

15 FEBRUARY 2019

1. Wasted effort: half of India's waste-to-energy plants defunct

Nearly half of India's waste-to-energy (WTE) plants, meant to convert non-biodegradable waste, are defunct. Further, the country's inability to segregate waste has resulted in even the existing plants working below capacity.

Since 1987, 15 WTE plants have been set up across the country. However, seven of these plants have shut down.

Key Reasons

The key reasons for closure are the plants' inability to handle mixed solid waste and the high cost of electricity generated by them that renders it unattractive to power companies.

However, this track record has not stopped the government from betting big on WTE.

The NITI Aayog, as part of the Swachh Bharat Mission, envisages 800 megawatt from WTE plants by 2018-19, which is 10 times the capacity of all the existing WTE plants put together.



Waste – to – Energy:

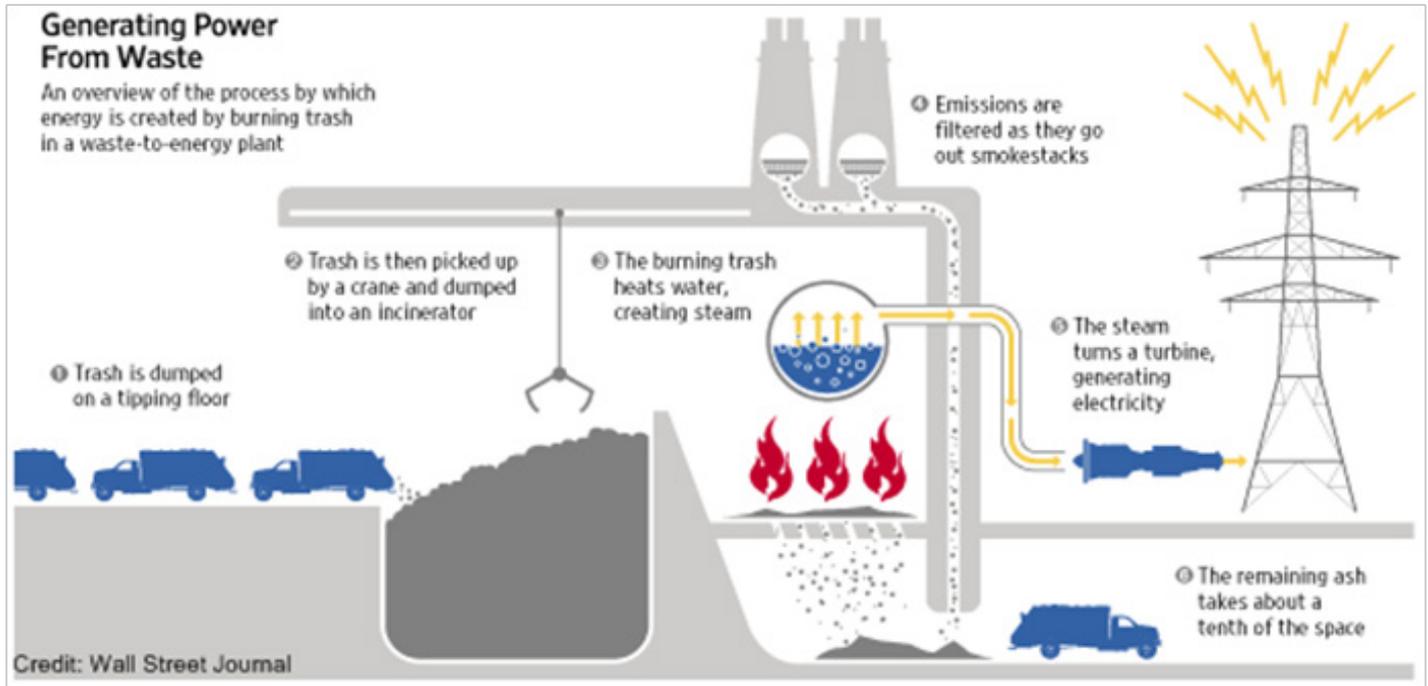
- Waste-to-Energy (WTE) technology utilizes Municipal Solid Waste (MSW) to create electric and heat energy through various complex conversion methods.
- WTE technology provides an alternative source of renewable energy in a world with limited or challenged fossil reserves.
- MSW is considered a source of renewable energy because it contains a large amount of biological and renewable materials,
- There is a significant excess supply of MSW (primarily in landfills) around the globe.
- The demand for MSW as a fuel source has increased.
- The most common conversion method of MSW to energy is combustion and although it is currently entrenched in the market, there are three emerging technologies moving toward the forefront:
 - Biological treatment method via anaerobic digestion: Anaerobic digestion is a waste-to-fuel application; waste can be converted into purified biogas which can then be used to power gas engines or turbines to create heat or electricity. The biogas can also be purified and compressed to be used as vehicle fuel.
 - Thermal treatment methods that yield energy in the form of heat and electricity include combustion, gasification, and pyrolysis.
 - Pyrolysis used in the production of cellulosic ethanol – there are multiple facilities in the pilot and commercialization stages.

