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1.0 INTRODUCTION

To worship God and Goddess generally natural things like Milk, Curd, Ghee, Coconut, Betel leaves and river water are used. Generally, Idols are made with clay or locally available materials and then coloured with natural materials like Chandan, Turmeric etc. The religious scripts, mythology and religious rituals have attempted to drive the importance of preserving nature by adoring it through the centuries. Bhagavadgita (9.26) states:

“Patram Pushpam phalam toyam, yo mey bhaktya prayachchati Tadaham bhakt yupahrutam asnaami prayataatmanaha” which means

“ If one offers me in pure consciousness with love and devotion a fruit, a flower, a leaf or even water, I delightfully partake of that offered article”

भावार्थ : जो कोई भक्त मेरे लिए प्रेम से पत्र, पुष्प, फल, जल आदि अर्पण करता है, उस शुद्धबुद्धि निष्काम प्रेमी भक्त का प्रेमपूर्वक अर्पण किया हुआ वह पत्र-पुष्पादि मैं सगुणरूप से प्रकट होकर प्रीतिसहित खाता हूँ॥

Traditionally, clay is used to make Ganesh idols. Over the years however, plaster of Paris (POP), which is lighter and cheaper, has become the favoured material to mould idols. POP contains chemicals such as gypsum, sulphur, phosphorus, and magnesium. The dyes used to colour these idols may also contain mercury, cadmium, arsenic, lead, and carbon. Plastic and thermocol accessories are used to decorate these idols. Such materials are not biodegradable, hence are toxic when immersed in water bodies. Hence, need was felt to develop guidelines for idol immersion.

In the matter of Public Interest Litigation (PIL) / W.P.(C) No. 1325/2003 in the matter of Janhit Manch Vs. The State of Maharashtra & Ors., Hon'ble High Court of Mumbai in its order dated 22/07/2008 has given the following directions to the Central Government:-

“We expect that the Central Govt. will consider laying down of guidelines for immersion of idols and would also consider related matters with regard to pollution of water bodies. Both the Union Government as well as the State Government shall consider it expeditiously because the time lost involving the pollution might prove dangerous for environment of the country in long run”

In pursuance to the directions of Hon'ble High Court, Central Pollution Control Board (CPCB) constituted a Committee under the Chairmanship of Chairman, Central Pollution Control Board, vide order No. A-22011/1/90-Mon, dated February 10, 2009. In the year 2009. The constituted Committee held meetings with the concerned stakeholders and discussed the issues including designated identification of places for idol immersion in the river stretch, use of natural materials in "Pooja", mass awareness programmes to be initiated every year before commencement of all activities of worship and idol immersion. Subsequently, based on the recommendations of the Committee, in the year 2010, CPCB has finalized "Guidelines for Idol Immersion" and circulated to all the stakeholders for ensuring its implementation. These guidelines have been prepared with a view to ensure environmental friendly idol immersion without affecting the quality of water bodies while ensuring religious observance. These guidelines emphasize the need for restriction on single use plastic materials for making idols, use of naturally occurring colors for coloring idols, imposing restrictions on size of the idol, construction of temporary synthetic lined ponds of adequate capacity, etc.

During the last few years, there has been some developments in terms of substitutes for various materials used for idols making as well as disposal of idol immersions in temporary artificial designated ponds/tanks, earlier guidelines circulated by CPCB in the year 2010 has been revised after taking views of stakeholders specially emphasizing use of naturally occurring clay, colors in place of synthetic paints and chemicals for coloring idols, arrangement for the provision of temporary confined ponds or tanks for immersion of idols, imposing spot fine for violation of guidelines, safe disposal of solid wastes generated during visarjan/immersion activities, development of market system whereby manufacturers or craftsman or artisans themselves can buy back the idols for reuse and other aspects have been considered and incorporated appropriately as felt necessary. The revised guidelines for idol immersion are detailed in subsequent paras: -

2.0 GUIDELINES FOR IDOL MAKERS-CRAFTSMANS OR ARTISANS

- (i) Idols made up of only natural, bio-degradable, eco-friendly raw materials without any toxic, inorganic raw materials [such as traditional virtuous clay and mud as well as free from Plaster of Paris (PoP), plastic and thermocol (polystyrene)] should be encouraged, allowed and promoted and Idols made up of Plaster of Paris (PoP) shall be banned.

