

FEATURED EVENT

SEISMIC PROTECTION OF CULTURAL HERITAGE

Antalya
Oct 31 Nov 1
Betterment of Seismic Retrofitting and Restoration Practices

The World Council of Civil Engineers (WCCE), the European Council of Civil Engineers (ECCE) and the Turkish Chamber of Civil Engineers (TCCE) are jointly organizing a conference on the seismic protection of cultural heritage to be held in Antalya, Turkey on October 31 – November 1, 2011.

UPCOMING EVENTS

1- 2 July - Guimarares, Portugal
2nd Iberian Congress on Self Compacting Concrete

11th to 15th July 2010 - Lisboa
Panamericano de Transportes y Congresos Mundial de Investigación en los Transportes.

22nd and 23rd July - ICE
Headquarters, One Great George Street Westminster, London Zimbabwe Infrastructure Investment Conference

CONTENTS

News	1
Preventing corruption	4
Our day	4
Did you know	4
Our heritage	5
Event Calendar	6

WCCE GENERAL ASSEMBLY 2011

6TH WCCE GENERAL ASSEMBLY

Mark your Calendars.

The ACTIVITIES REGARDING 6TH WCCE General Assembly are to be held from **25 to 26th November 2011** in **CICCP's** premises (Spanish member of WCCE) located in **Luis Vives 3, 46003 Valencia, Spain.**

Before WCCE's General Assembly, the 6th Spanish National Congress in Civil Engineering "Challenges for Civil Engineering" will gather engineers and businesspeople from all over the World at the **fair venue of Exhibition Hall**, in Valencia from **November 25th to 26th**, 2011. [+]

All routes are heading for Valencia, Spain.

23-24 Nov 11	Civil Engineers National Congress: Colegio de Ingenieros de Caminos, Canales y Puertos
25 Nov 11	WCCE Technical Sessions: Water Challenges and Climate Change Adaptation Business Forum for Construction
26 Nov 11	WCCE General Assembly VI
25-26	Accompanying Persons Program 25 Nov Valencia City Tour 26 Nov La Albufera



Valencia

WCCE AT WORLD JUSTICE FORUM III

The World Justice Forum III was held in Barcelona, Spain from 20 to 23 June 2011. Under the auspices of the World Justice it promotes the Rule Of Law following four universal principles::

1. The government and its officials and agents are accountable under the law;
2. The laws are clear, publicized, stable and fair, and protect fundamental rights, including the security of persons and property;
3. The process by which the laws are enacted, administered and enforced is accessible, fair and efficient;
4. Access to justice is provided by competent, independent, and ethical adjudicators, attorneys or representatives and judicial officers who are of sufficient number, have adequate resources, and reflect the makeup of the communities they serve.

Over 450 diverse leaders, from current and former heads of state and Supreme Court justices, lower court judges, to attorneys at law, medical doctors, school teachers and educators, engineers, architects, journalists, business owners and artists, among others, assembled to develop projects to advance the rule of law across disciplines, and around the world. This action-oriented Forum builds on the success of the first and second World Justice Forums, as well as nine regional outreach meetings held across the globe. In addition, and utilizing as framework the Rule of Law Index, discussions followed on the promotion of the Rule of Law around the world.

Sessions were organized under professional groups and 10 thematic sessions. From the thematic sessions discussions and interdisciplinary efforts, recommended action plans emerged to promote the Rule of Law in various countries and regions in the world. The WCCE had two participants to the WJF III. They were its President, Emilio Colón (Puerto Rico) and one of its Vice presidents, Martin Manuhwa (Zimbabwe). The Architects and Engineers group developed one new project and re-stated support for the project presented last year during WJF II on promoting the development of Anti Corruption Action Plans at the National Level for the Construction Sector. The new proposal is titled: Recognize the Faces of Corruption. It involves promoting the definitions and facets of the main nine traditional modalities of corruption plus one: Indifference. Efforts will start in southern Africa and the Caribbean.

