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## News & Views

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### **ITA publishes strategy for site investigation of tunnelling projects**

The International Tunnelling Association (ITA) has released a new publication, its 'Strategy for Site Investigation of tunnelling projects'. The document has been prepared by Working Group Two – Research.

In a statement, ITA announced: "This study of site investigation for tunnelling projects began with a request from the Executive Council Meeting held in Kyoto, Japan on November, 2001 led by Professor Andre Assis, former President of the International Tunnelling Association (ITA).

"As it is not possible to predefine the ground conditions in detail before a tunnel is constructed, geological risks exist on any tunnelling project. The purpose of site investigation is to provide adequate and reliable information in early stages of the project in order to improve the knowledge of the subsoil, assess various design options and choose construction methods that better cope with the identified potential risks.

"Site investigations have to be conducted within the global strategy of project risk management (see "Guidelines for Tunnelling Risk Management ", WG2, 2004) and should follow the ALARP (As Low As Reasonably Practicable) principle to reduce risks - namely geological, geotechnical and hydro-geological risks.

"The level of acceptable risk as defined by the ALARP principle can be specified in different ways depending on the design stage, and the site investigation strategy should take cognizance of this. The effort required during a site investigation (in terms of the scope of investigation and related cost) will vary with the project development, and has to focus on progressively improving the level of knowledge. The effort required at any stage will depend upon the complexity of the project and will have a direct impact on risk mitigation and project cost.

"This document presents the strategy for site investigations based on international best practice, with the aim of maximizing the benefit in terms of acquiring knowledge at the right project phase, while avoiding common misleading approaches in terms of investigation effort and responsibility. It is hoped that this document will be a useful guide for future tunnelling projects."

*Source: Tunnels and Tunnelling, 23.10.2015  
([www.tunnelsonline.info/news](http://www.tunnelsonline.info/news))*

### **Breakthrough at Lal Qila, Delhi**

The TBM boring from Kashmere Gate to Lal Quila in Delhi, India has completed its journey. Part of Delhi Metro Phase III, contract CC-07 forms part of the extension of the Central Secretariat corridor to Kashmere Gate.

The contractor is a joint venture of Russia's Metrostroy and local firm ERA Infra.

A Delhi Metro Rail Corporation spokesperson said: "This TBM was lowered at Kashmere Gate shaft on 6 December 2014 and after assembly of the TBM below the ground the initial drive began on 26 December 2014. The maximum depth of the tunnel is 16m below the earth's surface."

The 6.61m-diameter EPBM was manufactured by Terratec. It is fitted out with 33 no. 17in disc cutters. It has excavated 1,351m, and another TBM is still working on the 1,356m parallel bore.

Under the Delhi Metro Phase-III plan, the Violet Line is being extended from its current terminus to meet the Yellow and Red Lines at Kashmere Gate Station. This will offer an alternative route between Central Secretariat and Kashmere Gate Stations, easing crowds on the heavily-used Yellow Line.

*Source: Tunnels and Tunnelling, 30.9.2015  
(www.tunnelsonline.info/news)*

### **Station breakthrough on Bangalore metro**

One of the four TBMs mining tunnels for Bangalore's Metro Green Line Phase 1 made a breakthrough at Chikpet Station on August 31.

The drive from Krishna Rajendra market is said to have taken 20 months. Bangalore Metro Rail Corporation Ltd. (BMRCL) officials said the 5.5m diameter TBM had been stuck in loose soil for four to five months, and required a very slow pace.

The machine will undergo maintenance before undertaking its next drive of approximately 900m to Majestic station.

BMRCL managing director Pradeep Singh Kharola said that all tunnelling works will be completed by February 2016. This portion of the alignment includes three underground stations. Kharola said the first tunnel, on the southern line, should be operational by December 2016.