- (ii) Only dried flower components, straw etc. for making ornaments of idols and natural resins of trees may be used as a shining material for making idols attractive.
- (iii) Use of Single use plastic and thermocol materials shall not be permitted strictly and only eco-friendly materials as straw structure should be used in making idols or decoration of idols/pandals/tazias in order to prevent pollution in recipient water bodies.
- (iv) Use of toxic and non-biodegradable chemical dyes/oil paints for painting idols should be strictly prohibited. Enamel and synthetic dye based paints on idols should be discouraged instead eco-friendly water-based, bio-degradable and non-toxic natural dyes should be used.
- (v) For beautification of idols, removable and washable decorative clothes made only with natural materials and dyes shall be used in place of disposable material containing paints and other toxic chemicals. Only naturally occurring colors from plants (flowers, barks, stamens, leaves, roots, seeds, whole fruits), feathers of different birds, mineral or colored rocks shall be used for coloring.
- (vi) Craftsmen or artisans or manufacturer involved in making idols should be registered with the civic bodies, and should involve in making eco-friendly idols in accordance with these guidelines. In case of Large Scale Idol manufacturers (at least involved in making more than 100 idols in a day) shall obtain registration from the concerned ULBs (registration fee along with a deposit as decided by the ULB depending on the idol making capacity) and failing to comply with these guidelines or any violation of registration conditions, the deposit shall be forfeited by the ULBs apart from prohibition of idol making at least for two years.
- (vii) In the interest of protection of the environment, the craftsman or artisans prefer to adopt innovative approaches (Eg., use of natural clay, pyramid of sugarcane sticks that represents the pandals, natural clay mixed with alum for making idols (on disintegration of idol made out of mud mixed with alum in water, then alum act as a coagulant) in consultation with the concerned State Pollution Control Board (SPCB)/Pollution Control Committee (PCC).

3.0 GUIDELINES FOR POOJA ORGANISING COMMITTEES

- (i) As far as possible, low height and eco-friendly idols (made with natural clay, idols stuffed with eco-friendly food materials such as corn, spinach, wheat and vegetable powder), idols decorated with biodegradable, organic colours such as turmeric, chandan and gerua etc., (list of natural, bio-degradable and non-toxic annexed as **Annexure-I**) only should be used for offering poojas to avoid impact on environment.
- (ii) Use of cleaned multi-use metallic or glass or plastic utensils is ideal choice, especially when such material is available from utensil banks. Only biodegradable plates such as Patravali or Pattal or Vistaraku or Vistar or Khali or trencher made with broad dried leaves such as Areca/Banana/Banyan/Sal leaves, biodegradable paper cups/plates and earthen pots may be used in place of single use plastic and polystyrene (Thermocol) for prasad distribution and other purposes.
- (iii) Worship material like flowers, Patri (leaves), *vastras* (clothes), decorating materials (made of paper and bio-degradable or compostable plastic but not single use plastic) etc. should be ensured to remove before immersion of idols and segregated in colour coded bins provided at the designated idol immersion areas/spots.
- (iv) In the interest of protection of the environment, Pooja Organizing Committees should procure eco-friendly idols only from the respective ULBs registered or authorised craftsman or artisans.
- (v) Pooja Organising Committees should seek prior permission from concerned ULB as the case may be by providing management plan and the required provisions (as per the format to be issued by the ULBs) for ensuring safe idol immersion during festival season well at least one month in advance for making necessary arrangements in consultation with the concerned departments.

4.0 ROLE AND RESPONSIBILITIES OF THE LOCAL AND URBAN AUTHORITIES

- (i) Licenses/permits may be granted by the Local and Urban Bodies within the respective jurisdiction to only those Idol manufacturers or makers or craftsman or artisans who uses only eco-friendly natural clay materials (but not PoP or baked clay) in making idols, prior to festive times.

Also, large scale manufacturers (involved in making idols more than 100 in a day) shall obtain registration from the concerned ULB along with the prescribed fee and a deposit (as decided by the ULB depending on the idol making capacity). Registered idol manufacturer or maker or craftsman or artisan failing to comply with these guidelines or any violation of registration or permission conditions, registration or permission granted shall be cancelled apart from prohibition of idol making manufacturer at least for two years and in case of idol manufacturer, the deposit shall be forfeited by the respective ULB.

