Enviro Monitor
September 2015

Trending topics

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- India unveils climate target to cut carbon intensity
- Climate change to intensify dengue outbreaks
- Maharashtra's first climate study centre to come up in Aurangabad
- Sony, Microsoft, Adidas back new UN emission offset initiative

Air quality

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- Delhi will record world's largest number of premature deaths due to air pollution
- Air in Mumbai has more SO_2 & ammonia now than three years ago
- Construction activity has direct correlation with particulate matter concentration

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- Environment Ministry notifies new draft for conservation of Western Ghats
- Maharashtra sets up foundation to protect mangroves

Mining

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- Sand mining allowed at 24 clusters
- Centre rolls out welfare scheme for mining-hit people
- Meghalaya submits draft mining guidelines to NGT

Smart cities

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CSR

- Energy sector is the highest spender on CSR
- Maharashtra emerges as CSR hub
- Education, poverty eradication draw most firms' CSR funds
- Corporate shirking responsibility
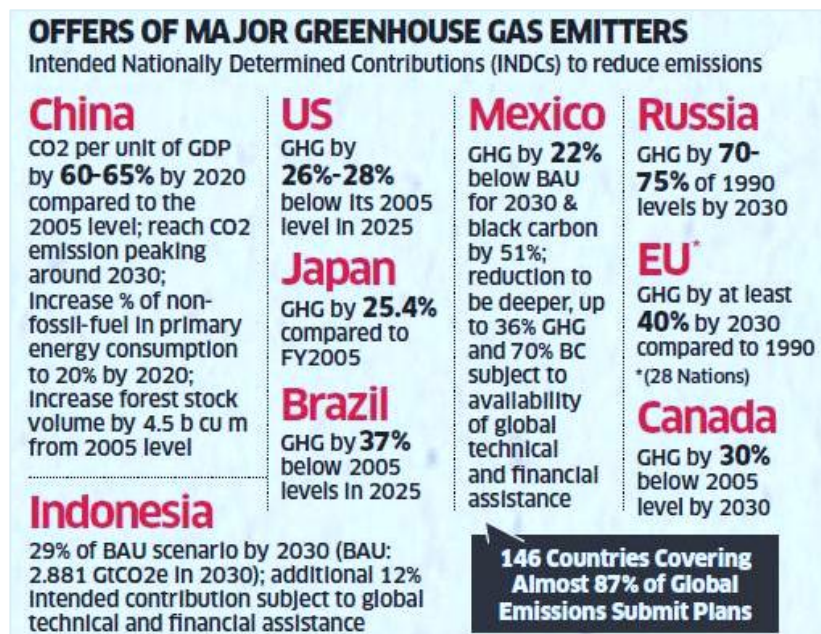- Programme to demonstrate how companies can integrate CSR into the business

Climate change

India unveils climate target to cut carbon intensity. India has promised to make its economy more energy efficient and cut the carbon produced per unit of GDP growth by 33-35% by 2030 from 2005 levels in a climate-change policy statement released ahead of a UN summit in Paris in December. India would target 40% cumulative installed power capacity from non-fossil fuel sources by 2030, though this would require UN financial support. The pledges, submitted to the United Nations, were broadly in line with expectations, given emerging economies such as India have resisted setting specific targets to cut emissions.

- India pledges 33-35% cut in carbon intensity by 2030
- No "peak emissions" target or carbon market pledges
- Coal set to continue dominating power sector in future

Some of the new initiatives that would be launched to achieve India's targets set under Intended Nationally Determined Contributions (INDCs) include introduction of new, more efficient and cleaner technologies in thermal power generation; promotion of renewable energy generation and increasing the share of alternative fuels in the overall fuel mix; reducing emissions from the transportation sector and waste; promotion of energy efficiency in the economy, notably in industry, transportation, buildings and appliances; development of climate-resilient infrastructure; and full implementation of the Green India Mission and other afforestation schemes.

