# NEWSLETERRE

**FEBRUARY 2013, ISSUE** 



## From the Chairman's Desk

### **Mercurial Valentine**

Mankind had love affair with elemental Mercury for more than 4000 years. More you go back in the history more this affair turns into curious obsession. The kings in China, Egypt and Mayacivilization after their death went down in their tombs with flowing mercury, which they thought to be next to gold- a water-silver or quicksilver.

In 18th century we began 'democratic honeymoon' with mercury when it started getting used all around by more and more people for their bodily needs. A bulb of mercury thermometer was put in mouth to measure the body temperature, doctors used it for the measurement for blood-pressure, mercury amalgams were used as dental filling, ladies used it to beautify eye-lashes, school going children had fun by flirting with it in the laboratory without being able to catch it or pinch it, in bit of an adult stage, the science students were mesmerized with its use as glowing-electrode in the laboratory, and later grown up engineeringstudents used in in the laboratory to learn how the electrical switches operate, the decorators were awed by its use in neon signs, environmentalists promoted the use of CFL lamps that had mercury, and the industrialists used it to manufacture omnipresent chemicals like Caustic Soda and chlorine.

For me too, as a Chemical Engineering student, it was easy to remember this element in the chemistry class. In periodic table it is 6th period, 12th group, atomic weight of 200 and atomic number of 80. All even numbers, easy to remember. Mercury was my favored element in Chemical Engineering education.

Our love affair had no end, till we sucked out almost all mercury as much we could estimated to be more than 350,000tons-from the mother-earth and out in the air, oceans and biosphere- and it is still there. And then came the shock in early 1950s. The love turned into hate. A crippling disease among Japanese was identified as the consequence of mercury compound drained in the Minamata Bay by the nearby industry through its effluent. Fish from the bay eaten by the Japanese, caused more than 1700 deaths, much more crippled for their whole life. The real number of affected people due to Minamata disease would probably never be known.

The world woke up to stark reality. More stories of mercury poisoning were revealed but official global action to ban the use of Mercury started 4 years back in 2009 i.e. 60 years after the incidence of Minamata disease.



It took 4 millennium for mankind to come out of its flirting with Mercury. The Convention-called Minamata Convention-brokered by UNEP in Geneva to control the production, trade and use of Mercury mankind's valentine-was agreed on 18th January 2013. It is not done yet. The ban is expected to be in force after 2020. History is mercurial, so also love affairs.

### **Guest Message**



#### Have A Green Earth

We are all concerned about the deteriorating natural environment due to a number of reasons. Thanks to the growing traffic on all roads, the air is getting polluted. The D. J. used in processions and festivals is increasing the noise pollution. Several builders encourage the cutting of big trees and construct the building even on the top of the hills. It is almost like the earth's daughter being gang raped by the greedy builders. This leads to environment getting adversely affected.

We must keep our earth clean. We must also keep our earth green. It is the duty of the enlightened citizens not only to protect the environment but also to spread the message of protecting environment in the minds of school students also so that they can understand the importance of our environment right from the beginning of their career.



**Rajendra Shende** Chairman, TERRE

Principal Dr. P. C. Shejwalkar Professor Emeritus of Commerce and Management Sciences, University of Pune



## **Quick Question**

What is the most common type of trash thrown away by <u>Americans?</u>



This year on Valentines day I did not use my petrol vehicle, the whole day I treid to save water and yes I planted a nice tree as gift of valentine's day to my valentine EARTH!

> Manav Jain Dedia, Mudra Arts photography and entertainment!

I have celebrated my valentine by dedicating, donating, contributin, cheerishing to my beloved city..n this is my message to everybody that Earth should be the first love of everybody.

Rahul Jaiswal,

#### Asteroid Predicted to Fly to Earth on Valentine's Day

Those sensitive people who waited for the end of the world last December but failed to see it now have a new reason to worry about. On February 15, DA14 asteroid will pass very close to Earth. The maximum close-up with Earth will be 28,000 km.

The coming asteroid flight raises concerns about the threat of asteroid and comet falling to the ground. Our planet keeps several traces of such disasters. This includes the meteor crater in Arizona, which diameter is more than 150 km, two giant craters at Yucatán peninsula and in Sahara desert. If DA14 asteroid ever clashes with Earth it will cause a serious damage, Vladimir Surdin, assistant professor of the astronomy department of the physics faculty at the Moscow State University says.