- (ii)** While granting licenses or permits to the idol makers a list of permitted and non-permitted substances to be used for making/coloring/decorating idols may be provided to the Idol makers or craftsman or artisans.
- (iii)** Only registered or licensed idol maker or craftsmen or artisans should be strictly allowed to make idols within the jurisdiction of the respective Urban and Local Bodies as the case may be, in accordance with these guidelines.
- (iv)** As far as possible, instead of immersion of idols in water bodies, all the resident welfare associations or individual households in a city or town should be encouraged to create temporary ponds/tanks of suitable size and adequate capacity with necessary provision for collection and storage of segregated waste prior to immersion, and public should be involved for immersion of idols in such temporary/artificial ponds/tanks made by the resident welfare association or individual household within their campus itself. The waste generated from designated idol immersion activity sites shall be collected and disposed of safely by the ULBs within 24 hours of completion of the idol immersion activity.
- (v)** Arrangements for temporary artificial idol immersion ponds or tanks in close vicinity of the public or on the banks of water bodies with all necessary safety provisions and waste collection centres prior to idol immersion should be arranged for ensuring safe idol immersion during festive season, by the concerned ULBs in association with the other departments as well as Pooja Organizing Committees.
- (vi)** The temporary Idol Immersion Ponds/Tanks with the liner made with well graded/highly impervious clay or eco synthetic liner should be arranged at suitable locations including on the banks of rivers or stagnant water

bodies such as ponds or lakes shall be cordoned off and barricaded by ULBs and with all other necessary provisions keeping in view safety of the public (such as proper access, approach roads, sign boards, fire safety measure, barricades, designated space for keeping idols prior to immersion, suitable plat form with crane provision for idol immersion).

- (vii) In the interest of protection of environment, Urban and Local bodies (ULBs) shall impose restrictions on height of the idol to the idol making agencies or manufacturer or craftsman or artisans (as lesser the size of the idol better would be the immersion process and less consumption of materials required for making idols) depending on the availability of water bodies, provisions made for idol immersions by the ULBs.
- (viii) Waste collection centre in the vicinity of the designated temporary/artificial idol immersion sites or locations should be arranged for ensuring collection of segregated materials (such as flowers, leaves, decorating materials etc.,) prior to idol immersion. All waste collection centres should have a provision of colour coded bins of adequate size for collection and storage of segregated materials.
- (ix) Also, all the collected and segregated materials should be transported and disposed of periodically or within 24 hours of completion of idol immersion in accordance with the prevailing provisions of Solid Waste Management Rules 2016, as amended notified under the Environment (Protection) Act, 1986 (i.e., Reusable clothes may be sent to local orphan homes for reuse, bio-degradable materials for composing and non-biodegradable materials for ultimate disposal in sanitary landfills by the concerned Urban or Local Authorities, as the case may be).
- (x) After completion of the idol immersion ceremony, within 24 hours, the liner material shall be removed and the temporary pits or tanks should be filled with native soil and levelled properly. Other disposable materials shall be managed in accordance with these guidelines (i.e., Clay, Bamboo and wooden logs, if any may be reused). The straw structure materials recovered from designated temporary or artificial immersion areas or spots shall be retrieved and processed for converting into organic manure.
- (xi) Public should be educated on aspects relating to procurement of eco-friendly idols only from the licensed or permitted idol makers or craftsman or artisans, location details of idol makers, type of materials to be used for ill effects of immersion of idols/Tazias in the holy water bodies

and the existing guidelines for idol immersion through mass awareness programme.