OFFERS OF MAJOR GREENHOUSE GAS EMITTERS
Intended Nationally Determined Contributions (INDCs) to reduce emissions

China
CO2 per unit of GDP by **60-65%** by 2020 compared to the 2005 level; reach CO2 emission peaking around 2030; increase % of non-fossil-fuel in primary energy consumption to 20% by 2020; increase forest stock volume by 4.5 b cu m from 2005 level

US
GHG by **26%-28%** below its 2005 level in 2025

Japan
GHG by **25.4%** compared to FY2005

Brazil
GHG by **37%** below 2005 levels in 2025

Mexico
GHG by **22%** below BAU for 2030 & black carbon by 51%; reduction to be deeper, up to 36% GHG and 70% BC subject to availability of global technical and financial assistance

Russia
GHG by **70-75%** of 1990 levels by 2030

EU*
GHG by at least **40%** by 2030 compared to 1990
*(28 Nations)

Canada
GHG by **30%** below 2005 level by 2030

Indonesia
29% of BAU scenario by 2030 (BAU: 2.881 GtCO2e in 2030); additional 12% intended contribution subject to global technical and financial assistance

146 Countries Covering Almost 87% of Global Emissions Submit Plans

Source. The Economic Times, 3 October 2015

Climate change to intensify dengue outbreaks. Dengue has already killed at least 17 people in the capital; hundreds more have contracted it. Experts say this is an example of how climate variability-fluctuations in weather patterns-might accentuate certain disease outbreaks in the future. Scientists at National Institute of Malaria Research as well as municipal health officials have found a direct link between a long humid season and the span of the disease season. A prolonged monsoon with intermittent rains made it ideal for *Aedes aegypti* mosquitoes to breed and transmit the virus for a longer time, they said. It has also been seen that the transmission window of dengue is extending over the years.

Sri Lanka's rising dengue incidence, over the last six years, is being attributed by officials to erratic patterns of monsoon rainfall and temperature rise. Research done at the University of Peradeniya and published in 2014 in the International Journal of Infectious Diseases had warned that "climate (temperature, rainfall, and humidity) change due to global warming can expand the geographical range of vector mosquitoes, extend the disease transmission season, shorten the gonotrophic cycle, and reduce the time taken for ingested viruses to develop to infective stages in mosquitoes, thereby increasing the propagation rates of arboviral diseases transmitted."

Maharashtra's first climate study centre to come up in Aurangabad. Reeling under crippling water scarcity, Maharashtra has decided to set up the state's first climate change study centre. The idea of a centre was prompted by the successive weather eccentricities that the state has suffered in consecutive years --- drought, excess rainfall, hailstorms and drought again. The centre will be set up in Aurangabad, the heart of the state's driest and the most drought-prone region of Marathwada.

Sony, Microsoft, Adidas back new UN emission offset initiative. The UN has launched a major new initiative designed to get businesses and consumers to voluntarily become 'climate neutral'. The Climate

Neutral Now scheme encourages individuals, companies and governments to measure their climate footprint, reduce emissions where possible, and offset the remainder through a UN-certified website. Several high-profile businesses have pledged their support for the scheme, including Microsoft, Sony, Adidas and Marks & Spencer's. The initiative includes a new online platform that anyone can use which makes it easy to quickly select from a range of UN verified emissions reductions for offsetting. It also links to organisations that can provide businesses with climate footprint measurement and reduction advice and support. All of the projects providing offsets through the online platform contribute to sustainable development in the developing world as well as reducing global emissions.

SciDev.Net, 12 September 2015 | The Times of India, 26 September 2015 | Edie, 23 September | UNFCCC Press Release, 23 September | Hindustan Times, 28 September | The Hindu, 2 October 2015 | Mint, 3 October 2015 | The Economic Times, 3 October 2015

Air quality

Deteriorating air quality triggers cases of acute respiratory infections in the country. According to the National Health Profile 2015 published by the Central Bureau of Health Intelligence, around 3000 people have died due to acute respiratory infections in 2014. While 3,48,14,636 ARI cases were reported in 2014, 3,34,23,107 cases were reported across the country in 2013.

Delhi will record world's largest number of premature deaths due to air pollution. According to study published in Nature, Delhi had the world's second highest number of deaths caused by air pollution and, in the absence of adequate measures to combat it, the city may continue to be among the top three air polluted cities till 2050.

In another 10 years, Delhi will record the world's largest number of premature deaths due to air pollution among all mega cities in the world. By 2025, nearly 32,000 people in Delhi will die solely due to inhaling polluted

Higher levels of air pollution may also increase risk of Alzheimer's disease in those who carry a gene associated with the debilitating brain disorder, suggests new research published in the Journal of Alzheimer's Disease.

air. Kolkata will record the highest number of such deaths by 2050. Kolkata will see its number of premature deaths spike between 2025 and 2050 and will record 54,800 deaths due to air pollution -- more than Delhi which will record 52,000 deaths and Mumbai with 33100 deaths during the same year. Together, these three Indian cities topped the list of premature deaths due to harmful particles like PM2.5 and O3 in the air.