*Source: Tunnels and Tunnelling, 10.9.2015  
(www.tunnelsonline.info/news)*

### **The 400 year old tunnel has brought surplus water supply**

A group of villagers met the Chief Minister of north Indian state Uttarakhand and urged him to declare village Maletha as a national heritage because of the 400 year old tunnel that has brought surplus water supply for the domestic and agricultural purposes round the clock, a rare thing in the hills.

Villagers claimed the tunnel constructed by Madhav Singh Bhandari in the 16<sup>th</sup> century was a historical event for the village. The painstaking efforts by the man, who has become a legend for the people here, has proved to be a boon for Maletha and enabled it to achieve and sustain food self-sufficiency even today.

According to them, Bhandari sacrificed his son for the successful construction of the tunnel and to bring water to the homes from the local rivulet Chandrabhaga.

“Today, Maletha is a well known place because of its successful water scheme. There is abundance of water in the village to feed more than 5,000 inhabitants and irrigate 900 hectares of agricultural land which is a rare sight in the village without any support from the government”.

According to a local villagers, unlike other hill areas in the state, Maletha and its surrounding location have seen virtually no migration ever mainly because of abundant water availability. The irrigated farms have become a staple source of livelihood to most of the villagers.

While other hill villagers are witnessing constant migration to plain locations, Maletha villagers are least interested in moving out mainly for their dependence on agriculture which is fully supported by the water availability. Those who are employed in other parts of the state or country have also preferred to keep their land and houses intact here.

The villagers said Chief Minister assured them to initiate the process for declaring Maletha as the heritage village.

*Source: Hindustan Times, 30.07.2015*

### **ISRO bags US national space society award for Mars orbiter mission**

India’s low-cost Mars mission which is in rendezvous with the red planet for an extended period has been presented with the Space Pioneer award for the year 2015 by the US’ National Space Society.

Space Pioneer award for the year 2015 was presented to Indian Space Research Organisation (ISRO) in the Science and Engineering category during the 34<sup>th</sup> Annual International Space Development Conference held at Toronto in Canada during May 20-24, 2015, ISRO said on its website.

It said the National Space Society (NSS) of USA presented the award in recognition of ISRO’s efforts in accomplishing Mars Mission in its very first attempt.

Scripting space history, India on September 24, 2014 successfully placed its low-cost Mars spacecraft in orbit around the red planet in its very first attempt, breaking into an elite club of three – US, Russia and Europe who have successfully undertaken missions to Mars or its orbit.

The spacecraft was launched on its nine month long odyssey on a homegrown PSLV rocket from Sriharikota on November 5, 2013.

In 2009, NSS presented a similar award to ISRO in recognition of the accomplishment made in the success of the Lunar Probe, Chandrayaan-1.

*Source: Hindustan Times, 10.06.2015*

## **‘On the Origin of Species’ voted most influential academic book**

Charles Darwin’s ‘On the Origin of Species’ has been voted the most influential academic book ever written, from a short list of 20 books drawn up as part of a new project of the British Library and the Arts and Humanities Research Council.

The vote was released on the first day of the project’s Academic Book Week that runs across Britain until November 16, 2015. Darwin’s book was described as “the supreme demonstration of why academic books matter” and “a book which has changed the way we think about everything”.

The runner-up was The Communist Manifesto by Marx and Engels, with Shakespeare’s Complete Works, Plato’s The Republic and Critique of Pure Reason by Immanuel Kant also polling a large number of votes, organizers said.

Samantha Rayner, who leads the Academic Book of the Future project, said: “As we investigate what an ‘academic book of the future’ might be... this list reminds us of the part evolution, reason, politics and creativity have always played in these discussions”.

Alan Staton of the Booksellers Association said: “It’s not in the least surprising, and completely right, that ‘On the Origin of Species’ won. No work has so fundamentally changed the way we think about our very being and the world around us.”

He added: “I’m personally very hearted to see ‘Critique of Pure Reason’ in the top five. We seem to be governed by expediency and doublethink and it’s reassuring to know that Kant’s Categorical Imperatives are known and thought important.”