WCCE and its members are committed to promote the Rule of Law and to support the World Justice Project.



from left: Emilio Colon and Martin Manuhwa from WCCE, Prime Minister of Zimbabwe Morgan Tsvangirai and Kamel Ayadi, WFE0

UNESCO ENGINEERING REPORT

More than ever, the world needs creative engineering solutions to face its biggest challenges, from poverty to climate change. Yet many countries are seeing a decline in the enrolment of young people, especially women, in engineering studies. The slump endangers future engineering capacity, particularly in developing countries where brain drain is an additional problem.

The shortage of engineers is a central theme of the first international report on engineering just published by UNESCO, entitled "Engineering: Issues, challenges and opportunities for development". Based on contributions by more than 120 experts around the world, the Report is intended as a platform for better understanding of engineering, an extraordinarily diverse and pervasive activity that has been central to human progress since the invention of the wheel.

"In the past 150 years in particular, engineering and technology have transformed the world we live in," notes UNESCO Director-General Irina Bokova in the Report's foreword. But the benefits they have brought are unevenly distributed throughout the world – nearly three billion people, for instance, do not have safe water, and nearly two billion people are without electricity.

As the 2015 deadline for achieving the United Nations Millennium Development Goals (MDGs) approaches, Ms Bokova continues, "it is vital that we take the full measure of engineering's capacity to make a difference in the developing world."

The escalating demand for engineering talent is highlighted throughout the Report. It is estimated, for instance, that some 2.5 million new engineers and technicians will be needed in sub-Saharan Africa alone if the region is to achieve the UN Millennium Development Goal of improved access to clean water and sanitation. Meanwhile experts predict the global market for climate change solutions – such as low carbon products and renewable energy systems - will rapidly reach US\$1 trillion dollars and continue to grow.

At the same time, the shortage of engineers is marked in many countries. Germany reports a serious shortage of engineers in most sectors, and in Denmark, a study showed that by 2020 the labour market will be lacking 14,000 engineers. And although in absolute numbers the population of engineering students is multiplying world-wide, percentages are dropping compared to enrolment in other disciplines. In Japan, the Netherlands, Norway and the Republic of Korea, for example, enrolment decreases of 5 to 10% have been recorded since the late 1990s.

"The decline in engineering's popularity among students is apparently due to a perception that the subject is boring and hard work, jobs are badly paid considering the responsibilities involved, and engineering has a negative environmental impact, and may be seen as part of the problem rather than the solution," explains Tony Marjoram, the Report's editor.



Engineering: issues challenges and opportunities for development

PDF download

Regarding gender parity and promoting capacity in engineering, efforts to boost women's participation in many countries had increased enrolment in the 1980s and 1990s from 10-15% to 20% and even above, but since 2000 the numbers have been sliding back down. In some countries the percentage of women in engineering is below 10%, and in a few countries there are virtually none at all. A recent two-year study in the United Kingdom of why engineering does not attract more women pointed to persistent stereotypes that identified it as a strictly technical, masculine occupation.

Not only students have misconceptions about engineering – it is “routinely overlooked in the context of development policy and planning,” says Mr Marjoram, and in addressing the MDGs, for example. The Report points to an overall need for better public and policy-level understanding of engineering and how it drives development. This is particularly crucial in the aftermath of the global financial crisis; the Report underlines the importance of investing in infrastructure and innovation in times of economic downturn.

To generate more interest and enrolment, engineering itself requires innovation and transformation, and the Report makes a number of suggestions. New approaches must be developed in education and training, notably hands-on, problem-based learning that reflects engineering's problem-solving nature. Another major area of growth relates to sustainable or “green” engineering. “Engineering needs to promote itself as relevant to solving contemporary problems, to become more socially responsible and to link to ethical issues related to development,” explains Mr Marjoram. “This will also help attract young people.”

The Report also emphasizes the urgent need for improved statistics and indicators on engineering. It is not possible at present, for instance, to compare the numbers or types of engineers per capita around the world, because such data at the international level aggregate scientists and engineers. Refining indicators would drastically improve the information available to policy-makers and planners.

The Report identifies more than 50 fields of engineering and looks at engineering around the world, giving regional and country perspectives. Focused on engineering's contributions to sustainable human, social and economic development, it discusses issues, applications and innovation, infrastructure, capacity-building and education, illustrated through case studies and examples of good practice.