Exposure to air pollution is particularly acute in Asia, especially in China and India, where three-quarters of the world's pollution-related deaths occur. The team headed by Prof Johannes Lelieveld, Director at the Max Planck Institute for Chemistry, reported that 1.4 million people per year in China and 650,000 people in India die every year as a consequence of air pollution. Annually, 3.3 million people worldwide die prematurely from the effects of air pollution. This number will double by 2050 to 6.6 million if

emissions continue to rise, according to the study. In 2010, 75% of the premature mortality by air pollution occurred in Asia - with 1.4 million people/year in China and 650,000 people dying every year in India. Pakistan recorded the third highest number of deaths due to air pollution in 2010 - 1.10 lakh followed by Bangladesh (91923), Nigeria (89022) and Russia (67152).

NUMBER OF DEATHS DUE TO AIR POLLUTION

INDIAN CITIES

	2010	2025	2050
DELHI	19700	31100	52000
MUMBAI	10200	17400	33100
KOLKATA	13500	26600	54800

INTERNATIONAL CITIES

	2010	2025	2050
LONDON	2800	3400	4200
PARIS	3100	3800	4600
MOSCOW	8600	10800	11700
ISTANBUL	5600	8500	13200
KARACHI	7300	11400	17900
DHAKA	13100	26400	49900
BEIJING	13700	17300	17700
SHANGHAI	14900	18900	19400
LOS ANGELES	4100	5200	7000
NEW YORK	3200	4200	5200

Premature mortality by PM2.5 and O3 related diseases in 2010 in countries

WORST COUNTRIES

COUNTRY	DEATHS IN 2010
CHINA	1357353
INDIA	644993
PAKISTAN	110571
BANGLADESH	91923
NIGERIA	89023
RUSSIA	67152
USA	54905

Source. The Times of India, 17 September 2015

In an email interview with the Economic Times, Prof Lielieved explains his study in detail.

Air in Mumbai has more SO₂ and ammonia now than three years ago. Data from the Brihanmumbai Municipal Corporation's yet-to-be-released *Environment Status Report 2014-15* indicates that suspended particulate matter, ammonia and sulphur dioxide (SO_2) levels have gone up at varied pace in different localities across the city since 2012-13. Air pollution levels were monitored at three traffic junctions in the city—Worli, Wadala and Andheri.

Stations	2012-13	2013-14	2014-15	Permissible Level
Particulate Matter 10 (PM10)				
Worli	148	150	148	
Wadala	169	161	194	$60 \ ug/m^3$
Andheri	150	95	190	
Particulate Matter 2.5 (PM2.5)				
Worli	59	68	52	
Wadala	61	50	56	$40 \ ug/m^3$
Andheri	84	46	80	
Nitrogen Dioxide (NO_2)				
Worli	89	44	45	
Wadala	72	161	50	$40 \ ug/m^{3}*$
Andheri	89	59	62	
Ammonia				
Worli	38	41	43	
Wadala	39	50	51	$100 \ ug/m^3$
Andheri	33	44	45	
Sulphur Dioxide (SO_2)				
Worli	4	11	13	
Wadala	4	12	15	$50 \ ug/m^3$
Andheri	5	8	13	

Source. The Times of India, 26 August 2015

The report shows the NO_2 level in Worli, for instance, increased from 44 ug/m3 (micrograms per cubic metre of air) in 2013-14 to 45 ug/m3 in 2014-15—above the permissible standard of 40 ug/m3. Then, particulate matter 10 (PM10) at Wadala junction increased from 161 ug/m3 to 194 ug/m3 during the period—way higher than the limit of 60 ug/m3.

Construction activity has direct correlation with particulate matter concentration. A soon to be released study funded by the Mumbai Metropolitan Region Development Authority's Environment Improvement Society has found that construction activity emissions are in direct correlation with the overall concentration of particulate matter, irrespective of the number of vehicles. The Environment Policy and Research India team has monitored air pollution in Wadala, Thane, Panjrapol and Parel where the monorail, a bridge and heavy residential construction had been underway in 2014. Ambedkar Road in Parel is one of the city roads that currently sees maximum construction activity. The team found that in the pre-monsoon season daily average of PM levels was 535 microgrammes per cubic metre, almost five times the acceptable standard, and unloading of materials, digging, excavation and demolition activity were found to be the main causes of high pollution in all the spots.