*Source: Hindustan Times, 11.11.2015*

## **India to be declared yaws-free, says WHO**

A technical fact-finding team of the World Health Organisation (WHO) has cleared the way for India to be certified free of Yaws, a relapsing bacterial infection that causes skin and bone deformities. The last yaws case was reported in 2003, and since then, India had been running sustained surveillance to ensure the last bacterium was destroyed.

“After India’s success in polio eradication, elimination neonatal tetanus and in view of the verification team’s recommendations on yaws eradication, the focus will be on eliminating of kala-azar and lymphatic filariasis,” said Ashnu Prakash, Joint Secretary, Ministry of Health and Family Welfare.

Yaws is transmitted through direct skin-to-skin contact and usually affects children younger than 15 years, with infection being the highest in children aged 6-10 years. Similar to syphilis, yaws can persist for years as a chronic, relapsing disease.

The international verification team sent its recommendations to the WHO after visiting more than 50 health facilities in five formerly affected states to validate the quality of surveillance and data from blood tests to detect infection. It confirmed that transmission had stopped in India and there were no clinical cases of yaws.

The team reviewed records, disease surveillance and verified data in Gujarat's Dang, Khammam in Andhra Pradesh, Gadchiroli in Maharashtra, Kallakuruchi in Tamil Nadu and Koraput in Odisha between October 5 and 16, 2015.

*Source: Hindustan Times, 20.10.2015*

### **After Polio, India set to win battle against tetanus at child birth**

Year after obtaining WHO certification for the elimination of polio, India is on the verge of crossing another milestone in public health.

It has eliminated maternal and neonatal tetanus – an infection that at its peak killed an estimated 2 lacs adults and children every year – and is expecting an official certification from WHO within two months, Health Ministry sources told The Indian Express.

Confirmation of the break-through came after a joint team of WHO and UNICEF recently conducted field visits in Jammu and Kashmir, Nagaland and Meghalaya, and Dadra and Nagar Haveli, which were the last four hotspots where incidence of the infection had remained above acceptable levels, sources said.

“The latest inspections went well and it’s only a matter of time before the formal certification comes, like it happened in the case of polio,” said a senior Health Ministry official.

According to a professor of neonatology in All India Institute of Medical Sciences (AIIMS), three major reasons why India managed to tame an infection that was “once responsible for some 15% of the total number of neonatal deaths in the country”.

The immunization coverage of expecting mothers has become very good, though it is not 100% yet. The number of institutional deliveries have gone up. Even for those happening outside institutions, we have delivery kits that minimize chances of infection. Safe umbilical cord practices have also been crucial.

Maternal and Neonatal Tetanus Elimination (MNTE) is defined as less than one neonatal tetanus case per 1000 live births per year in every district of a country. India was among only 23 countries yet to eliminate MNT.

Health Ministry officials, meanwhile, have credited a strengthening of the system, including “a renewed focus on institutional deliveries” and a “maternal and child tracking system on the mobile phone” to track pregnancy, delivery and post-delivery immunization.

India had received the WHO certification for its ‘Polio Free’ status last March-until 2009, it had accounted for half of all cases globally.

*Source: Indian Express, 24.05.2015*

### **Cheaper care, traditional drugs aid medical tourism in India**

Medical tourism in India is growing at an exponential rate of 15% and contributes approximately 4% to the country’s gross domestic product (GDP), according to a report released by the PHD Chamber of Commerce and Institute of Cost Accountants of India.

Known for providing quality healthcare at affordable rates, India has emerged as the cheapest destination for bypass, valve replacement and knee replacement.

Most of the medical tourist influx is from neighbouring countries, including Afghanistan, Pakistan, Bhutan, Nepal, and Bangladesh, West Asian and European countries, the US and Canada, the study said.

“Thailand, Malaysia and Singapore have also become popular destinations for medical tourists, but India stands out because of cost effectiveness, access to healthcare, and good nursing facility,” said Girish Shankar, Additional Secretary, Tourism Ministry.