Note



How it works?

Combustion is currently the primary method of converting waste to energy.



Conversion Technologies:

Incineration:

- Incineration of waste is the most prevalent form of converting MSW to energy.
- The waste is combusted, and the heat or biogas created is harnessed and either distributed as heat or converted into another form of useful energy i.e. steam or electricity.

Combustion:

- Combustion processes are classified as mass burn combustion, where waste is not pre-sorted, or RDF combustion, a more costly process where recyclable materials are sorted from the rest of the waste.
- This process is also known as the Solid Recovered Fuel (SRF) combustion process.

Gasification:

- Another thermal treatment process is gasification, which is effective in minimizing air pollutants.
- Gasification occurs in the presence of limited oxygen and generates a synthetic gas to be used in a heat and electricity producing gas turbine.

Pyrolysis:

- It is a thermo-chemical process that produces syngas, and most recently cellulosic ethanol.

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Anaerobic digestion:

- Anaerobic digestion is a form of biological treatment where organic material is treated and the output biogas is rich in methane.
- The biogas can be cleaned and used, turned into heat and electricity, or used for methane.

Criticism in Indian Context

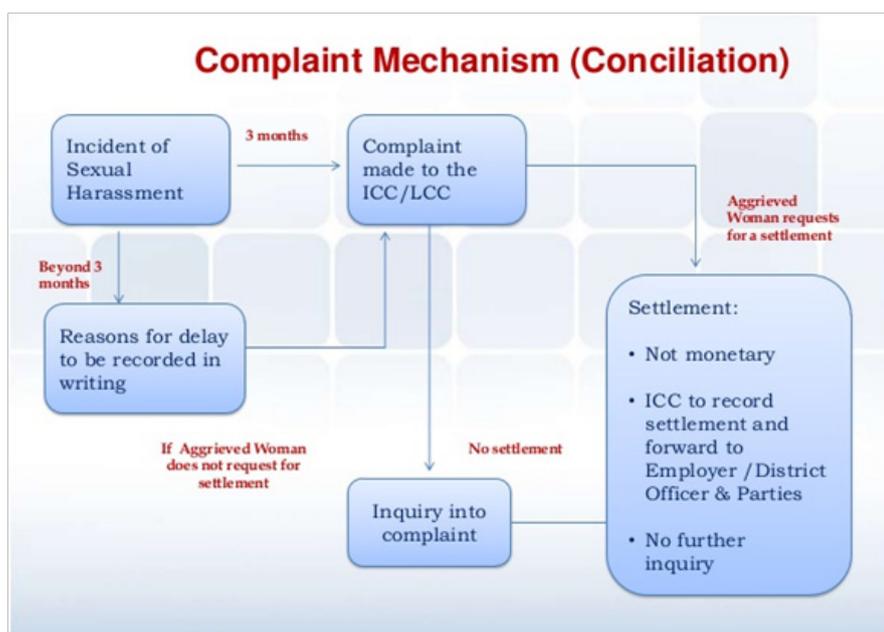
The NITI Aayog’s backing to WtE Technologies is not very much appreciated due to following reasons:

- There are funding issues for the new energy plant suggested by the Aayog.
- When WtE Plants in cities use un-segregated waste to generate electricity, they emit harmful toxic gases into air as by-product which will lead to more air pollution and other complications.
- India does not have adequate and effective mechanisms for monitoring gas emissions and such emissions from WtE plants will make things tougher.
- There is need to segregate dry solid waste from wet solid waste at the source of waste generation.
- The solid waste in India is of high moisture content and low calorific value (800-1000 kcal per kg) which is very less than what is required (2000 kcal per kg) for WtE Plants to work effectively.
- According to the study of UNEP in 2009, India’s informal recycling sector only collects dry waste with high calorific material leaving moisture residue with high green waste content which is not suitable for production of combustible “fluff” without considerable pre-treatment.