The Times of India, 26 August 2015 | The Independent, 16 September 2015 | The Times of India, 17 September 2015 | The Economic Times, 21 September 2015 | Indian Express, 22 September 2015

Biodiversity conservation

International biodiversity projects in Maharashtra. The National Biodiversity Authority, a statutory body under the Ministry of Environment, Forest and Climate Change, will implement two international projects in Maharashtra soon. One of the two global projects to be implemented in the state includes Biodiversity Finance Initiative (BIOFIN) by United Nations Development Programme. The three-year project will be a pilot initiative and later implemented in other states. It will be implemented in Chandrapur and Sindhudurg districts of Maharashtra. Another project will be about sensitizing and making people aware about biodiversity conservation. It will be implemented with the help of GIZ. The GIZ project will be launched in states like Maharashtra, Tamil Nadu and Uttarakhand.

BIOFIN focuses on providing tools and methodological framework for measuring expenditure on biodiversity, which the countries may choose to use in their efforts to mobilize resources required for achieving the global and national biodiversity targets. So far, 19 countries are implementing the project.

Environment Ministry notifies new draft for conservation of Western Ghats. The Environment Ministry has notified the draft related to the implementation of recommendations by the Kasturirangan Committee for the conservation of the Western Ghats. The new draft seeks to clarify these provisions and dispel apprehensions and concerns raised by the stakeholders with respect to provisions of the draft Notification and the concept of Ecologically Sensitive Area. As per the latest notification, the extent of ecologically sensitive area and the other provisions stated in the earlier draft notification remain unchanged pending the finalisation of proposals from the State Governments of demarcation of Ecologically Sensitive Area by physical verification.

The Centre has notified 17,340 sq km of the Western Ghats in Maharashtra as ecologically sensitive area. The stretch is part of the 56,825 sq km spread over six states —Gujarat, Maharashtra, Goa, Karnataka, Kerala and Tamil Nadu. According to the gazette notification, the onus of monitoring and enforcing restrictions in the ecologically sensitive areas has been placed on the respective states. The Ministry will also set up a monitoring centre for the Western Ghats.

Maharashtra sets up foundation to protect mangroves. In order to conserve coastal and marine biodiversity and improve livelihoods of coastal communities, Maharashtra government has established a Mangrove and Marine Biodiversity Conservation Foundation. The management, supervision and control of the Foundation will vest in its board of governors that will have chief minister as patron. Its headquarters will be in Mumbai. Over 3% of the project cost of Navi Mumbai international airport, amounting to Rs 115.71 crores, transferred to forest department as per the direction of the National Board for Wildlife will form the corpus for the Foundation.

The Times of India, 31 August 2015 | The Pioneer, 10 September 2015 | The Times of India, 11 September 2015 | The Times of India, 28 September 2015

Mining

Centre issues guidelines on sustainable sand mining. Seeking to strike a balance between construction needs and environmental concerns while allowing sand mining in states, the Union environment ministry has come out with [Guidelines on sustainable sand mining](#) in the country and proposed strict monitoring and crackdown against illegal mining that has been rampant in many states. The draft guidelines, which will help states in devising fresh monitoring mechanism, also suggest increasing penalty against the illegal miners which may include confiscation of vehicles carrying illegally mined sand, recovering huge amount (five to 10 times of the market value of the seized minerals) and seizures of all the equipment or machineries involved in mining in non-leased areas.

The National Green Tribunal (NGT) has pulled up the Maharashtra state environment department for failing to ensure compliance of environment clearance conditions for sand mining in Maharashtra. The

NGT has directed the Environment Ministry not to grant environmental clearance for sand mining in the rivers of north India till September 1 each year and not during the rainy season.

NGT's western region bench in Pune has directed authorities to take strict action, including arrest, confiscation of vessels' licences and use of armed police, against illegal sand miners in Goa.

Taking a serious note of the illegal sand mining operations in the twin states of Telangana and Andhra Pradesh, a division bench of the Hyderabad High Court has directed the states to file counter affidavits.