This first UNESCO Report on engineering grew out of informal discussions in 2005 with members of the World Federation of Engineering Organizations (WFEO), the International Council of Academies of Engineering and Technological Sciences (CAETS), the International Federation of Consulting Engineers (FIDIC), Engineers Without Borders and related professional and non-governmental engineering organizations.

WFEO EXECUTIVE BOARD IN PARIS 5-6 APRIL

The World Federation of Engineering Organizations held its Executive Board Meeting in UNESCO premises in Paris from the 4th to the 7th of April. The meeting comprised representatives of national members, from business, academia, and Standing Committee's chairmen. All the activities were preparatory to the General Assembly to be held in Geneva during the World Engineering Congress in September.

During this meeting, the Task Group of Governing documents chaired by Bill Salmon discussed the final proposal to be distributed for amendment and final approval of both new Bylaws and Rules of Procedure. These documents will be finally approved during the next General Assembly.

Nominations to President Elect have been received by Marwan Abdelhami, from Palestine, Julien Roitman, from France and Felix Atume from Nigeria. Also approved was the Task Group on Water and Food security for Rural Areas as presented by India and WCCE.

53RD ECCE MEETING IN MALTA

The European Council of Civil Engineers held its 53rd General Assembly in Sliema, Malta from the the 4th to the 7th of May. The theme of the General Assembly was “Civil Engineering and Built Environment”

During this Assembly ECCE has approved requesting EUCCEET to building an index that includes all undergraduate and master's degrees which are related to civil engineering and a basic study on the requirements for the development of a professional curriculum that allows reduce unnecessary paperwork in applications for professional registration processes in the countries of the European Union and disbarment Case report on a European level.



PREVENTING CORRUPTION

OECD INVITES RUSSIA TO JOIN THE ANTI-BRIBERY CONVENTION

Russia has taken a major step forward in its effort to join the Organization of Economic Cooperation and Development, when it agreed to join the OECD Working Group on Bribery in International Business Transactions in an exchange of letters with OECD Secretary General, Angel Gurría in Paris on Wednesday, 25 May 2011.

The Working Group is made up of representatives from 38 parties to the OECD Anti-Bribery Convention which criminalizes bribery of foreign officials in international business transactions and provides a range of enforcement measures. Joining the Working Group is a major step toward joining the Convention. A total of thirty-eight countries have now joined the Convention, among them Brazil, South Africa, the United States and UK. See also OECD newsletters on Russia's invitation to join the Convention:

The OECD will today invite the Russian Federation to join the OECD's Working Group on Bribery and to accede to the OECD's Anti-Bribery Convention. Secretary-General Angel Gurría will sign an exchange of letters with First Deputy Minister of Foreign Affairs, Andrey Denisov, and Russia's Minister for Economic Development, Elvira Nabiullina, at a ceremony with US Secretary of State Hillary Rodham Clinton during the OECD Ministerial Council Meeting.

"This is a significant milestone in Russia's accession to the OECD," said OECD Secretary-General Angel Gurría. "It underlines the political priority that the Russian government has given to its fight against bribery and corruption."

Russian President Dmitry Medvedev signed at the beginning of May 2011 legislation that clearly criminalized foreign bribery, with a significant increase in the monetary sanctions for companies and individuals who bribe foreign public officials to gain business advantages (read the press release). Following the invitation today, the Russian parliament will now proceed to approve the country's accession to the OECD Convention.

Like all members of the Working Group on Bribery and in accordance with its procedure, Russia will undergo detailed reviews of its anti-bribery laws to confirm that they meet the Convention's standards and that these laws are effectively implemented.

Russia's membership of the Working Group also marks another step forward in the G20 Action Plan, supported by the OECD, for "combating corruption, promoting market integrity and supporting a clean business environment".

The Convention, which entered into force in 1999, outlaws the bribery of foreign public officials in international business transactions. Through country monitoring and extensive peer-led follow-up, the OECD Convention seeks to ensure that the fight against bribery is effective, thus creating a level playing field for fair competition. Since the Convention came into force, 199 individuals and 91 companies have been sanctioned for foreign bribery offenses.

The 34 OECD member countries plus Argentina, Brazil, Bulgaria and South Africa are Parties to the Convention.

