

Challenges of Firecracker Industry

Why in news?

Recently, a blast in Tamil Nadu licensed firecracker unit located in Virudhunagar district claimed the lives of at least 12 workers.

Status of Firecracker Industry in Tamil Nadu

- Tamil Nadu, and particularly Sivakasi, an arid region in Virudhunagar district, has been known as the *fireworks capital of the country*.
- Sivakasi accounts for 90% of fireworks production in India.
- India is the 2nd biggest producer of fireworks, after China.
- According to Tamil Nadu Fireworks and Amorges Manufacturers Association (TANFAMA), there are around 1,085 cracker manufacturing units in and around the Sivakasi region.
- At least 8 lakh people are directly and indirectly involved in the fireworks and allied industries, including transport.
- Former Prime Minister Jawaharlal Nehru termed Sivakasi as "*Little Japan*" because it is also the leader for printing, fireworks and safety matches production.

What are the challenges with the firecracker industry?

- **Illegal units**- The industry in Tamil Nadu has become much more dispersed with many illegal units.
- **Work burden**- Workers are engaged to work for 8 to 12 hours during the festival season.
- **Lack of regulation**- The cracker units function with little supervision, monitoring, or official inspections resulting in increased accidents.
- Though the work in the unit happens year round, monitoring is done only during the festive season.
- **Lack of training**- Many units employ workers without any training resulting in mishandling of explosives by inexperienced and untrained youth.
- **Lack of experience**- During festive season, licensed units sub-lease work to smaller units which have no experience and 80% of accidents happen during this process alone.
- **Lack of safety** - Fireworks manufacturing units often ignore safety norms with an intention to increase productivity in a short span of time.
- The cracker units stock chemicals above the permitted limits which trigger the explosion in firecracker unit.
- **Manufacturing in house**- Production of crackers in houses causes many blasts.
- **Shortage of manpower**- *Petroleum and Explosive Safety Organisation* (PESO), the licensing and regulating authority for large fireworks units, is short-staffed.
 - There are only 5 officials to monitor more than 1000 units.
- **Health effects**- Due to high chemical usage, lungs of the workers are affected and

skins are burned.

National Green Tribunal Ruling in Virudhunagar Blast

- NGT took suo motto cognizance of a blast in Virudhunagar district in 2021 and formed an 8 member committee to suggest measures to prevent such accidents in the future.
- The panel suggested that
 - The *Explosives Act be amended* to make punishments more stringent than now,
 - Employing *only certified persons* for operations including mixing, filling of chemicals and making of colour pellets
 - *Usage of drones* for surveillance of various firecracker industry
- It directed the Tamil Nadu government to take appropriate action against the factory owners and officials responsible for the blast.
- It also directed the State government to prepare an action plan for proper management and disposal of hazardous waste generated by firecracker industries.

What actions must be taken to prevent firecracker accidents?

- **Constant monitoring-** Effective monitoring must be ensured and the enforcing agencies should take strict actions against violators and illegal units should be eradicated.
- Periodical inspection is the need of the hour.
- **Skilled workers-** Only trained workers should be allowed to work in these units so that explosion will be reduced.
- **Committee-** State level committee headed by Chief Secretary and District level committee headed by District Collector must monitor the units for ensuring safety measures.
- **Mixing ratio** - The chemical mixing ratio should be automated to reduce the accidents, as it accounts for majority of accidents.
- **Responsibility** - The industry should take the responsibility of the life and the health of workers.

FOR SAFETY SAKE

The following measures should be taken to avert fire accidents in firecracker manufacturing units and godowns:

MANUFACTURING UNITS

- Static current discharge plates should be installed in fireworks manufacturing units
- Mixing quantity allowed per day should tally to the manufacturing capacity of the units; it will avoid storage of these hazardous mixtures beyond the day
- Workers should sit only in designated places in the working shed, especially near doors to enable easy escape
- Manufacturing activities should not be done under tree shades and on rainy days
- Sieving/breaking of lumps of

raw materials/dusting of gunny bags inside the raw material store/mixing/filling rooms should be prohibited

- Knives, tools, and use of ferrous materials in any form should be prohibited in fireworks industry
- Number of persons in the working shed should be limited to approved numbers
- Colour pellets should be manufactured in separate sheds with wall mounts

GODOWNS

The stacking height for the storage of boxes containing fireworks should be within an accessible height for easy handling

Tools made of ferrous materials like staples and hammer should not be used in godowns

Workers should careful not to drop boxes during loading and unloading; trolley made of aluminum/brass fitted with rubber wheels can be used

Quick facts

Petroleum and Explosive Safety Organisation (PESO)

- PESO, formerly known as *Department of Explosives*, since its inception in *1898*, has been serving as a nodal agency for regulating safety of hazardous substances such as explosives, compressed gases and petroleum.
- PESO's major work is to administer the responsibilities delegated under the *Explosives Act 1884* and *Petroleum Act 1934* and the Rules made there under with the motto "**Safety First**".
- **Headquarters-** Nagpur, Maharashtra
- **Objective-** Provide operational and technical advice and assistance to central government, states, local bodies, law enforcement agencies, industry, trade and end users

References

1. [The Hindu- Tamil Nadu tragedy plagued fire cracker industry](#)
2. [The Hindu- Flouting norms in fireworks unit](#)



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