In The Name Of Allah The Most Gracious And Ever Merciful

Impact of Construction Activities on the Environment

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Half Day Seminar to mark the 45th Anniversary of Earth Day
Changing Lifestyles - Our Turn to Lead

Organized by
Women Engineers Committee and Environment Committee
Institution of Engineers Pakistan (IEP)
Karachi Center

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Construction Activities Generate-

Air Pollution

Dust Pollution

Noise Pollution

DUST IS SUSPENDED PARTICULATE MATTER

viz. fumes, smoke, aerosol and can absorb chemicals

Major sources

1. Asbestos factories
2. Mining activity
3. Power plants
4. Ceramic industry
5. Cement industries
6. Road traffic

Major Industrial Contributors to Water Pollution in Pakistan

More than 80% of the total Industrial effluent are contributed by

- **Cement Production**
- **Petrochemicals**
- **Paper and Pulp**
- **Food Processing**
- **Sugar Production**
- **Textile**

Different Pollutants in Cement Production

Major Polluting Source	Pollution Parameters	Impact
Crushing.	Dust from raw material	Air Pollution
Proportioning, Mixing of Raw Materials and Grinding.	Noise	Workplace
Kiln and Clinker Cooling.	Water Vapors and dust	Workplace Air Pollution
Finish Grinding.	Dust	Air Pollution
Packaging.	Cement Dust	Air Pollution

Traditional Construction Materials-
Detrimental Impact on the Environment

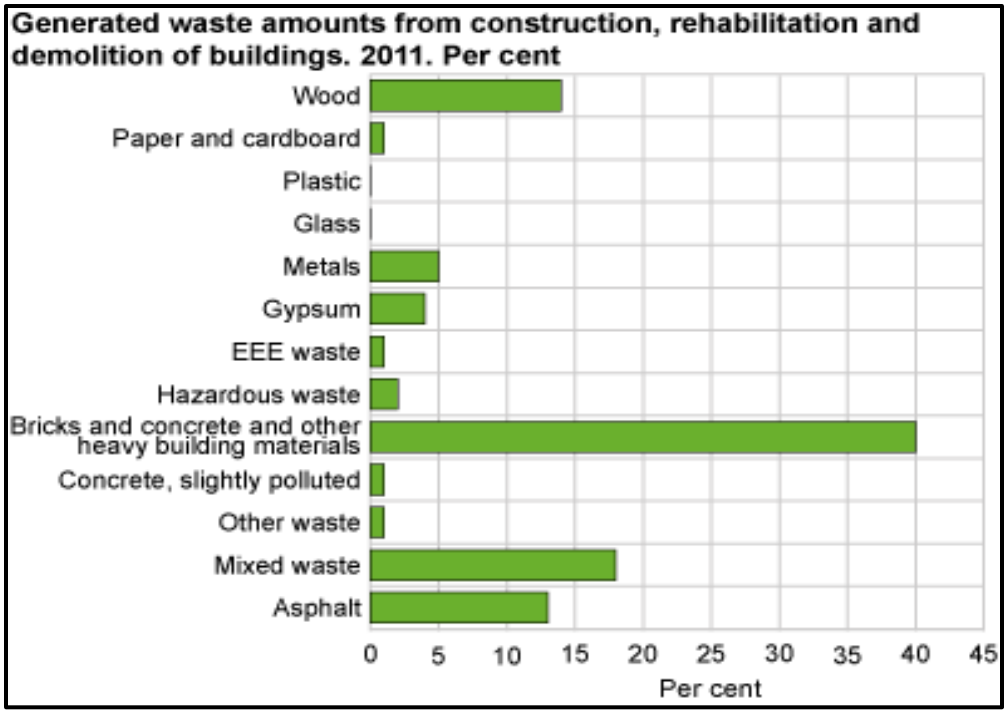
Element	Environmental Disadvantages
Cement	❖Contaminates Soil When In Contact With Soil
Bricks	❖Loss of Valuable Soil
Water Usage	❖Loss Of Water
Sand	❖Makes River Unable To Retain Water
Frames	❖Wood Is Used To Make Frame Structure And Support Slab
Stones	❖Mining Is Done To Get Stones

Some Images Showing Examples of Pollution Caused by Cement and Brick Manufacturing

Brick Kilns dot landscape in Rawalpindi. A study In 2012 showed that hydrogen fluoride emissions from kilns severely damage important crops.