2. CCTVs will join the fight to curb lecherous babus

Justice of Madras High Court issued a “strong recommendation” to the Chief Secretary of the Tamil Nadu government to install closed circuit television (CCTV) cameras inside the official chambers of all bureaucrats. This would avoid allegations of sexual harassment and safeguard the interest of women employees.

Quoting Mahatma Gandhi, who reportedly



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said, “an ounce of practice is worth more than tons of preaching,” Justice Subramaniam also issued a directive to the High Court administration to first install a CCTV camera inside his own chambers within two weeks. The judge pointed out that the police department was promoting



CCTV cameras in public places as well as private properties to curb crime. “This being the preaching of the police department to the citizen at large of this great nation, what about the offenders and black sheep in the police offices, chambers and office rooms of the higher officials? What measures are taken to nab such offenders inside the police department and other public offices and institutions?”

Exam Prespect:

- VishakhaJudgement (Vishakha vs. state of Rajasthan – 1987)
- Definition of Sexual Harassment as defined by the court
- Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013

3. 37 CRPF men killed in J&K suicide attack

At least 37 CRPF personnel were killed when a convoy in which they were travelling was attacked by a Jaish-e-Mohammed (JeM) suicide bomber, who rammed his explosives-laden vehicle into one of the convoy’s buses near Awantipora on the Srinagar-Jammu highway.

The bombing in Awantipora’sLethpora area in Pulwama district also left at least eight troops critically injured and was the deadliest attack in terms of casualties in the last three decades of militancy in the State.

The Jaish-e-Muhammad (JeM) militant outfit, with a cadre strength of zero in 2015 and six in 2016, is regrouping in Kashmir again and has carried more attacks on the security forces than the Lashkar-e-Taiba (LeT) and the Hizbul-Mujahideen (HM)outfits in the past two months.

In a “desperate bid” to take centre stage, The JeM has carried out around 10 grenade attacks, with four grenades

Spreading terror
Some big suicide attacks carried out by JeM in Jammu and Kashmir since 1999

- Nov. 1, 1999:** JeM carry out first Pulwama attack by recruiting a local boy, Afzal Ahmad Shah. Six security personnel are killed.
- Oct. 1, 2001:** Three JeM militants attack the Legislative Assembly complex in Srinagar. 28 persons are killed.
- Dec. 5, 2014:** JeM's Guru squad carries out attack on the Mithra camp in Uri near the Line of Control. Seventeen killed, including 11 security personnel.
- Jan. 2, 2016:** JeM militants target the Pecherhat. Three security personnel are killed.
- Nov. 26, 2016:** JeM militants attack the Nagrota Army camp. Ten soldiers are killed.
- Aug. 26, 2017:** Three Jash terrorists strike the District Police Lines, Pulwama. Eight security personnel are killed and assistants are shot dead.
- Dec. 30, 2017:** Pulwama target the District Police Lines in Pulwama once again. The CRPF personnel are killed.
- Feb. 10, 2019:** JeM carries out a Pulwama attack on the Srinagar-Jammu highway. At least 27 security personnel are killed.
- July 14, 2019:** Militants attack the District Police Lines in Pulwama. 8 security personnel are killed.
- February 14, 2019:** A blast rips through a bus carrying CRPF personnel near Pulwama on the Srinagar-Jammu highway. At least 27 security personnel are killed.

Injured CRPF personnel being rushed to a hospital on Thursday.

triggered in capital Srinagar this year so far, according to the police report. The attacks left around 20 security personnel injured. The JeM attacks come at a time when the LeT and the HM’s abilities were “heavily dented” with the killing of around 20 militants in the past two months by the security forces in back-to-back operations.

Eight JeM militants have also been killed between December 30, 2018 and February 1, 2019, out of 19 killed for the same period. “Of the eight killed, only two were foreigners and the others were local recruits from JeM old axis of Tral-Awantipora-Pulwama in south Kashmir.

Close Third

According to the police data, the JeM has emerged as a close third in

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2019 with its ranks swelling to over 60 local recruits compared to 100-plus recruits of the LeT and the Hizb each.

The outfit attempted a major comeback in October last year when it introduced high-calibre M4 carbine for sensational attacks in Srinagar and Pulwama, killing three security personnel.

Top police officers in Srinagar suggest that in post-BurhanWani killing situation, the JeM started recruiting young boys in 2017 from massive rallies carried out in south Kashmir in favour of slain militants. Otherwise, in 2015, AdilPathan, a resident of Pakistan, and his associate, Abdul Rehman alias ChotaBurmi, were the last active militants killed in Pulwama'sTral.