- (xii) Immersion of Tazia during Muharram should be performed in Eco- friendly manner.
- (xiii) Local Bodies /Urban Bodies/District Authorities should make efforts to identify and arrange adequate number of designated temporary or artificial immersion ponds or tanks in consultation with River/Pond Authority, Port Authority, Water Supply Board, Irrigation Department and other concerned State/UT Departments, in the close vicinity of the public colonies (such as open grounds) to avoid overcrowding at the water bodies and also to reduce pollution load on receiving water bodies. In case, the designated temporary artificial ponds or tanks are required to be arranged on the bank of the river, in such a case, it should be arranged at suitable places where flow of river/ stream is not harmful to the public, does not inundate in case of increase in flow of river during idol immersion period and river is cordoned off and barricaded suitably to avoid any loss of life specially during immersion activities.
- (xiv) A co-ordination Committee comprising local Police Department, Non-Government Organizations, Local Authorities, SPCB/PCC, representatives of *pooja organizing* committees and other concerned stakeholders may be set up for guiding the public in carrying out the immersion without affecting environmental damages to the water bodies.
- (xv) To ensure safe immersion of idols during festive season, ULBs should deploy adequate number of staff at all the designated idol immersion spots under overall supervision of the nodal officer to be designated by the concerned ULBs. The Nodal Officers also should co-ordinate with the co-ordination committee constituted by the ULBs.
- (xvi) Details regarding arranged designated temporary or artificial immersion spots or areas need to be notified and public as well as *pooja organizing* committees preferably at least one week in advance of idol immersion through electronic and local media in vernacular language.
- (xvii) Sanitary workers shall also be deployed at all the temporary immersion sites for ensuring removal of bio-degradable items like flowers, leaves, clothes, ornaments etc. prior to idol immersion at the designated areas. ULBs shall provide separate colour coded bins for collection and

segregation of biodegradable and non-biodegradable wastes at immersion spots.

- (xviii) Littering or burning of solid wastes comprising of used flowers, clothes, decorating materials, recovered material such as Bamboo and wooden logs, straw structures etc. so generated at the immersion sites or on the banks of water body should be prohibited strictly.
- (xix) In case of immersion of idols in rivers, lakes and ponds is inevitable, arrangement may be made for construction of adequate capacity temporary confined areas at designated places with earthen bunds for the purpose of immersion of idols atleast 50 m away from the waterbody. Temporary immersion ponds shall have a free board of at least 50 cm. Temporary ponds should be constructed with impervious liner (made with well graded/highly impervious clay or eco synthetic liner) with a provision of adequate landing platform for keeping the crane for idol immersion. Water in the temporary or artificial immersion ponds or tanks may be drawn from the nearby water body. After completion of immersion, only supernatant water may be allowed to flow into river/pond/lake, as the case may be, after checking for colour and turbidity as per BIS specification for Drinking Water IS 10500:2012. Natural coagulants shall be used for pre-treatment of wastewater mainly composed of polymers of natural origin extracted from plants, algae or animals. Among these are polysaccharides and water soluble substances that act as coagulation and / or flocculation agents. include microbial polysaccharides, starches, gelatin galactomannans, cellulose derivatives, chitosan, glues, and alginate.
- (xx) Concerned ULB Authorities also should consider option of construction of permanent cemented large sized artificial tanks for immersion of idols/Tazias at suitable places for a village or town or city to avoid direct immersion of idols into lakes/rivers/ ponds/sea.
- (xxi) Proper Sign Boards showing location of temporary idol immersion ponds/tanks, route charts to be provided at all salient points and also create awareness through local newspapers/electronic media in vernacular language, atleast one week in advance at all the salient points. by the ULBs.
- (xxii) The Pooja Organizing Committees/Local or Urban Bodies/ District Authorities be involved in organizing a public campaign on the ill effects of

the toxic components of coloring materials, not only of the idols, but also other decorating materials used during the festive season, for immersing (visarjan) the idol or 'pratima' or tazias only in designated temporary artificial ponds or tanks. Specific leaflets and poster for mass awareness may be prepared in vernacular languages and displayed at salient points. Further, the *Pooja* committees/Local or Urban Bodies/ District Authorities also be persuaded to display such posters and distribute leaflets among worshippers involving Eco Clubs, NGOs, Education Institutes/Universities and Schools.