Another reason for India’s popularity is its traditional medicine. “People travel to India, especially Kerala, to experience traditional practices like yoga and siddha. We are trying to promote this through our AYUSH mission,” said AK Ganeriwala, Joint Secretary, Ministry of Ayush.

India received 300,000 ‘medical tourists’ in 2009, 850,000 in 2011 and is expected to touch 3,200,000 by the end of 2015. It is estimated to become a \$160 million industry by 2016. However India’s global share is still less than 2%.

*Source: Indian Express, 28.08.2015*

## **Refugees welcomed to Germany with candies, cuddly toys**

In moving scenes, the newcomers clutching their children and sparse belongings stepped off trains to applause from well-wishers who held balloons, snapped photos and gave them water, food and clothes.

“The people here treat us so well, they treat us like real human beings, not like in Syria,” said Mohammad, 32, from the devastated town of Qusayr, his eyes welling up with tears.

Europe’s worst refugee crisis since World War II has exposed a growing east-west rift, with frontline nation Hungary – which first held back migrants, but later sent them on to Austria and Germany – rejecting the EU’s “failed immigration policy”.

Hungary’s conservative Prime Minister Viktor Orban, who has sought to secure his country’s Serbian border with a fence, has voiced concern about mostly Muslim refugees under-mining what he said is Europe’s Christian-based identity.

The scale of suffering in war-torn Syria has led Germany in recent days to drop normal formalities and allow in vastly higher numbers of refugees.

As train and busloads have kept on coming from Hungary, Germany took in another 3,000 people by 1200 GMT Sunday and expected 2,000 more through the day, after about 8,000 refugees in total arrived Saturday, police told AFP.

In all, Europe’s most populous nation expects 800,000 new asylum applications this year - four times last year’s total and more than any other EU nation – at a cost of 10 billion Euros (\$11 billion).

“Say it loud, say it clear, refugees are welcome here,” crowds chanted overnight at the Frankfurt railway station.

*Source: Hindustan Times, 7.9.2015*

## **Yoga, a valuable gift of India to world**

Yoga is a complete science. It is a valuable gift of India to the world. Literally Yoga means to unite or to connect, to harmonize, to balance. Harmony and balance make life happy; its absence fills it with sorrow and grief. Harmony and balance between body, mind and action; desire, knowledge and action and the three constituents of nature (Prakariti) Satva, Rajas and Tama is key to awakening of immense latent powers within us. Yoga also helps us use these powers to attain the supreme bliss that is the ultimate aim of life.

On June 21, 2015 a golden chapter is going to be added to the world history. On the call of our energetic Yogi Prime Minister Shri Narendra Modi the United Nations has declared it as the International Yoga Day. About 200 countries are going to observe the Yoga Day. This would go a long way in further popularizing Yoga across the globe.

Yogic discipline is the only way to provide solace and true joy to the humanity afflicted by the ills of materialism. Today man is growing more and more knowledgeable, but getting oblivious of this true self. He is seeking pleasure and happiness in material things but to no avail. The disappointment caused by this failure is making him frustrated and desperate. This is also a major cause of increasing drug addiction. Even drugs and alcohol have failed to quench his thirst of everlasting joy. The deep frustration has turned him home to a number of dreaded diseases including depression, stress, nervous breakdown and heart ailments.

This tragic condition of man has been likened to the deer who wanders about the forests in search of the fragrance of musk which, in fact, exists within it. There is another parable of a beggar who keeps begging around unaware of the immense wealth lying buried in his own house.

Yoga activates every organ and part of human body, regulates the blood circulation and helps control the Prana or vital force. This leads to inner transformation.

In the modern times a number of great Yogis including Shri Ramkrishna Paramhansa, Swami Vivekananda, Shri Arvind, Swami Kunalayananda, T. Krishnamacharya, Swami Vishnudevananda, Shivanad Swaraswati, Chidanand Swaraswati, Satyanand Saraswati, Swami Tama, BKS Iyengar, Pattabhi jois, Maharshi Mahesh Yogi, Shyamacharan Lahiri, Swami Yuktेशwar Giri, Swami Yogananda, Swami Akhandananda, Bhagwan Nityananda, Swami Muktananda, Swami Vishnutirth, Baba Ramdev, Sri Sri Ravishankar, Gurudev Jaggi Vasudev have furthered the Yoga tradition.

