleared to create farmland for growing crops to provide food for growing population or for growing cash crops for export trade. Urban development is adversely affecting existing tree population in countries like Pakistan. Healthy big trees are being cut for widening highways and city roads. Although new saplings are planted in large numbers every year but the survival rate is very low for lack of protection and watering.

Forests are a blessing from the Nature for the mankind. They not only enhance the scenic beauty of the landmass but also support life on earth by maintaining ecological balance. They absorb and convert atmospheric carbon dioxide into tree biomass and release oxygen during this process which makes the environment refreshingly healthy. Pakistan has a low forest cover because more than

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1. Vice-President / Secretary, Pakistan Engineering Congress and Managing Partner, National Development Consultants (Pvt.) Ltd.

70% of its land area is arid and semi-arid with annual rainfall of 250-500 mm : too low and erratic to sustain natural vegetation.

### **Climate Change**

As a consequence of industrialization in developed countries and increase in their consumption patterns have increased the concentration of Greenhouse Gases in the atmosphere thereby thickening the “blanket” which prevents excess heat from escaping the earth thereby causing changes in climatic systems. Pakistan contributes only about 0.04% to the total carbon emissions in the world, yet it is vulnerable to the severity of climate change. Pakistan experienced unprecedented summer rains in the year 2010, on the other hand winter rains were delayed. This year also the Province of Sindh received unprecedented summer rains. Great damage has been done to villages and crops. Global temperature rise is expected to cause glacial melt in Himalayas causing increased flooding and consequential damages to the infrastructure and agricultural economy.

### **Mitigation Measures**

Valuable suggestions have been put forward by the contributing authors. All the stakeholders have to be proactive and should start implementing remedial measures and not wait for the disaster to overtake our country. It is a common observation that a large segment of rural population in Pakistan depends upon wood as fuel for domestic uses. They have no access to LPG and natural gas. Because of high costs involved they will perhaps never have access to these fuels. Promoting the culture of using indigenous mineral coal for domestic and commercial purposes holds the promise to save trees and shrubs where they naturally exist.