- (xxiii) Idol makers, pooja Committees may also be awarded for promotion of clay idols made with natural colors, consistent awareness for ensuring compliance to these rules. Imposing Spot fine for violation of these guidelines also be practiced by the Local and Urban Authorities.
- (xxiv) ULBs also shall make arrangements for movable artificial tanks to reach residential welfare societies where people can do idol immersion without crowding and polluting the water bodies to avoid uncontrolled crowd conditions at Ghats during idol immersion and also to avoid accidents that may likely to happen at the time of idol immersion in rivers, lakes and ponds.
- (xxv) Management of idol waste and treatment of polluted water from the designated temporary Idol Immersion ponds or tanks should be carried out as detailed below:-
 - (a) Practices that would lead to some economic benefits like returning the visarjit idols to the idol maker or management of solid wastes generated during visarjan activities in different localities for household as well as large community festivals shall be ensured in accordance with the prevailing rules by the Local/Urban bodies. As far as possible, only non-recyclable/non-biodegradable/non-recoverable materials should be disposed of in sanitary landfills by the Local/Urban bodies.
 - (b) Community festivals with large idols should be given permission by ULBs only when the organisers submits a detailed management plan prepared in line with the prevailing rules or by the guidelines issued from time to time on environmental management charge basis to be decided by the Local/Urban Bodies. The bamboo scaffolding/metal sub structure on which large idols are built shall be reused as far as possible and may be collected separately from the degradable remains.

- (c) The charges of hiring/outsourcing agencies to clean-up the wastes from the designated idol immersion sites should be collected as 'visarjan charges' from every individual citizen or community. The visarjan charges collected should be utilized to clean-up the visarjan sites, to manage polluted water from the artificial temporary tank/ponds and for environmentally sound management of the solid remains of idol, etc. The waste water collected from the designated temporary artificial ponds/tanks after ensuring on-site pre-treatment shall be discharged into or public sewers leading to the Sewage Treatment Plants (STPs)/ Common Effluent Treatment Plants (CETPs).
- (d) Disintegrated material/Non-biodegradable materials shall be dealt as per provisions of the Solid Waste Management Rule 2016, as amended.

5.0 GUIDELINES FOR IDOL IMMERSION IN RIVERS, LAKES AND PONDS

- (i) As far as possible idol immersion in Rivers/Ponds/Lakes shall be encouraged only at specific designated artificial confined tanks/ponds with liner made with well graded/highly impervious clay or eco synthetic liner, on the banks shall be promoted.
- (ii) A temporary artificial tank or pond with liner made with well graded/highly impervious clay or eco synthetic liner (HDPE), and having earthen bunds on the bank of the river/lake/pond shall be created for Idol Immersion by the concerned ULBs. Temporary artificial tank or pond.

In case of immersion of idols in rivers, lakes or ponds is inevitable, a designated location (having proper approach, access, corner portion of a river/pond/lake, having shallow depth of water in river or lakes or ponds) should be identified and safety provision preferably steel or wooden barricades shall be made by concerned ULBs.

- (iii) All the flowers, leaves and artificial ornaments of idols should be removed prior to immersion of idols and only such idols may be immersed in a designated place provided with safety provisions.
- (iv) Lime or alum or any other equivalent coagulant should be added in designated temporary lined pond/tank as pre-treatment option for ensuring settling of solids. After completion of immersion, only

supernatant water may be allowed to flow into river/pond/lake, as the case may be, after checking for colour and turbidity as per BIS specification for Drinking Water IS 10500:2012.

- (v) Post immersion, with remains of idols and activities such as desludging of the designated area should be undertaken and ensured its disposal as per Solid Waste Management Rules 2016 as amended thereafter, within 24 hours by the concerned ULBs, as per these guidelines.

6.0 GUIDELINES FOR IDOL IMMERSION IN SEA

- (i) In case of Idol immersion in sea, immersion may be done between low tide line (LTL) and high tide line (HTL) (irrespective of its depth) and only at designated areas identified by the Coastal Zone Management Authorities in the States/UTs. The low-tide line and high tide lines may be identified and marked well in advance by the ULBs in consultation with the concerned authorities.
- (ii) Immersion of Idols in High Tide Line (HTL) & Low Tide Line (LTL) into the sea may be permitted only in Non-Eco-Sensitive Areas earmarked previously in consultation with all the concerned agencies approved by Govt. of India for demarcation of HTL, LTL, Eco-sensitive area etc.
- (iii) Concerned authorities in State Govt./UT Administration dealing with safety & security in coastal areas shall take care of the necessary arrangements such as Motor Boats with security personnel/home guards with adequate safety equipment be deployed to supervise idol immersion activities during festive season.

