Executive Summary

We would like to pose a significant technical contradiction to all the readers and provoke thinking process.

IF we use all our resources and pollute environment with unmanaged waste, THEN we will meet our existing demands and enjoy our current lifestyles

BUT will we be able to save the natural resources and ensure pollution free environment for our future generations?

Being honest with answer is a starting point for the analytical and critical thinking process

From 1990 to 2017, the Asia-Pacific countries recorded significant increase in natural resource use in terms of absolute and per capita consumption. India is one of them. Rapid urbanization, manufacturing expansion, consumption patterns have lead increase demand for materials.

The municipal solid waste is directly proportational to the growing population and is the result of urban lifestyle. By 2025 this waste will likely increase to 4.3 billion urban residents generating about 1.42 kg/capita/day of municipal solid waste (2.2 billion tonns per year) according to the "What a Waste" report by the World Bank. Poorly managed waste has significant health and environmental impacts. Improper management leads to higher down stream processing costs.

Finance Minister Ms. Nirmala Sitharaman alloted 1.41 lakh cr. Rs, which will be implemented over five years from 2021, with a focus on sludge management, waste water treatment, source segregation of garbage and reduction in single use plastic, reduction in air pollution, especially waste from construction and demolition, and bio-remediation of dumpsites. Municipal Authorities have worked on the segregation but the disposal remains the daunting challenge. The poor processing percentage of the states is critical as solid waste management is the responsibility of local governments. Inspite of the central budget allocation, CSR activities there is clear imbalance in the functionality of the waste management system.

We believe that the solid waste management in India needs systems thinking intervention because of following reasons.

1- The issue is important.
2- The issue is chronic and not a one time event.
3- The problem is familiar to everybody and has a known history.
4- People have tried to solve the problem earlier.

Currently, we observe that component parts of the entire system are acting differently as they are isolated from the system. System thinking concerns an understanding of the system by examining linkages and interactions between the elements that comprise the whole system. Solid Waste Management, In India, has been an issue for several decades. We consider the sums spent via the Swachh Bharat Mission and/or Jal Jeevan Mission, to be an investment for future generations of the country. When we realize the impact of these national initiatives, we aim to work alongside with various stakeholders and governments.

Solid waste management planning and policy making at national level requires a thorough understanding of the institutions, private players, etc. involved in the plan's execution and the factors having positive or negative impacts. This report highlights an inclusive approach. This report covers key points that will benefit the existing mission and provide these institutions/ companies/ individuals to analyze the engagement strategies that benefit employee motivation, corporate citizenship & forming partnerships. Engagement of all stakeholders throughout the project life cycle is key to a national solid waste management implementation.

This collaborative approach creates opportunities for brainstorming discussions, emphasizes on accountability and enhances responsibility, and opens excellent learning opportunity for all stakeholders. This also enables effective risk identification and response planning and gives opportunity to individuals or groups to express their ideas/ issues/ concerns over the project. System thinking helps practitioners to bring together many different stakeholders – especially those with radically different backgrounds and perspectives – to identify problems and solutions to challenges, and increasing the possibility of transformational change.

Circular economy approach involves creating and mainstreaming a regenerative and circular system in which it minimizes resource inputs, waste emissions and energy leakages. It is important to monitor trends in resource use and efficiency to analyze the impact of different policies on resource efficiency. In case of domestic material consumption, the region accounts for almost 65% of global share. India needs to focus on transformation from resource intensive development to a resource efficient path, which is critical in achieving all SDGs.

SDG 12, Sustainable Production and Consumption directly relates to waste management. There is no current performance data available. It has significant direct or indirect impact on all 17 SDGs. In this report, we cover how focusing on improvement of waste management sector enhances the overall SDG performance and benefits of aligning SDGs in national planning.

The report covers

- India's municipal solid waste composition.
- Status of disposal and their consequences on natural resources, negative effects, and economic impacts.
- Importance of resource recovery.
- Review of available guidebooks.
- Sustainable Development Goals and waste management.
- Gap analysis of the solid waste management sector.
- Understanding stakeholders as components of the entire system.
- Re-considering food waste and sanitary waste.
- Highlights of integrated sustainable waste management.
- Practical challenges in the solid waste management sector.
- Stakeholder engagement initiatives in India.
- Opportunities in the waste management sector.

We provide some key recommendations which can help drive the system-change required for successful execution of solid waste management in India. Strengthening the value chain and EPR systems provides ways forward for the waste management sector, creating the grounds for circular economy initatives for effective management.

There are four principles that we must prioritize for integration of three dimensions of sustainability in the national planning:

- Resources on the planet are not limitless.
- The shift in mindset from short-term gains to long - term benefits
- Reforming conventional economic system
- Integrated, efficient use of resources.

Considering Waste Management as 'Resource Saving' will help India reduce its direct material consumption per capita and save significantly on the resource price.

We strongly recommend the policies aligned with SDGs and prioritizing the waste management sector in the national planning. This will give additional advantages in terms of cross-sector collaboration, sharing strengths in the national interest under SAVING IS EARNING. Initiatives that focus on engaging the informal sector, reverse logistics, public-private partnerships, aligning business with SDGs, public awareness have their own notable success stories.

The Policy Advocacy Research Centre (PARC) an independent think-tank is an initiative of the Vivek Vyaspeeth Trust that aims to bring together all stakeholders from all fields inclusive of citizens, with a feeling of mutual trust for the intent of national welfare. This is the first step undertaken by PARC in addressing waste management, further to which a series of other studies and subsequent advisory reports would be published in consultation with all the associated stakeholders engaged in the WARSA collaboration.

Every stakeholder highlighted in the report may engage with PARC for WARSA as a collaboration campaign to improve adherence, develop partnership, drive the engagement, and bring out the best practices by supporting the need of each category.

We think that WARSA will help improve strategic planning, governance and improve the status quo of the sector by collaborating with stakeholders and targetting the sectoral interventions to improve the performance.