

Background Note on Green Crackers

I. Directions of Hon'ble Supreme Court of India in writ petition (Civil) No. 728/2015

Hon'ble Supreme Court of India in writ petition (Civil) No. 728/2015 in its order dated 23 October 2018 directed that the crackers with reduced emission (improved crackers) and green crackers, only would be permitted to be manufactured and sold. The relevant directions are as reproduced below:

- I. Use of Reduced Emission firecrackers (Improved crackers) - (a) Avoidance of use of ash as desiccant or filler materials in crackers for reduction in particulate matter by 15-20%. These can be implemented subject to approval by PESO, and (b) usage of charcoal meeting specifications of explosives and pyrotechnics as prescribed by PESO.
- II. Use of Reduced Emission firecrackers (Green crackers: Safe water and air sprinklers (SWAS) - Low emission sound and light emitting functional crackers with PM reduction by 30-35% and significant reduction in NO_x and SO₂ due to in-situ water generation as dust suppressant and low cost due to usage of low cost oxidants. These can be implemented subject to approval by PESO.

Point wise directions:

- The crackers with reduced emission (improved crackers) and green crackers, as mentioned in Suggestion Nos. II and III above only would be permitted to be manufactured and sold.
- As a consequence, production and sale of crackers other than those mentioned in Suggestion Nos. II and III is hereby banned.
- The manufacture, sale and use of joined firecrackers (series crackers or laris) is hereby banned as the same causes huge air, noise and solid waste problems.
- The sale shall only be through licensed traders and it shall be ensured that these licensed traders are selling those firecrackers which are permitted by this order.
- No e-commerce websites, including Flipkart, Amazon etc., shall accept any online orders and effect online sales. Any such e-commerce companies found selling crackers online will be hauled up for contempt of court and the Court may also pass, in that eventuality, orders of monetary penalties as well.
- Barium salts in the fireworks is also hereby banned.
- PESO is directed to review the chemical composition of fireworks, particularly reducing Aluminum content, and shall submit its report in respect thereof within a period of two weeks from today. For undertaking this exercise, PESO would also associate FRDC.
- Even those crackers which have already been produced and they do not fulfill the conditions mentioned in Suggestion Nos. II and III above will not be allowed to be sold in Delhi and NCR.
- PESO will ensure fireworks with permitted chemicals only to be purchased/possessed/sold/used during Diwali and all other religious festivals, of

any religion whatsoever, and other occasions like marriages, etc. It shall test and check for the presence of banned chemicals like Lithium/Arsenic/Antimony/Lead/Mercury.

- PESO will ensure suspension of the licenses of manufacturers of such fireworks items and appropriate disposal of such stock.
- PESO will ensure that only those crackers whose decibel (sound) level are within the limits are allowed in the market and will ensure to take action by suspending the licenses of the manufacturers on such violations and disposal of such lots. To add to it, as mentioned in the order dated September 12, 2017, the directions issued and restrictions imposed in the order passed by this Court on July 18, 2005 in Noise Pollution (V) shall continue to be in force.
- Direction Nos. 4 to 9 and 11 contained in the order dated September 12, 2017 shall continue to operate and are reiterated again.
- Extensive public awareness campaigns shall be taken up by the Central Government/State Governments/Schools/ Colleges informing the public about the harmful effects of firecrackers.
- On Diwali days or on any other festivals like GURPURAB etc., when such fireworks generally take place, it would strictly be from 8:00 p.m. till 10:00 p.m. only. On Christmas eve and New Year eve, when such fireworks start around midnight, i.e. 12:00 a.m., it would be from 11:55 p.m. till 12:30 a.m. only.
- The Union of India, Government of NCT of Delhi and the State Governments of the NCR would permit community firecracking only (for Diwali and other festivals etc. as mentioned above), wherever it can be done. For this purpose, particular area/fields would be pre-identified and pre-designated by the concerned authorities. This exercise shall be completed within a period of one week from today so that the public at large is informed about the designated places one week before Diwali. The areas designated now for the purpose of Diwali shall be valid for community firecracking on other occasions/festivals as well, as mentioned above. Even for marriages and other occasions, sale of improved crackers and green crackers is only permitted.
- Insofar as other States are concerned, an endeavour shall be made by them also to explore the feasibility of community firecracking. However, it is made clear that Direction No. (xiv) pertaining to the duration within which fireworks can take place on all such occasions would be applicable throughout India. Similarly, Direction No. (xiii) for extensive public awareness campaigns is also a pan India direction.
- All the official respondents, and particularly the Police, shall ensure that fireworks take place only during the designated time and at designated places, as mentioned above. They shall also ensure that there is no sale of banned firecrackers. In case any violation is found, the Station House Officer (SHO) of the concerned Police Station of the area shall be held personally liable for such violation and this would amount to committing contempt of the Court, for which such SHO(s) would be proceeded against.
- CPCB and respective State Pollution Control Boards/ Pollution Control Committees (SPCBs/PCCs) of the States and Union Territories shall carry out short-term monitoring in their cities for 14 days (commencing from 7 days prior to Diwali and ending 7 days after Diwali) for the parameters namely, Aluminum,

Barium, Iron apart from the regulatory parameters against the short-term Ambient Air Quality Criteria Values (AAQCVs) proposed by CPCB with regard to bursting of firecrackers. This will help in generation of data on pollution caused by the bursting of firecrackers and would be helpful for regulation and control quantity of Aluminum, Barium and Iron used in the manufacture of firecrackers.