Sand mining allowed at 24 clusters. The Goa state environment impact assessment authority on Tuesday granted environmental clearance to district collectors of North and South Goa, permitting manual sand extraction by traditional methods in 24 clusters (both riverine and estuarine) in the state. This will bring relief to stakeholders of sand extraction businesses including consumers as the construction industry was hit badly due to the ban on sand extraction. The authority permitted non-mechanized sand extraction using traditional methods in 14 clusters in North Goa and 10 clusters in South Goa, rejecting extraction in two riverine clusters in South Goa, at Pilliem village in Khandepar, Dharbandora and in Shirvoi village in Quepem, along Kushawati River.

Centre rolls out welfare scheme for mining-hit people. The Central Government has announced the launch of the Pradhan Mantri Khanij Kshetra Kalyan Yojana.

The programme is meant to provide for the welfare of areas and people affected by mining related operations, using the funds generated by District Mineral Foundations.

The objectives of the scheme will be:
- to implement various developmental and welfare programmes in mining affected areas that complement the existing ongoing schemes/projects of State and Central Government
- to minimize/mitigate the adverse impacts, during and after mining, on the environment, health and socio-economics of people in mining districts

Meghalaya submits draft mining guidelines to NGT. The Meghalaya government on Tuesday submitted draft mining guidelines for coal mining activities in the state to the NGT following the interim ban on coal mining since April 2014 in the state.

The Times of India, 10 September 2015 | The Asian Age, 10 September 2015 | The Times of India, 16 September 2015 | Press Information Bureau, 17 September 2015 | New Kerala, 29 September 2015

Smart cities

Climate-smart cities could save the world $22 trillion, say economists. Research from the New Climate Economy finds that investing in public and low emission transport, building efficiency, and waste management in cities could generate savings with a current value of US$17 trillion by 2050. These low-carbon investments could also reduce greenhouse gas emissions by 3.7 Gt CO2e per year by 2030. Investing in public transport would make the biggest immediate difference, the report found. Green building standards could cut electricity use, reduce heat island effects, and reduce demand for water. In waste management, biogas from waste could be harnessed as fuel to provide electricity to communities, as was already being done by Lagos in Nigeria and other cities.

Some countries, such as China and India, are already recognising the critical role of cities in driving economic development, and are prioritising urban planning and investment in their national development strategies. Cities around the world are piloting innovative systems to make financial frameworks greener and unlock investment for low-carbon options. Johannesburg, South Africa, and Gothenburg, Sweden, have issued green bonds to fund low-carbon infrastructure; Hyderabad, India, and Edinburgh, UK, are trialling tax increment financing to capture land value improvements from public infrastructure investments.

India's smart cities aligned with UN Sustainable Development Goals. With the announcement of 98 aspirants for India's smart cities and the government incorporating sustainability as a key component of the project, global consulting firm PricewaterhouseCoopers (PwC) feels "the pillars of a smart sustainable city" are completely aligned with the proposed UN's Sustainable Development Goals (SDGs). The SDGs, that will define the global sustainable development agenda post-2015, are a proposed set of global development targets to be adopted by governments around the world.

The closer the integration of sustainability into India's '100 Smart Cities' initiative, the greater will be the linkages with the SDGs, PwC said in the report titled Making cities smart and sustainable.

UK experts preparing roadmap for New Town's smart city project. A team from London-based urban planning organisation Future Cities Catapult has started work with the West Bengal Housing Infrastructure Development Corporation and New Town Kolkata Development Authority.

JICA to develop Ponneri City in Chennai. Japan International Cooperation Agency (JAICA) has prepared a master plan for the development of Ponneri city near Chennai, spread across 22,000 acres of land, at a total cost of INR 32,713 crore. As per the master plan document, the city will have a population of four lakh and a working population of 8.88 lakh by 2025. It would be developed in three phases. The agency plans to develop Ponneri as an engineering hub for automobile and machinery units.

Tata Projects eyes smart cities opportunity. Tata Group company Tata Projects Limited has created a dedicated division to tap the opportunities expected to be generated by the Smart Cities initiative.