Construction Contributes Wastes-

- **Construction sites are a source of waste.**
- **Construction companies buy a lot of materials and end up throwing it away.**

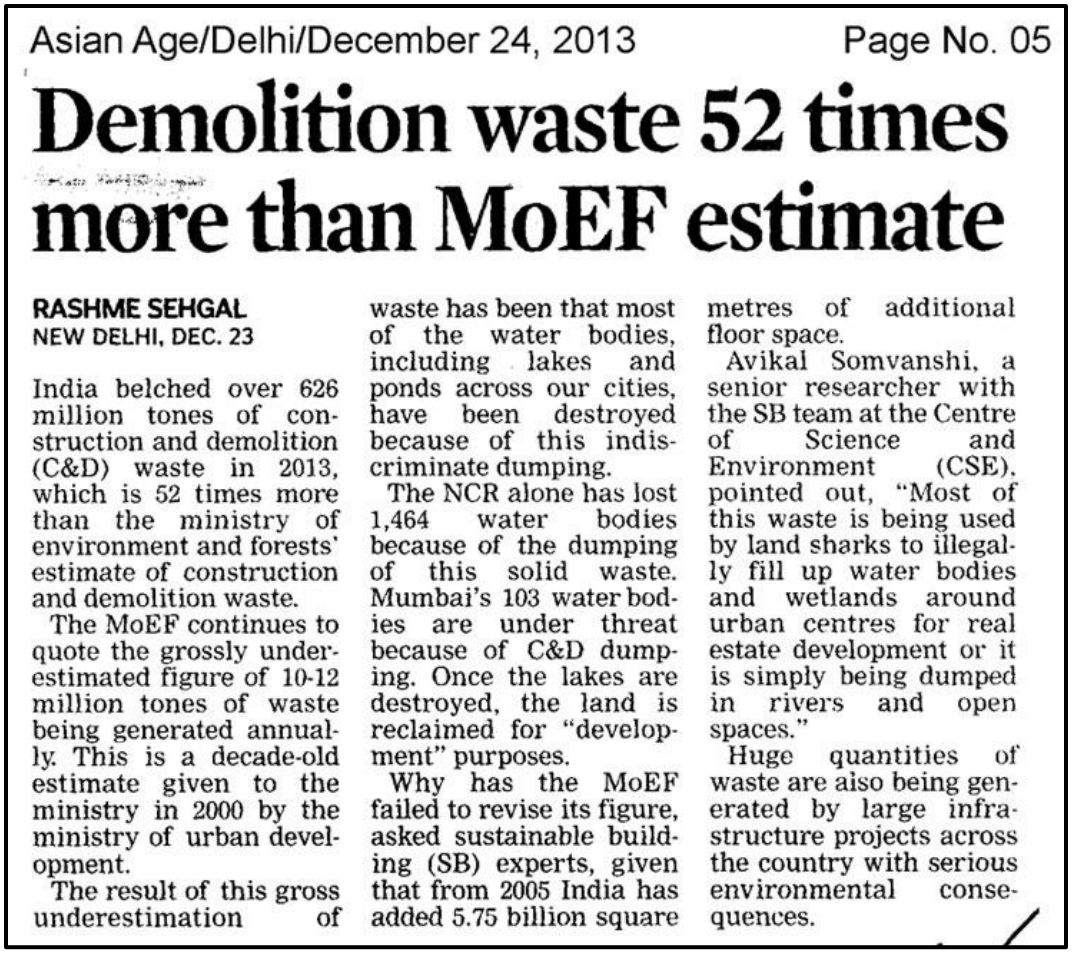


Source:

Statistisk sentralbyrå
Statistics Norway

Demolishing Creates Wastes-

- **When buildings reach their usable limits, they need to be demolished.**



Asian Age/Delhi/December 24, 2013 Page No. 05

Demolition waste 52 times more than MoEF estimate

RASHME SEHGAL
NEW DELHI, DEC. 23

India belched over 626 million tones of construction and demolition (C&D) waste in 2013, which is 52 times more than the ministry of environment and forests' estimate of construction and demolition waste.

The MoEF continues to quote the grossly underestimated figure of 10-12 million tones of waste being generated annually. This is a decade-old estimate given to the ministry in 2000 by the ministry of urban development.

The result of this gross underestimation of waste has been that most of the water bodies, including lakes and ponds across our cities, have been destroyed because of this indiscriminate dumping.

The NCR alone has lost 1,464 water bodies because of the dumping of this solid waste. Mumbai's 103 water bodies are under threat because of C&D dumping. Once the lakes are destroyed, the land is reclaimed for "development" purposes.