II. Directions no. 04 to 09 and 11 contained in the order dated 12.09.2017:

4. The concerned police authorities and the District Magistrates will ensure that fireworks are not burst in silence zones that is, an area at least 100 meters away from hospitals, nursing homes, primary and district health-care centres, educational institutions, courts, religious places or any other area that may be declared as a silence zone by the concerned authorities.

5. The Delhi Police is directed to reduce the grant of temporary licences by about 50% of the number of licences granted in 2016. The number of temporary licences should be capped at 500. Similarly, the States in the NCR are restrained from granting more than 50% of the number of temporary licences granted in 2016. The area of distribution of the temporary licences is entirely for the authorities to decide.

6. The Union of India will ensure strict compliance with the Notification GSR No. 64(E) dated 27th January, 1992 regarding the ban on import of fireworks. The Union of India is at liberty to update and revise this notification in view of the passage of time and further knowledge gained over the last 25 years and issue a fresh notification, if necessary.

7. The Department of Education of the Government of NCT of Delhi and the corresponding Department in other States in the NCR shall immediately formulate a plan of action, in not more than 15 days, to reach out to children in all the schools through the school staff, volunteers and NGOs to sensitize and educate school children on the health hazards and ill-effects of breathing polluted air, including air that is polluted due to fireworks. School children should be encouraged to reduce, if not eliminate, the bursting of fireworks as a part of any festivities.

8. The Government of NCT of Delhi and other States in the NCR may consider interacting with established medical institutions for issuing advisories cautioning people about the health hazards of bursting fireworks.

9. The interim direction issued by this Court on 31st July, 2017 prohibiting the use of compounds of antimony, lithium, mercury, arsenic and lead in the manufacture of fireworks is made absolute. In addition, the use of strontium chromate in the manufacture of fireworks is prohibited.

11. Since there are enough fireworks available for sale in Delhi and the NCR, the transport of fireworks into Delhi and the NCR from outside the region is prohibited and the concerned law enforcement authorities will ensure that there is no further entry of

fireworks into Delhi and the NCR till further orders. In our opinion, even 50,00,000 kg of fireworks is far more than enough for Dussehra and Diwali in 2017. The permanent licensees are at liberty to exhaust their existing stock of fireworks in Delhi and the NCR and, if that is not possible, take measures to transport the stocks outside Delhi and the NCR

Do's and Don't's for firecrackers

What You can Do as a Citizen:

- On Diwali days or on any other festivals like Gurgurab etc., when such fireworks generally take place, it should strictly be from 8:00 p.m. till 10:00 p.m. only. On Christmas even and New Year eve, when such fireworks start around midnight, i.e. 12:00 a.m., it should be from 11:55 p.m. till 12:30 a.m. only.
- The crackers approved with reduced emission (improved crackers) and green crackers, will be permitted to be manufactured and sold.
- The manufacture, sale and use of joined firecrackers (series crackers or laris) is banned as the same causes huge air, noise and solid waste problems.
- The sale should only be through licensed traders and it should be ensured that these licensed traders are selling those firecrackers which are permitted by Hon'ble Supreme Court's order.
- No e-commerce websites, including Flipkart, Amazon etc., shall accept any online orders and effect online sales. Any such e-commerce companies found selling crackers online will be hauled up for contempt of court and the Court may also pass, in that eventuality, orders of monetary penalties as well.
- Use of Barium salts in the fireworks is also banned.
- PESO will ensure suspension of the licenses of manufacturers of such fireworks items and appropriate disposal of such stock and found presence of banned chemical for fireworks.
- Designated areas will be provided for community firecracking. The areas designated for the purpose of Diwali shall be valid for community firecracking on other occasions/festivals as well. Even for marriages and other occasions, sale of improved crackers and green crackers is only permitted.
- The concerned police authorities and the District Magistrates will ensure that fireworks are not burst in silence zones.
- Notified areas as Silence Areas/Zones:
 - An area of 100 meters around all Educational Institutions having more than one thousand students,
 - An area of 100 meters around all Courts,
 - An area of 100 meters around all Government Office Complexes,
 - An area of 100 meters around all 100 bedded and above hospitals
- Whom to Approach/Who can take action in case of violations of Noise rules:
 - All Deputy Commissioners, Office of Divisional Commissioner, GNCTD
 - All Sub Divisional Magistrates, Office of Divisional Commissioner, GNCTD
 - Asstt. Commissioners of Police (Control Room & Traffic).
 - All Sub Divisional Police Officers including Railways & Airports
 - Chairman and Member Secretary of Delhi Pollution Control Committee, Delhi

Harmful effects of bursting of firecrackers:

Health issues: throat, nose and eye-related problems, triggers problems such as asthma, coughing, bronchitis, and can aggravate problems associated with lung disease, and in extreme cases could cause nervous system breakdown and cognitive interference. firecrackers produce extremely high levels of personal exposure to PM₁₀ and PM_{2.5} levels that are likely to have significant short-term and long-term adverse health effects

Environmental issues: releases harmful gases and causes air pollution, noise pollution by producing loud noises, global warming by releasing the greenhouse gas carbon dioxide in the atmosphere after burning.