The Guardian, 8 September 2015 | Press release, New Carbon Economy, 8 September 2015 | Business Standard, 20 September 2015 | The Economic Times, 29 September 2015 | The Economic Times, 30 September 2015

Energy sector is the highest spender on CSR. Energy companies spent the highest on corporate social responsibility (CSR) initiatives in the year ended 31 March 2015, the first year after rules were implemented requiring companies to spend 2% of their net profit on social development. The energy sector was followed by financial services and IT when it came to firms that committed to CSR, according to data collected from the annual reports of 85 publicly traded companies by NextGen, a CSR management firm. The energy sector focused on initiatives around hunger, poverty, preventive health care, sanitation and safe drinking water, spending Rs 913 crore on this. With oil and gas companies being among the largest corporations in India by revenue and profit, they emerged as the highest spenders.
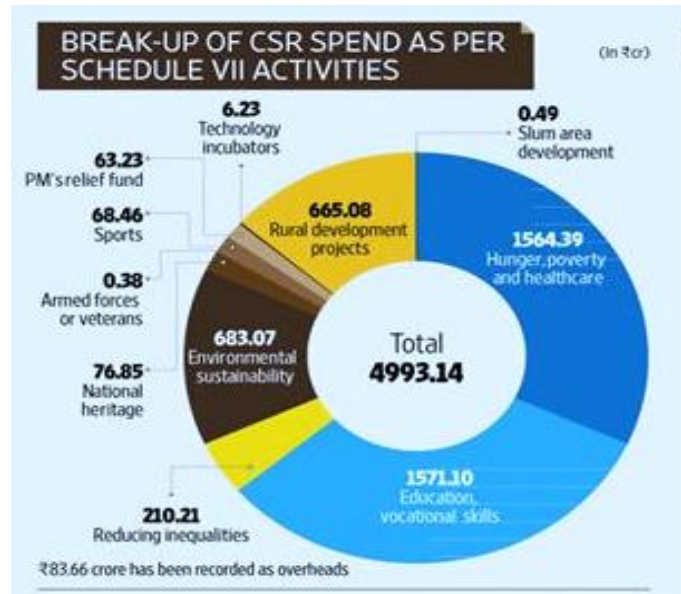

Source. Mint, 24 September 2015

Maharashtra emerges as CSR hub. Maharashtra emerged as the biggest beneficiary in the first year of mandated CSR under the Companies Act, 2013, with at least Rs 677.56 crore being spent by 53 of the 85 National Stock Exchange (NSE)-listed companies surveyed by NextGen. The strong presence of manufacturing facilities across the state, in addition to much of corporate India having Mumbai as their headquarters, has resulted in more than 50% of the top 100 companies by market capitalisation on NSE deploying their CSR spends in Maharashtra in one way or the other.

Data analysis by NextGen, based on the reports of companies, showed that CSR capital is concentrated in developed states with a strong manufacturing presence such as Maharashtra, Tamil Nadu, Gujarat,

Andhra Pradesh, Rajasthan and Karnataka. These states are also among those with the highest gross state domestic product. Another reason for these states being favoured by companies is because of the vast network of NGOs that work in them.

Education, poverty eradication draw most firms' CSR funds. The government's efforts to reduce illiteracy, poverty and environmental damage have received a shot in the arm with companies focusing their CSR spending on similar activities. Promoting education and eradicating poverty received the maximum funds in the year ended 31 March 2015, according to the annual reports of the top companies by market capitalisation on the National Stock Exchange of India as analysed by NextGen. The analysis of the 85 companies shows the favoured activities are promoting education, which received money from 80 companies; eradication of poverty and hunger, which came a close second with 79 companies; and ensuring environmental sustainability received funds from 57 firms.

Source. Mint, 24 September 2015

Corporate shirking responsibility? Indian corporates have been slow to warm up to new rules on CSR spending with only 14 Nifty companies managing to spend the mandatory 2% of net profit towards social causes in FY15. A study of annual reports of Nifty companies by ET Intelligence Group showed that 48 companies spent a combined Rs 4252 crore during FY15. This is 1.6% of the standalone net profit earned by Nifty companies for FY15.

Programme to demonstrate how companies can integrate CSR into the business. Harvard Business School will host a new executive education program this year, *Corporate Social Responsibility - India*, beginning 26 October 2015 in Mumbai. In this programme participants will discover new ways to think about CSR, along with best practices for CSR strategy development and tactics for truly effective implementation. Through two workshop-based classroom sessions and a period of individual work, participants will develop new ways of approaching CSR and create a corporate social responsibility strategy that enables their organization to meet its CSR requirements—along with broader goals for creating social value.

India Education Diary, 31 August 2015 | Mint, 23 September 2015 | Mint,- 24 September 2015 | The Economic Times, 30 September 2015