

“S&T Roadmap for Building a New India”

Arya Rathi

“It’s just one straw”- said eight billion people. A simple sentence that throws light on a major obstacle in the path of science and technology. Waste, a significant part of our lives, yet thrown away in an insignificant corner. It exists not only in the form of our day to day garbage but also as wastage of resources, costing a heavy fine on a country looking to grow and flourish. Two major expertises which India lacks and which would also save a considerable measure of assets are waste management, particularly electronic waste (e-waste) and agriculture sector.

Waste management is an issue so desperate for attention that it comes up time and again in new avatars, the most recent and unknown being electronic waste. Many might wonder about the relevance of waste in shaping a new India, but just like the villains of Spiderman, it’s an evil waiting to unleash itself on the world. So, no better time than now, when India is on the way to becoming a developed country, to unleash her webs and wipe out the menace.

As technology is taking the world by storm, the usage of electronics per household is increasing exponentially. New advancements, cut throat competition and ease of life all lead to high supply and demand but a question we face ourselves with is, “What happens with electronics when they cease working?”. Almost 90 percent of the general public doesn’t know the answer to this and thus, electronic waste ends up in landfills and with rag-pickers instead of its rightful place, a recycling centre. Landfills or soil have no effect on electronics as they contain non biodegradable substances like lead and mercury. Burning them harms more than it helps because of the toxic fumes released in the air whereas only a small proportion of the valuable metals are recovered if any.

Recycling is a one stop solution to all of these problems. It leads to reuse of raw materials with 100 percent efficiency, thus saving a substantial amount of resources which can then be devoted to other fields. Land also being a finite resource is of immense value especially to a country like India with such an enormous population. Therefore, a cherry on the cake is the land that is saved because of less disposal of garbage which would have otherwise been used in landfills. All our country needs to do is spread awareness and practical knowledge about this topic so people realise the importance of this in the longer run. Setting up easily accessible collection centres for the general public and subsidies to recycling agencies by the government can all contribute to making recycling a way of life.

Another topic that needs the country’s attention right now is cultivation. “A farmer is a magician who produces money from mud”- such wise words yet their worth is known only to few. India is among the leaders in a number of fields in science. The creation of the Polar Satellite Launch Vehicle and missions like Chandrayaan 3 point towards greatness to come for Space Technology while twenty-two nuclear reactors in 7 power plants indicate Nuclear Energy is not far behind. But, we find ourselves looking for the oldest occupation, practised in India since centuries to come, yet nowhere to be seen.

Agriculture has been an integral part of human civilisations since the beginning of time and continues to be of utmost importance to the growth of a community or a country. It might even be said that the primary sector of a country is an indicator towards its extent of development. A common trend seen in many developed countries is the dominance of the primary sector in economy at first, but soon taken over by secondary and finally tertiary or service sector. Likewise, employment ratios should be similarly divided between the three sectors with the service sector leading.

Yet, no such trend is seen in India. The irony is, the tertiary sector contributes the most to our economy, almost 60-70 percent, however we find only 25 percent of our workforce engaged in this sector. Nearly half of the employment goes into agriculture which produces only one-sixth share of the economy. This means that more people are working in farming than required to produce the same amount of yield. The major reason for this situation is the absence of technology from this sector. Since, all of the work is still performed manually on the field and the use of any machines is minimal, the output has been reduced substantially. Work that should have needed only three people now engages six and still gives the same output.

When we compare this to the developed countries, we find a stark difference in advancement. Where our work is fully man-operated, other countries seem to be leaning towards technology to lend a hand. Electric tools, AI operated tractors, genetically mutated seeds are the future and the sooner India recognises this problem, the sooner we can start working towards it. There's no deficit of skill in the country, it just needs to be put to the right task. If more investment is dedicated towards research and it is promoted, India could be at par with high income countries in no time at all. The surplus man force could then be dedicated elsewhere, which would lead to the optimal use of human resources.

In conclusion, we see that small steps could lead to enormous changes in the way India matures as a country and the direction in which its science and technology develop. Our policy needs to include agriculture as a prime topic of attention along with recycling of e-waste. The human resources saved by the former and the land and mineral resources saved by the latter would make a tremendous difference and lead India on the pathway to success.

Mr Arya Rathi, Class XI, Maharishi Jr College, Amravati.
Email: aryaa7rathi@gmail.com