The JeM introduced first ever fidayeen or suicide attack in Jammu and Kashmir on November 3, 1999, when a Srinagar boy, Afad Ahmad Shah, along with another militant, drove an improvised explosive device-laden car into the Badamibagh Cantonment in Srinagar, killing six security personnel.

The JeM and the LeT are jockeying for power among the militant groups and use more ferocious attacks to take centre stage and recruit more locals.

Exam Prespect:

- Insurgency issues in Kashmir
- Government Initiatives in Kashmir valley to contain the unrest situation
- National Highways in Kashmir
- Uri – The Surgical Strike

4. Olive Ridley conservation zones planned along the coastline

In a bid to ensure the safety of turtles during nesting and hatching seasons, there are plans to set up turtle conservation zones along the coastline between December and April every year.

About Olive Ridley Turtles

- Olive Ridley turtle is the smallest and most abundant of all sea turtle found in the world.
- It gets its name from its olive coloured carapace, which is heart-shaped and rounded.
- It is found in warm waters of the Pacific and Indian oceans.
- It spends entire lives in the ocean and migrates thousands of kilometres between feeding and mating grounds in the course of a year.
- It is classified as Vulnerable in IUCN Red List and is listed in Appendix I of CITES
- Conservation of Olive Ridley turtles is done in the Krishna Wildlife Sanctuary (KWS),Andhra Pradesh.
- Members of the Yanadi tribe are directly involved in the conservation bid.
- They are best known for their behaviour of synchronized nesting in mass numbers.

Breeding Season:

- It commences its journey from Indian Ocean towards Bay of Bengal during their mating season in October and November every year.
- A single female can lay up to 100 to 150 eggs in a pit dug on the beaches.
- Six weeks later these eggs hatches and the newly hatched turtles start the

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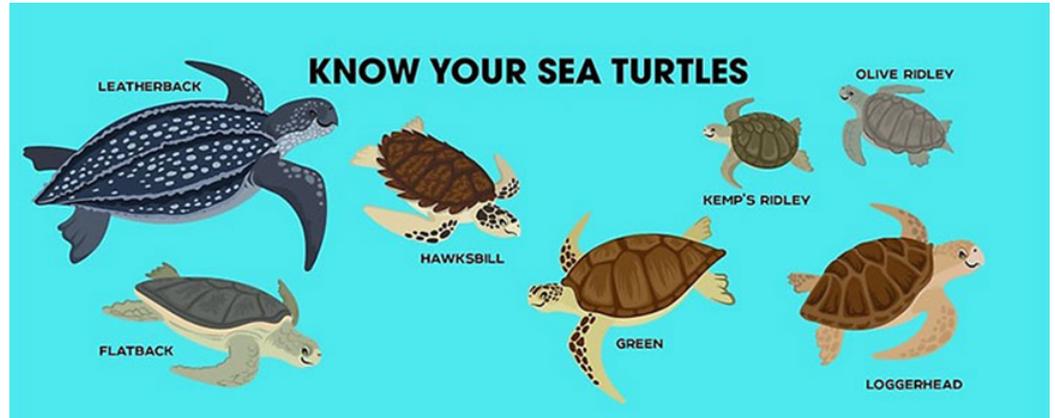


journey to their Indian Ocean habitat.

- The destination for majority of the turtles for laying egg is Gahirmatha in Odisha.
- The sandy stretches of Hope Island of the Coringa Wildlife Sanctuary also have turned into a breeding area.

Exam Prespect:

- Gahirmatha Beach
- Coringa Wildlife Sanctuary
- Yanadi tribe
- Krishna Wildlife Sanctuary
- Other Turtle Varieties



5. Centre hikes minimum price of sugar to Rs. 31/Kg.

In a bid to help sugar mills clear their mounting arrears to cane farmers, the Centre has hiked the minimum sale price of refined sugar by mills from Rs. 29 to Rs. 31 per kg.

Minimum support price

Minimum Support Prices is the price at which government purchases crops from the farmers irrespective of the market price. The objective of the scheme is to check fall of prices of farm produce below certain level and thus support the farmers.

MSP Fixation:

Government fixes MSPs of various kharif and rabi crops every year

- On the recommendations of Commission for Agricultural Costs & Prices (CACP),
- Views of concerned State Governments and Central Ministries/Departments and Other relevant factors.