"This asteroid is 45 meters big, which is approximately the same size as the size of the of Tunguska meteorite which fell to Earth 100 years ago. The explosion of the Tunguska meteorite caused huge environmental damage to taiga forests. The area of forest fires was comparable to the area of modern Moscow. The fall of a celestial body which is dozens of meters big is dangerous if it happens over a densely populated area. It can be even more disastrous if it falls into the sea causing tsunami that seriously damage coastal areas."

possible to detect them only one day before they reach Earth. In 2010 such an asteroid exploded above a deserted area in Indonesia and the blast was



more powerful that the blast in Hiroshima. Scientists have started to create asteroid monitoring network, which will make it possible to detect dangerous falling objects two weeks before they hit Earth providing enough time for people evacuation from a dangerous area. Telescopes which are powerful enough to detect asteroids far from Earth do not exist but they are being built now, Vladimir Surdin says.

"At present several countries are joining efforts to build such telescopes and launch them to space. The problem is that we can't detect the asteroids and comets flying to Earth from the side of the Sun because the Sun blinds optical equipment. That is why it is necessary to launch telescopes to space to the area behind the Sun bringing them to the orbit which is on the opposite side of Earth orbit." raising funds for the project. The telescope will use infra-red band detecting asteroids using temperature difference between the surface of asteroids and the cosmic background. Nevertheless even stateof-the-art instruments won't remove threat of asteroid falling on Earth, Sergey Bogachev, senior researcher at the Institute of Physics of the Russian Academy of Sciences, says.

"Today scientists are working on different methods of control over the environment but such systems do not make it possible to prevent clashes of celestial objects with Earth. These are early warning systems but not prevention tools. So far humans can't prevent such clashes." As of today about twenty methods of fighting dangerous space objects have been invented. For example, in order to make an asteroid deviate from its Earth-targeted trajectory it is proposed to installing a rocket engine on its surface. It is also proposed to explode an asteroid at a safe distance from Earth . It is not excluded that scientists will have to apply one of the methods to DA14 asteroid, which orbit is now almost coincides with Earth orbit but its coordinates will significantly change when the asteroid closes our planet. The distance at which the asteroid passes Earth will define the probability of future clashes of celestial bodies with Earth.

Enterpreneur

I have started my valentine's day with four Protect, Preserve, Plan and Prosper...Not just for two of us but also for the future.

> Aneesh Phadnis, Journalist

Astronomers detected DA14 asteroid a year ago. They calculated that on February 15 asteroid's orbit won't cross the orbit of Earth. But when it comes to 10 meter celestial bodies it makes things much more difficult because it is

It is planned to bring the first telescope Sentinel into space between the orbits of Earth and Venus in 2018. At present a US private fund is

**USEOUSEO** 

'Since then the asteroid has passed by without 'touch' with the Earth.'

## Matt Damon strikes bum note at YouTube launch for water campaign



Renowned Hollywood star Matt Damon is going on strike ahead of the World Water Day! Not from acting, as you might be thinking. He has a striking reason for going on strike. Wondering what he is going to do? Sample this: Matt Damon recently had a press

conference. He at once gazed at this press conference of unusually well-groomed journalists & then suddenly made this 'striking' announcement. "I'm going on strike," he said, 'to protest lack of sanitation in developing countries.' "Not from acting, that would be too easy." He pauses. "A strike from going to go the bathroom." Interesting? ... Find more on the following link: http://www.guardian.co.uk/e nvironment/2013/feb/12/ma tt-damon-bathroom-strikeyoutube-water



#### Cryosat spots Arctic sea-ice loss in autumn

The decline in Arctic seaice cover has been in news for a while now. Various studies have corroborated the fact and the scientists are busy finding more data on the same. The decline is illustrated in a new data too. Europe's Cryosat mission, which uses radar to estimate the thickness of marine floes, has observed a deep reduction in the volume of ice during autumn months. For the years 2010-2012, this is down a third compared with data for 2003-2008. Read full text on: http://www.bbc.co.uk/ne

ws/science-environment-

21437680



#### Dear Earth,

#### Happy Valentine's Day.

You are valentine of every leaving things, I want you to know how much you mean to us, We could not walk without you, We could not breathe without you, The ocean is always fresh as it was yesterday We need to conserve it without delay, Your beauty stirs our heart again and again we 've never seen anything so beautiful as you, we need to prevent it anyway, you are our home, our support, our guide and our mother we are grateful for your unending love for us & promised to love you forever,



Vinitaa Apte (President, TERRE)

#### **TERRE Policy Centre**

7, Hemdatta Apartments, 38 Mrutyunjay Colony Kothrud, Pune - 411029 Pandit Ajgaokar Scheme, Khandobacha Mal, Bhugaon, Pune - 411042

For feedback, suggestions and contributions contact us at terrepolicycentre@gmail.com Www.terrepolicycentre.org Editor **NewsleTERRE:** Vinitaa Apte (President, TERRE)

**DECLARATION:** TERRE Policy Centre is a non-profit organization and this NewsleTERRE is a purely informative and non-commercial activity of TERRE Policy Centre. The source of information is always credited, where applicable.