

RESOURCE RECOVERY FROM WASTES - A POTENTIAL FOR BUSINESS DEVELOPMENT AND EMPLOYMENT GENERATION

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Waste generation and its disposal are the concerns of every citizen, every administration, and every government in each of the nations in the world. The ever-increasing rates of waste generation and the diversity in characteristics among different types of waste make the collection, storing and disposal processes very critical and complicated. Throwing garbage is a popular and easy solution to the people in many nations traditionally, while waste to consider as a valuable material has been evolved recently in those countries since 1880s. With the concept of Reduce- Reuse-Recycle (3Rs) in the areas of waste management is becoming popular in many countries and started thinking on how the waste can be utilised for making different products. Very recently the concept of circular Economy has brought a revolutionary paradigm shift in the waste management and addressing the sustainable development Goals.

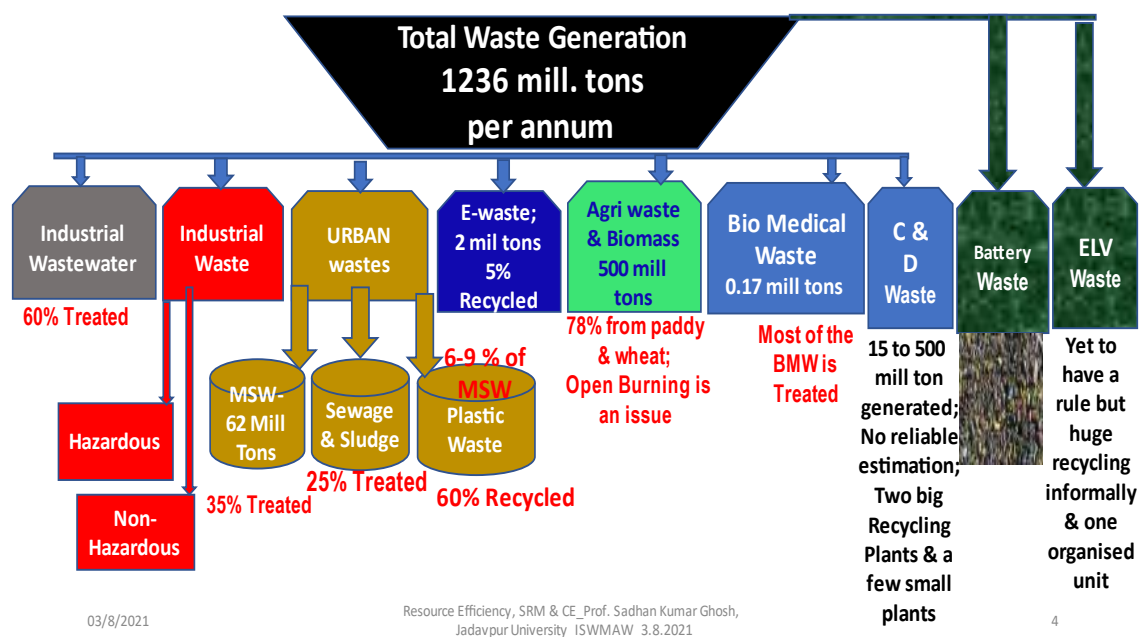
The extraction of natural resources at a faster rate made the scientists and policy makers to think of the utilisation of the wastes as a secondary raw material to develop suitable products which will help in reducing the extraction of natural resources. Global use of materials almost tripled, from 26.7 billion tons in 1970, to 92.1 billion tons in 2017 & accelerating. Forecast to grow to between 170 & 184 billion tons by 2050. This helps in environmental sustainability. The key Processes in waste management are Collection Services, Materials Recovery facility of dry wastes, treatment of organic fraction of wastes (OFW), Landfill Management, Transfer Stations, Waste Strategic Planning, Infrastructure Delivery, and Environmental Monitoring & Management to optimise the efficiencies. but also a number of risks that will need to be managed. Waste Services aims to ensure effective and efficient management of wastes. Hence the Resource Recovery from wastes has become a focal point for each nation to be included in the Nationally determined contributions (NDCs). Nationally determined contributions (NDCs) are at the heart of the Paris Agreement and the achievement of its long-term goals. NDCs embody efforts by each country to reduce national emissions and adapt to the impacts of climate change. The Paris Agreement (Article 4, paragraph 2) requires each Party to prepare, communicate and maintain successive nationally determined contributions (NDCs) that it intends to achieve. Parties shall pursue domestic mitigation measures, with the aim of achieving the objectives of such contributions.

Many initiatives worldwide such as, “Swachh Bharat Mission” in India, Chinese “national sword” impact on the recycling system, the new Queensland Container Refund Scheme and the recently announced State Government’s waste levy will impact or influence Council’s own waste strategic thinking are some of the examples of strengthening the waste management initiatives with a focus on investment and returns.

Waste Management has to look into as a business model for sustainable waste management. Here is the huge potential for Business development and employment generation in each of the countries. The global waste management market in terms of revenue was estimated to worth USD 423.4 billion in 2021 and is poised to reach USD 542.7 billion by 2026, growing at a CAGR of 5.1% from 2021 to 2026. The growing awareness program shows the need of waste management and waste segregation is one of the primary factors driving the market growth [https://www.marketsandmarkets.com/Market-Reports/waste-management-market-72285482.html?gclid=CjwKCAiA0cyfBhBREiwAAStHKObbkoVNgmHTTJ4OE_xIWaEuMe6qqDhs_AO5fX7s5-H-zkJHH1bwhoCJBQUAvD_BwE].

In reality the waste management plan and the concept of circular economy provide overall Business Structure for Waste Services, and the responsibilities of the Water and Waste Services management. The circular economy concepts, as defined, “Circular economy is a systems-level approach to economic development and a paradigm shift from the traditional concept of linear economy model of **extract-produce-consume-dispose-deplete (epcd2)** to an elevated echelon of achieving zero waste by resource conservation through changed concept of design of production processes and materials selection for higher life cycle, conservation of all kinds of resources, material and/or energy recovery all through the processes, and at the end of the life cycle for a specific use of the product will be still fit to be utilised as the input materials to a new production process in the value chain with a close loop materials cycles that improves resource efficiency, resource productivity, benefit businesses and the society, creates employment opportunities and provides environmental sustainability” (Ghosh, S. K., 2020) gives a clear picture of potential of business development and employment generation. The huge amount of waste generation in India gives a clear idea of quantum of business potential in the sectors.

Waste Generation status in India



one very important areas of business development in waste management arena is, “Extended Producer Responsibility” (EPR) – system that will be able to achieve the quantitative target and thereby must be adjusted accordingly. The national government in each of the countries must establish the waste management legislation focused on investment in the sectors by private players to make the waste management sectors a sustainable one.

Reference:

Sadhan Kumar Ghosh, (2020), Circular Economy: Global Perspective, Springer Nature, Circular Economy: Recent Trends in Global Perspective , by Sadhan Kumar Ghosh (Editor), Sannidhya Kumar Ghosh (Editor)