Procurement Procedure

Procurement under MSP is undertaken by the designated Central and State Government agencies and Cooperatives. MSP is in the nature of minimum price offered by the Government. Producers have the option to sell their produce to Government agencies or in the open market as is advantageous to them

Facts about MSP

- This scheme started in 1966-67 on advent of green revolution

Note



- MSP is announced for 25 crops
- No MSP for Sugarcane. Instead government fixes FRP (Fair & Remunerative Price) for sugarcane. Each state then fixes its own SAP(State Advised Price)
- For Oil seeds and Pulses, there is a Price Support Scheme by NAFED (nodal Agency). So, when the prices of oilseeds, pulses and cotton fall below MSP, NAFED purchases them from the farmers.

Exam Prespect:

- Refer MSP of all Crops
- WTO – Peace Clause
- Doha Round (WTO)

6. Low velocity of cash circulation in large States hints at sluggish economy

While the currency in circulation has surpassed what it was in the pre-demonetisation days, it is still short of what it should have been and the lower velocity of circulation in larger States points to sluggish economic activity.

Currency in circulation has gone up to Rs. 20.6 lakh crore as on February 1. It was Rs. 17.97 lakh crore a week before 86% of the currency was rendered invalid on November 9, 2016. Current estimates suggest that CIC [currency in circulation] is still short of trend by at least Rs. 1.5 lakh crore. Thus, any argument of cash coming back aggressively into the system and financing informal activities is not entirely correct.

It estimates bank notes in circulation by March 2019 ought to have been at Rs. 22.45 lakh crore, but given the present trend of growth, it is expected to reach only Rs. 20.9 lakh crore by then. It further said with income velocity of money having shown a ‘sharp plunge’, it possibly implies that currency of higher denomination (Rs. 2,000) is not getting adequately circulated in the economy.



Larger States like Maharashtra, U.P., and Karnataka, income velocity is far lesser than the national average, while in States like Chhattisgarh, M.P., A.P. and J&K, the velocity is much higher than the average. “A declining income velocity of money clearly suggests that a pick-up in economic activity remains elusive. Rural economy still remains depressed, with latest inflation numbers suggesting any meaningful

pick-up in food inflation is still at a distance.

Exam Prespect:

Basic Economy Concepts – Inflation, Deflation, Business cycle, etc

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7. Wholesale inflation eases to 10-month low of 2.76%

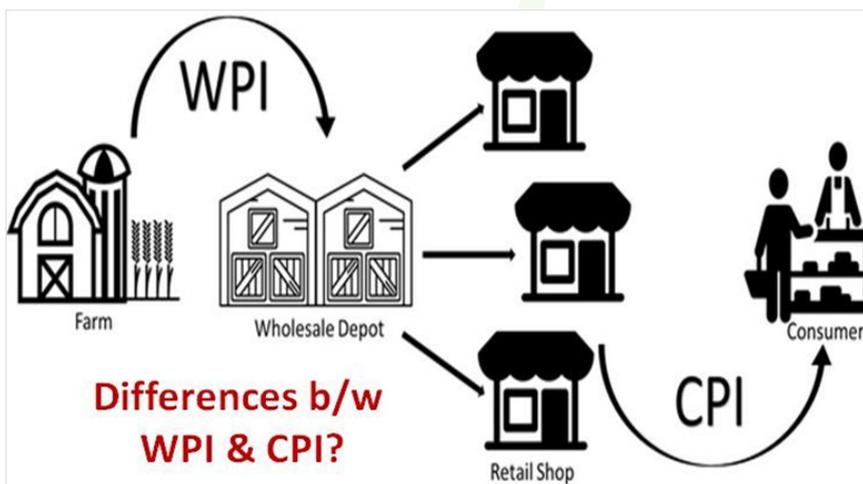
Wholesale inflation eased to a 10-month low of 2.76% in January due largely to cooling fuel prices.

Growth in the **Wholesale Price Index (WPI)** fell for the third consecutive month in January from 5.54% in October 2018, 4.47% in November, and 3.8% in December. Within the overall index, the primary articles category saw inflation quickening to 3.54% in January from 2.28% in December 2018.

Inflation in the crude petroleum and natural gas segment slowed sharply in January to a one-year low of 3.87% from 16.8% in December. Similarly, inflation in the fuel and power segment slowed to a 27-month low of 1.85% in January, driven in large part by the fact that the mineral oils segment also saw inflation slowing to a 27-month low of 0.11%.

Wholesale inflation in the food segment quickened to a one-year high of 2.34% in January from a contraction of 0.07% in December 2018. Inflation in the overall food group — a combination of wholesale food as well as manufactured food — also quickened to 1.84% in January, a 13-month high.

Difference between WPI and CPI



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