OUR DAY

WORLD ENVIRONMENT DAY 5TH JUNE



World Environment Day (WED) is an annual event that is aimed at being the biggest and most widely celebrated global day for positive environmental action. WED activities take place all year round but climax on 5 June every year, involving everyone from everywhere.

WED celebration began in 1972 and has grown to become the one of the main vehicles through which the UN stimulates worldwide awareness of the environment and encourages political attention and action.

Through WED, the UN Environment Programme is able to personalize environmental issues and enable everyone to realize not only their responsibility, but also their power to become agents for change in support of sustainable and equitable development.

WED is also a day for people from all walks of life to come together to ensure a cleaner, greener and brighter outlook for themselves and future generations.

Everyone counts in this initiative and WED relies on you to make this happen! We call for action – organize a neighborhood clean-up, stop using plastic bags and get your community to do the same, plant a tree or better yet organize a collective tree planting effort, walk to work, start a recycling drive . . . the possibilities are endless. Check out the WED pack for interesting suggestions on what you could do

Whatever you do, tell us about it! We will post your activities on this website and make it part of the Wide World of WED map.

DID YOU KNOW

WHY ARE DIMPLES PRESENT IN GOLF BALLS?



The golf balls are subject to lift and drag forces when struck. The drag force is a retarding force acting in a direction opposite to the direction of flight path of the golf ball. Separation occurs behind the ball which forms a low-pressure wake. The pressure drag is the difference in pressure between the front and back of the ball.

With dimples on the ball, the formation of separation is delayed so that it narrows the size of wake. Consequently, less pressure is pulling on the back of the ball so that the golf ball could travel longer in distance.

OUR HERITAGE

LA FORTALEZA AND SAN JUAN NATIONAL HISTORIC SITE IN PUERTO RICO

Between the 15th and 18th centuries, a series of defensive structures was built at this strategic point in the Caribbean Sea to protect the city and the Bay of San Juan. They represent a fine display of European military architecture adapted to harbour sites on the American continent.

Statement of Significance

The main elements of the massive fortification of San Juan are La Fortaleza, the three forts of San Felipe del Morro, San Cristóbal and San Juan de la Cruz (El Cañuelo), and a large portion of the City Wall, built between the 16th and 19th centuries to protect the city and the Bay of San Juan. They are characteristic examples of the historic methods of construction used in military architecture over this period, which adapted European designs and techniques to the special conditions of the Caribbean port cities. La Fortaleza (founded in the early 16th century and considerably remodelled in later centuries) reflects developments in military architecture during its service over the centuries as a fortress, an arsenal, a prison, and residence of the Governor-General and today the Governor of Puerto Rico.

Criterion (vi) La Fortaleza and San Juan National Historic Site outstandingly illustrate the adaptation to the Caribbean context of European developments in military architecture from the 16th to 20th centuries. They represent the continuity of more than four centuries of architectural, engineering, military, and political history.

Long Description

The entire historic site of San Juan with its different monumental components maintains, at the present, a balance between constructed and non-constructed zones. The Fortaleza is tangibly associated with the history of the New World and its explorers and colonists.

For the explorers and the colonists of the New World who came from the east, Puerto Rico was an obligatory stopping-place in the Caribbean. From this evolved its primordial strategic role at the beginning of the Spanish colonization. The island was for centuries a stake disputed by the Spanish, French, English and Dutch. The fortifications of the bay of San Juan, the magnificent port to which Puerto Rico owes its name, bear witness to its long military history.

San Juan had the first municipal government in the New World outside Santo Domingo, as well as the first military presidios in Spanish America. By the 19th century, the old city had become a charming residential and commercial district. The city itself, with its institutional buildings, museums, houses, churches, plazas and commercial buildings, is part of the San Juan Historic Zone which is administered by municipal, State and Federal agencies.