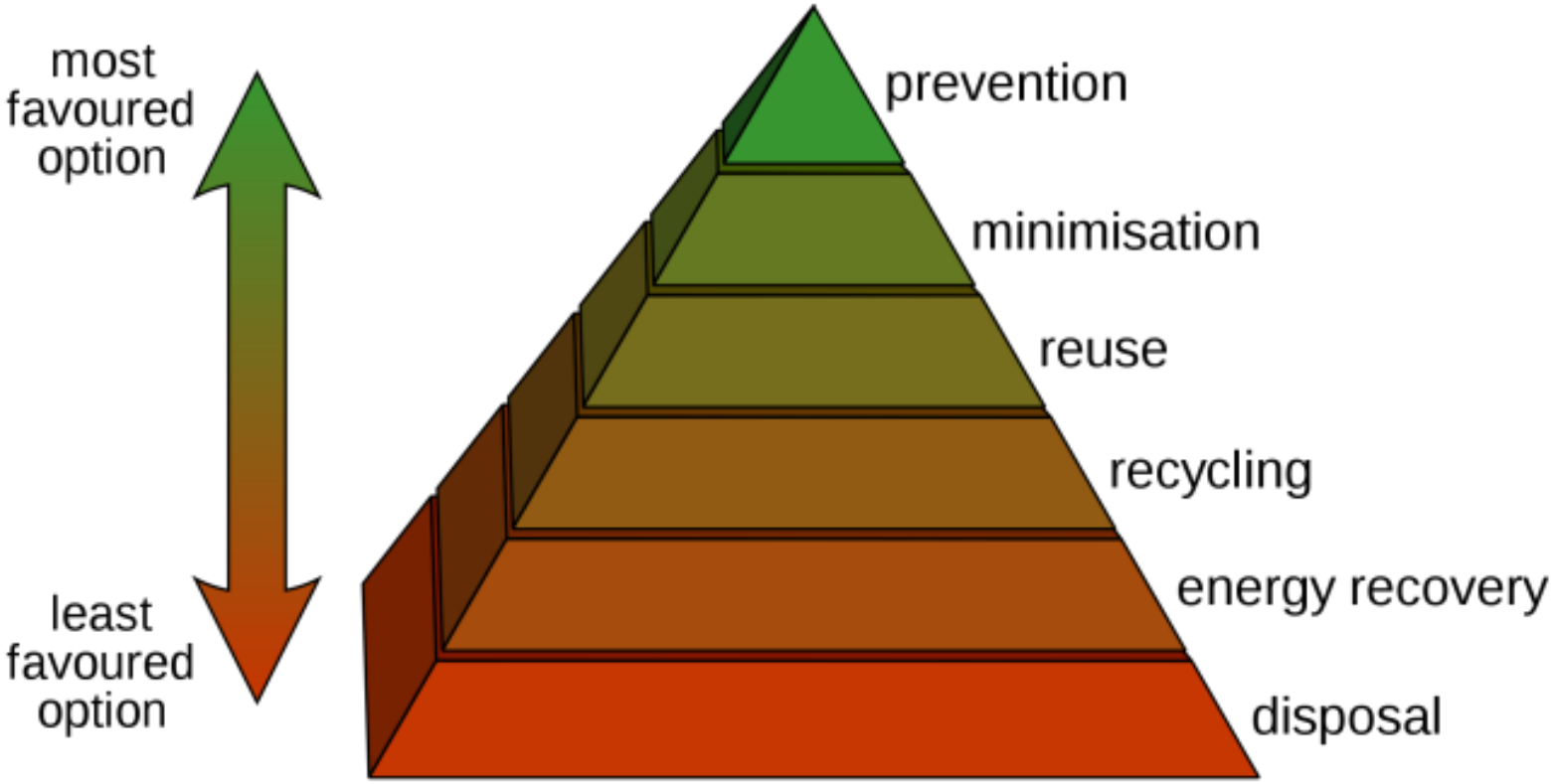
Why has the MoEF failed to revise its figure, asked sustainable building (SB) experts, given that from 2005 India has added 5.75 billion square metres of additional floor space.

Avikal Somvanshi, a senior researcher with the SB team at the Centre of Science and Environment (CSE), pointed out, "Most of this waste is being used by land sharks to illegally fill up water bodies and wetlands around urban centres for real estate development or it is simply being dumped in rivers and open spaces."

Huge quantities of waste are aiso being generated by large infrastructure projects across the country with serious environmental consequences.

Examples of Wastes Occurring From Demolishing

Waste Hierarchy



Why Green Construction is a Challenge!

- **The initial cost of construction is 5% to 10% higher as compared to standard construction practices.**
- **Lack of public awareness.**
- **Absence of effective Inspection and monitoring system for implementing environment protection regulations in the planning, implementation and post construction stages.**
- **Tendency of constructors in using non-biodegradable (lead based) raw materials during the construction phase as they are cheaper.**
- **There is some progress in Green Construction, but it is far too slow.**

The Environment will not wait for us.


SAVE EARTH
SAVE LIFE.
THANK YOU