

River Sand Mining- Environmental, Social issues and Policies



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Sand as Minor mineral

- Sand as minor mineral is defined in clause (e) of Section 3 of MMDR Act, 1957: '3 (e) "minor minerals" means building stones, gravel, ordinary clay, ordinary sand other than sand used for prescribed purposes and any other material which the Central Government may, by Notification in the Gazette of India declare to be a minor mineral;'
- The term `ordinary sand' used in clause (e) of Section 3 of the MMDR Act, 1957 has been further clarified in rule 70 of the MCR, 1960 as: when used for ceramic, pottery and glasses etc.

River bed sand mining



Sand is considered as

- Highest volume of raw materials used on earth
- Most consumed commodity next to water
- Essential commodity for construction, an agent of development
- A cause of conflict and virtual war
- A source of business and revenue
- A part of our culture and religion
- Sand is limited compare to its demand
- A neglected topic among policy makers and intellectuals
- Sand is to river what RBC is to blood, sand is vital for river-Prakash Javadekar , Minister, MoEFCC (27th Sept 2015)

Sources of sand in India

- River bed, flood plains and streams
- Coastal sand
- Paleo Chanel sand
- Sand from agricultural field
- Lakes and reservoirs



Problems of sand mining

- Affect in stream habitat: aquatic species
- Spread of mosquito and infectious diseases due to sand mining
- Accident due to sand mining – death of livestock, children during rainy season
- Impact on river bed sedimentation
- Impact on river bed cultivation
- Loss of agricultural land
- Decrease in grazing land
- Impact on women who fetch drinking water from distance places
- Loss of clean water available from 'pit' during summer days

Drinking water from river bed



Problems of sand mining

- Sand mining creates river bank erosion
- Lowering of groundwater table in the floodplain area:
- Extreme events like flood, erosion, change in flow of river
- Depletion of groundwater
- Polluting groundwater
- Conflict between land owners and sand mining contractors
- Use of heavy machine increase turbidity in water

Sand mining from deep water



Social issues

- Customary right of people on sand mines
- Rights of women and other vulnerable community
- Cultural and religious rights
- Timing of sand mining

Factors responsible

- Role of Center and State on sand as minor minerals
- Absence of appropriate authority and mechanism
- Absence of policy on sand mining
- Lack of knowledge and awareness among people on sand mining management
- Lack of local community participation
- Vested interest nexus leads to illegal sand mining
- No proper study on sand mining and its impact

Grazing animal on river bed



On policy front- SC and NGT verdicts on sand mining

- The apex court held (27th Feb 2012) that any person carrying on sand mining on land which is less than five hectares, requires clearance from the Ministry of Environment and Forests or the State Environment Impact Assessment Authority (SEIAA).
- Restrained sand mining without any license or environmental clearance from river beds across the country (NGT-5th Aug 2013)
- Set up committees from time to time to study impact of sand mining in different rivers and locations
- NGT banned SM in monsoon (Sept 2015) in the country but ban lifted next month

Steps taken by MoEFCC

- Sustainable Sand Mining Management Guidelines 2016 (Mar 2016)
- Notification of 15/01/2016 and 20/01/2016 on mining of minor minerals and formation of DLEIAA and DEAC- first time decentralisation of EC, dist. Survey report,
- The Centre wants external agencies to audit whether companies are adhering to government approved mining plans
- Mining plans include details like the extent of mineral body, geology, lithology, mineral reserves, mechanisation, plan of area indicating water course, and water pollution.

Highlights of SSMMG 2016

Basic principles

- Uncontrolled sand mining is not sustainable.
- Each lease holder should be given the opportunity to self-regulate to the extent that it can demonstrate compliance with legislation and regulations.
- There is a need to protect the environment and the right of the population to live in clean and safe surroundings

Sand mine management plan

- Prepared by RQP (Recognised Qualified Persons)- EIA and EMP
- Approved by appropriate state authority for Env Clearance (EC) 5 yrs max.
- Photo documentation, ground water level, river bed vegetation, riparian vegetation map etc.
- Transport Permit (TP) with bar code by Govt.
- Use of mobile tracking system of transport

EC proposal of sand mining and other minor mineral mining

Area of Lease (Hectare)	Category of Project	Authority to appraise/ grant EC	Authority to monitor EC compliance
0 – 5ha	‘B2’	DEAC/ DEIAA	DEIAA SEIAA
> 5 ha and < 25 ha	‘B2’	SEAC / SEIAA	SPCB CPCB
≥ 25ha and < 50ha	‘B1’	SEAC/ SEIAA	MoEFCC Agency nominated
≥ 50 ha	‘A’	EAC/ MoEFCC	by MoEFCC

Transportation of sand



Process of Environmental audit

- Environmental audit is a process, not an event or one time exercise
- Participatory- participation of women and most vulnerable affected community
- Comprehensive
- Compare to benchmark
- Regular

Steps of Environmental audit

- Preparatory phase (pre audit) environment building
- Information collection and compilation
- Verification with laws and policies, benchmark, ground data, people's opinion
- Report preparation and presentation
- Follow up action

Farming on river bed



Recommendations

- People's participation and awareness on policy and planning of sand mining
- Ensure public hearing with free, prior and informed consent of people through Gram Sabha
- Improve effectiveness of monitoring of sand mining and transportation of sand
- Local needs and requirements first priority for any sand mining
- Sand mining management through women cooperatives/SHGs
- Avoid sand extraction from vegetated riparian areas
- Do proper social, environmental and economic impact assessment before and during
- Set up proper timing of sand extraction after consultation with local people

Recommendations

- Ensure that sand mining is done in environmentally sustainable and socially responsible manner.
- Ensure conservation of the river equilibrium and its natural environment by protection and restoration of the ecological system.
- Ensure that the rivers are protected from bank and bed erosion beyond its stable profile.
- No obstruction to the river flow, water transport and restoring the riparian rights and instream habitats.

Recommendations

- Avoid pollution of river water leading to water quality deterioration.
- Prevent ground water pollution by prohibiting sand mining where it works as filter prior to ground water recharge.
- Share profit with local people
- Recognize role of women in sand mining management

Women managing sand mining



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Thank you so much