La Fortaleza is one among several, of the fortresses which protect it. Over the centuries, San Juan in fact protected Spain's empire against Carib Indians, pirates and the warships of other countries. This vast, coherent defensive system with ramparts, fortlets and fortresses, attesting formerly to its effectiveness and today to its historic significance. The principal components of this defensive system are, starting in the south: La Fortaleza, founded in 1530-40, enlarged at various periods, and heavily modified after 1846, is an exemplary monument of Hispano-American colonial architecture. It served at once as an arsenal, prison, and residence for the Governor-General of the island; El Morro, built to protect



San Juan Bay, is situated on a rocky peak of land on the western extremity of the island. The fort is a triangular bastion perfectly conceived according to the strategy of the second half of the 18th century, when it was entirely remodelled. It eventually developed into a masterpiece of military engineering with stout walls, carefully planned steps and ramps for moving men and artillery. By the end of the 18th century, more than 400 cannon defended the fort, making it almost impregnable.

San Cristóbal, with its dependencies, is another accomplished example of the military architecture of the second half of the 18th century. San Juan National Historic Site includes forts, bastions, powder houses, wall and El Cañuelo Fort, also called San Juan de la Cruz - defensive fortifications that once surrounded the old colonial portion of San Juan, Puerto Rico. El Cañuelo Fort is located at the Isla de Cabras at the western end of the entrance to San Juan Bay.

UPCOMING EVENTS



● **INDOWATER 2011 Expo & Forum from 14-16 July 2011**
14th to 16th July 2011 - Jakarta Convention Center

● **ICWES 15**
19th to 22nd July 2011 - Adelaide, South Australia

● **15th International Conference for Women Engineers and Scientists**
19th to 22nd July 2011 - Adelaide, South Australia

● **2011 World Water Week**
21st to 27th August 2011 - Stockholm, Sweden

● **ICEE-2011 International Conference on Engineering Education**
21st to 26th August 2011 - Belfast, Northern Island

● **Congreso Internacional de Jóvenes Profesionales del Sector de la Construcción**
Septiembre 2011 - Santiago de Cuba

● **Civil engineering education: are we meeting the needs of the industry and society?**
September 2011 - London

● **WEC 2011**
4th to 9th September 2011 - Geneva, Switzerland

● **The Second World Landslide Forum**
19th to 25th September 2011 - Rome, Italy

● **2nd World Landslide Conference**
19th to 25th September 2011 - Rome - Italy

● **35th International Symposium on Bridge and Structural Engineering**
September 20-23 2011 - London, UK

● **HydroVision Brazil**
20th to 22nd September - Rio de Janeiro - Brasil

● **Congreso Internacional de Jóvenes profesionales del sector de la Construcción**
21-24 septiembre - Santiago de Cuba, Cuba

● **XXIV World Road Congress**
26th to 30th September 2011 - Mexico City, Republic of Mexico

● **X Congreso Internacional de Ingeniería Hidráulica y VI Seminario Internacional del Uso Integral del Agua**
27 sep- 1 de octubre - La Habana, Cuba

● **X Congreso Internacional de Ingeniería Hidráulica y el VI Seminario del Uso Integral del Agua**
28 septiembre al 1 octubre 2011 - Holguín, Cuba

● **International Conclave on Climate Change (ICCC-1) & Exhibition**
12 -14 Oct 2011 - HITEX, Hyderabad, Andhra Pradesh, India

● **International Conclave on Climate Change (ICCC-1)**
12th to 14th October 2011 - Hyderabad, India

● **Surveillance and Safety**
15th to 20th October 2011 - Fredericton, New Brunswick

● **Escaping Silos**
24th to 26th October 2011 - Brisbane, Australia

● **Coastal Management 2011**
15th to 16th November 2011 - Belfast, Northern Ireland

● **Engineering Day**
8th December 2011 - Stanhope Hotel, Brussels

● **2012 IACEE World Conference - Continuing Engineering Education**
17th to 19th May 2012 - Valencia

● **Simposio Internacional del Ferrocemento (FERRO 10).**
12 to 17 October 2012 - La Habana, Cuba

● **X Simposio Internacional del Ferrocemento y compuestos delgados (FERRO10) y 6ª Conferencia Latinoamericana y del Caribe del Ferrocemento**
15 al 19 de octubre 2012 - Palacio de Convenciones, La Habana, Cuba

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In the months to come this events will be available on a RSS Channel. If you are interested in these events in our newsletter, please contact Secretariat.