7.0 GUIDELINES FOR IDOL IMMERSION BY HOUSEHOLDS

- (i) Individual households should be encouraged to use only eco-friendly idols made of natural clay and bio-degradable materials as decorative and pooja materials.
- (ii) As far as possible, immersion of small idols should be done at their homes in eco-friendly manner i.e., in a bucket filled with water and idol be kept in immersed state until it dissolves completely. After settlement of settleable and colloidal solids (if required alum powder or any other equivalent coagulant may be mixed and stirred vigorously using a stick at least for 30 seconds and thereafter slow mixing at least for 30 seconds and

then allowed to settle), the supernatant liquid may be used either in gardening or discharged in a drain. Settled mud can be dried and then reused further for future idol making or may be used in gardening as soil).

- (iii) In case, individual households intend to perform idol immersions, then idols should be immersed only in the designated on-land temporary artificial ponds or tanks located nearby or artificial movable tanks arranged by the ULBs.

8.0 ROLE OF STATE POLLUTION CONTROL BOARDS (SPCBs) IN STATES & POLLUTION CONTROL COMMITTEES (PCCs) IN UNION TERRITORIES

- (i) Concerned State Pollution Control Board (SPCB) in the State/Pollution Control Committee (PCC) in the Union Territory Administration should conduct water quality assessment of the water bodies, preferably in Class-I cities (having population more than one lac), at three stages i.e. Pre-immersion, during immersion and post-immersion. During post-festival, samples should be collected preferably after 3rd, 5th and 7th and 9th day of the festival.
- (ii) Considering the size of water body, appropriate number of sampling locations may be determined in order to get a fairly representative assessment of water quality during the afore-said periods. Sampling should be done at least 100 m away (downstream side in case of flowing water bodies-rivers) from the immersion site/location to avoid turbulence effect. For ascertaining water quality, Physico-chemical parameters such as pH, DO, Color, BOD, COD, Conductivity, Turbidity, TDS, Chloride, TSS, Hardness, Total Alkalinity and Metals (such as Chromium, Lead, Zinc, Copper, Cadmium, Mercury, Antimony, Barium, Cobalt, Manganese, Strontium) may be analyzed. Apart from the water samples, sediment samples also be collected during pre-immersion, during immersion and post-immersion and collected sediment samples be analysed for the metals (such as Chromium, Lead, Zinc, Copper, Cadmium, Mercury, Antimony, Barium, Cobalt, Manganese, Strontium)
- (iii) Detailed reports should be posted on the SPCBs/PCCs website in public domain and also shall be shared with Ministry of Environment, Forest and Climate Change (MoEF & CC), Ministry of Jal Shakti (MoJS) and CPCB, within two months of completion of last sampling conducted for a particular festival.

Annexure-I

Major Types of Natural Dyes and Their Origin

Chemical class	Coloring matter	Origin	Color obtained
Vat dyes			
Indole	Indigotin	Woad, indigo	Blues
Quinone	Juglone	Walnut	Browns
Mordant dyes			
Anthraquinones	Alizarin	Madder roots	Reds, oranges, browns
	Pseudopurpurin	Madder roots	Reds, oranges, browns
	Munjistin	Munjeet stems	Reds, browns, maroons
	Laccaic acids	Lac insects	Reds, purples, Maroons
Flavoid tannins	Catachin	Cutch	Browns, grays
Saffron, Flavone	Luteolin	Weld	Yellows, khaki
Flavonol	Quercetin	50% of all plants	Yellows, khaki
Anthocyanins	Cyanidin	Elderberries	Purples
Neoflavanoidones	Haematoxylin	Logwood	Violets, blacks
	Brazilin	Brazilwood	Reds, purples
Isoflavanoid	Pterocarpin	Sanderswood	Oranges
Direct dyes			
Cartinoid	Curcumin	Turmeric	Yellows
	Crocin	Saffron, gardenia	Yellows
Alkaloid	Berberine	Mahonia wood	Yellows
Orinol	Orcein	Orchil	Purples
Benzoquinone	Carthamine	Safflower	Pinks
Reactive dyes			
Depsidies	Atranorin	Lichens	Fawns
Despidones	Salazinic acid	Lichens	Browns

Source:- [Eco-friendly dyes and dyeing \(http://sciedtech.eu/journals/advmtenvsci/current-issue/\)](http://sciedtech.eu/journals/advmtenvsci/current-issue/)