

The Real World of Solid Wastes

N.C. Vasuki, P.E., DEE*

President

International Solid Waste Association
(ISWA)

* CEO, Delaware Solid Waste Authority, Dover, DE, USA



Homo Sapiens

(A unique species)

- All species require food, shelter and a favorable environment to survive.
- Human Beings want more than the minimum basic needs. They “Want” more and that is what makes them unique.
- They have learned to observe natural phenomena and developed technology to satisfy their “Wants”.

What are the human “Wants”

- They want, among others:
 - more food and clothing
 - larger and comfortable shelters
 - more weapons and speedier transportation
 - more entertainment, books, magazines etc
 - better and faster communication systems
 - more effective medicines.
- They are never satisfied!

What are the consequences?

- There is greater demand on natural resources.
- More energy is required to satisfy all human “Wants”
- Waste production increases
- Natural systems are adversely impacted
- Other species of life are threatened

Waste production and disposal

- All human settlements have disposed wastes usually in their own back yards and we know that from archeological studies.
- Until the advent of the industrial revolution the types of packaging materials humans used was rather limited to natural fibers, glass, ceramics, wood, and metal.
- The general standard of living was very low and the average life expectancy under 40 years

Human decisions

- All human decisions have good and bad consequences
- All decisions pose risks of one sort or another
- Human beings learn to weigh decisions in order to reduce risks. They do not like involuntary risks.
- Human beings understand that progress is not possible without taking calculated risks.

What is the current status of solid waste disposal in the World?

- The real problems are in China, India, Indonesia, Bangladesh, Pakistan, Philippines, South and Central America, and Africa.
- They collectively discard, every day, more solid wastes than the combined discards of the relatively wealthy industrialized countries.

Impact on global environment

- The horrendous open dumps still being used all over the World and open burning taking place emit more methane, carbon dioxide, hydrogen sulfide, dioxins and other persistent pollutants into global circulation.
- Therefore, the effort of wealthy industrialized nations to reduce global warming gases, dioxins and other persistent pollutants is offset by improper disposal elsewhere.















Should we despair about increased solid waste discards?

- No!.
- We should strive to quickly collect and transfer solid wastes to modern regional landfills.
- The solid waste could be used for materials and energy recovery.

Increasing solid waste discards

- As nations such as China, India, Brazil, Indonesia increase their industrial productivity, the workers will earn more and spend more. Consequently, daily solid waste discards will increase.
- If the discard rate in India increases from 0.5 kg/cap/day to 0.6 kg, the total amount of solid waste to be collected and disposed will approach 110,000 metric tons per day!

What can we do about it?

- We can:
 - assist the local governments in improving collection of solid wastes – technical & management support to local governments, creating joint ventures with local companies, capital infusion, and accounting structure to gradually shift to user fees.

Landfilling first!

- We should:
 - support changing open dumps into control dumps.
 - support development of modern regional landfills
 - train local workers to perform better and feel good about their job.

Why modern regional landfills are essential?

- They are very elastic in their ability to accept sudden changes in solid waste input.
- They could become centers of solid waste management systems hosting other activities such as recycling, composting, and thermal treatment.
- They could become centers of renewable energy and benefit the local region

Controlling landfill emissions

- We should:
 - provide technical assistance to recover landfill gas from the new modern landfills for local energy production
 - help convince local NGO's that recycling and composting should follow development of modern landfills and instead of it.

Data collection – Worldwide

- We have to develop standardized data collection systems in the solid waste management field. There is no cohesive effort to collect and analyze data from all nations. ISWA is trying to create an International data base by compiling national reports.

Can we afford to improve solid waste management worldwide?

- Yes we can and yes we should as soon as possible.
- We tend to spend money to marginally improve performance standards of waste disposal facilities and that increased performance has very little impact on global environmental quality.
- Instead, we could spend the same money to assist the developing nations to improve their solid waste management systems.
- If we take that approach, we will get more value out of the investment.



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