Along with the world, Madhya Pradesh will also be observing International Yoga Day on June 21. Yoga programme would be organized from state to panchayat level. Efforts are being made to associate eminent persons from every field including literature, journalism, medical science, engineering, law, IT etc. with these programmes so that maximum people may be inspired to learn Yoga and make it as way of life.

*- Writer is Chief Minister of Madhya Pradesh  
Source: Hindustan Times, 21.6.2015*

## **Eat fruits while young to stay fit**

A new research has found that if one eats more fruits and vegetables when they are younger, then it results into a healthier heart years later. The research conducted by American Heart Association explained that eating more fruits and vegetables as young adults was associated with less calcified coronary artery plaque 20 years later. The researchers examined 2,506 participants based on their daily consumption of fruits and vegetables and observed that women consumed an average of nearly nine servings of daily fruits and vegetables, whereas men averaged more than seven daily servings. The study noted that people who ate the most fruits and vegetables at the start of their examination had 26% lower odds of developing calcified plaque.

*Source: Hindustan Times, 29.10.2015*

## **Spreading Cheer at Work**

- You cannot delegate empathy and compassion.
- When the culture of an enterprise is not rooted in values, you grow weeds, not flowers.
- In a job, you work for someone. In a career, you work with someone.
- Make two promises to yourself before you start your career: earn more than you can spend and offer more help than you seek. Keep them till you retire.
- Passion is what you feel deep inside. Compassion, you feel for those outside.
- Leadership without empathy is the hallmark of a dictator.
- Freedom, like air, is often taken for granted until we are denied it.
- You recognize a fabulous team when you see each member committed to the happiness and success of the other rather than their own.
- Happiness is to employees what profit is to enterprises.

*- N S Rajan in Quote  
Me If You Can*

*Source: Hindustan Times, 1.9.2015*

## **Let your ego take a back seat to live a fuller life**

When a child is born, he has no ego. He slowly starts recognising himself, and an identity is established. With age, by learning and interacting, ego starts evolving.

People who behave arrogantly are often called egoistic. They consider themselves to be on a higher platform and don't communicate on an equal level. As a result of this, they end up losing friends or find it difficult to make friends.

A case in point: Hitler and Napoleon. Had they not been egoistic or arrogant, the world may have been different. Even today, conflicts play havoc in our relationships at home and outside.

The opposite of ego is humility. A humble person will avoid conflict of any manner. For him, avoiding a conflict and maintaining peace is much more valuable than having a temporary feeling of being superior. When there is no conflict, there is peace of mind, and therefore, better health. Humility also brings out an attractive personality.



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So, how does a person with an inflated ego develop humility?

There is only one way to do that: Surrendering the ego to God by realising that a superpower exists, which not only controls the earth, but also the whole universe. This thought can automatically subdue one's ego.

A humble person is more respected in society, he is more at peace with himself and his family, friends, colleagues, etc. His charming personality attracts others to him, and in my opinion he is likely to be more successful as a professional than an egoistic person. This in no way means that one surrenders one's self-respect. But by being an egoist, one loses respect in society. So, develop a personality that has no ego, and you will definitely live a better life.

*Source: Innervoice, Hindutans Times, 3.8.2015*

## **Humour**

Age is issue of mind over matter. If you don't mind, it doesn't matter.

**- Mark Twain**

I can calculate the motion of heavenly bodies, but not the madness of people.

**- Isaac Newton**

Success consists of going from failure to failure without loss of enthusiasm.

**- Winston Churchill**

A smile is the shortest distance between two people.

**- Victor Borge**

I find television very educating. Every time somebody turns on the set, I go into the other room and read a book.

**- Groucho Marx**