

Impact of Ganesha idols immersion on water quality of Bengaluru Lakes

Ganesh Chaturthi, also called VinayakaChaturthi, is an auspicious Hindu festival which is celebrated for several days every year. The festival is celebrated in the Bhadra month as per the Hindu calendar which generally falls in mid-August to September. It marks the birthday of the beloved elephant-headed Lord Ganesha.

In this festival Ganesha idols are used for Pooja and procession. Ganesh idols are generally made up of clay, Plaster of Paris (POP), plastic and cement etc. Toxic paints are used in decorating the idol. After the immersion, the ingredients of the statue do not completely dissolve in water which then leads to environmental pollution. Idols are bid farewell by taking out grand processions leading to large water bodies. The cause for worry for several years has been the amount of pollution both, land and water.

Ganesh idols are often decorated with toxic paints which contains heavy metals such as lead and mercury which seeps into the water after the **idol immersion**, and adds to the acidic level of water which is not good for the environment and marine life. It can also cause several diseases in humans.

Over the years with growing environmental awareness, people have started celebrating GaneshChaturthi in an eco- friendly way. This includes getting Ganesha idols made of natural clay/ mitti and using only flowers and natural items for decorating the pandals.

In this regard, Every year during this festival, the Karnataka State Pollution Control Board creating awareness to public through medias and also conducting special water quality monitoring as per the guidelines issued by the Central Pollution Control Board.

Twenty six lakes were selected for this study and the samples were collected each year before Ganesha idol immersion and after Ganesha idol immersion and

categorised the data by using water quality determining criteria for tested parameters.

The water quality criteria is as follows;

List of Lakes monitored during GaneshaChaturthi

SI No	Name of the Lake	SI No	Name of the Lake
1	Mallathahalli lake	14	Binnamangala lake
2	Ullalu lake	15	Ulsoor lake, near Kalyani
3	Kommaghatta lake	16	Byrasandra lower lake
4	Lalbhagh lake	17	Shivapura lake
5	Yediyur lake	18	Sankey tank lake water in kalyani
6	Madavara lake	19	K. Mallasandra lake water
7	Herohalli tank	20	Yellamallappa lake
8	Yelahanka lake Kalyani	21	Hulimavu lake
9	Allalassandra lake	22	Singasandra lake
10	Hebbal lake Kalyani	23	Kasavanahalli lake
11	Jakkur lake Kalyani	24	Begur lake
12	DoddaBommasandra lake Kalyani	25	Giddanahalli tank
13	Rachenahalli lake kalyani	26	Jigani tank

Sl. No.	Parameter	A	B	C	D	E
1	pH	6.5-8.5	6.5-8.5	6.0-9.0	6.5-8.5	6.0-8.5
2	Electrical Conductivity, µs/cm	-	-	-	-	2250
3	Dissolved Oxygen, mg/L	6	5	4	4	-
4	Biochemical Oxygen Demand, mg/L	2	3	3	-	-
5	Free Ammonia, mg/L	-	-	-	1.2	-
6	Sodium absorption Ratio	-	-	-	-	26
7	Boron, mg/L	-	-	-	-	2

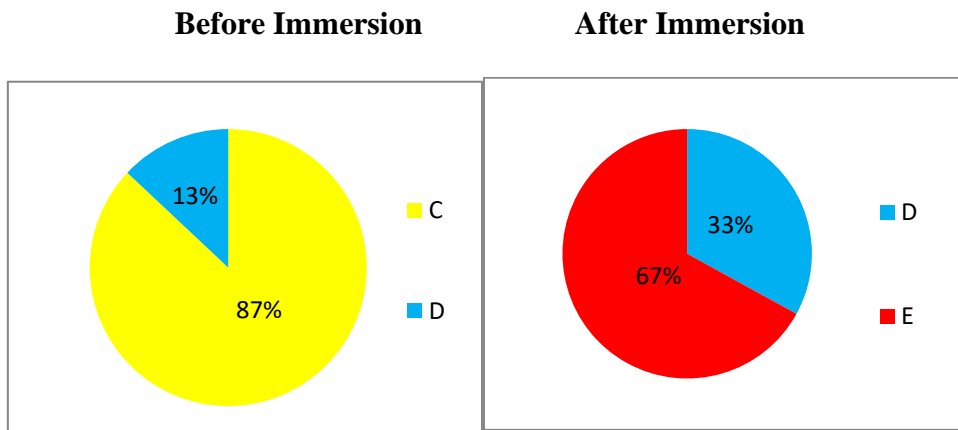
Class of Water	Designed best use
A	Drinking Water Source without Conventional treatment but after disinfections
B	Outdoor bathing (Organized)
C	Drinking Water Source after conventional treatment and disinfection.
D	Propagation of Wild Life, Fisheries
E	Irrigation, Industrial cooling, Controlled Waste disposal
Below-E	Not Meeting A,B,C, D & E Criteria

The results in percentage of the water quality before immersion and after immersion of the idol for the period of 7 years (2014-2020) are as follows;

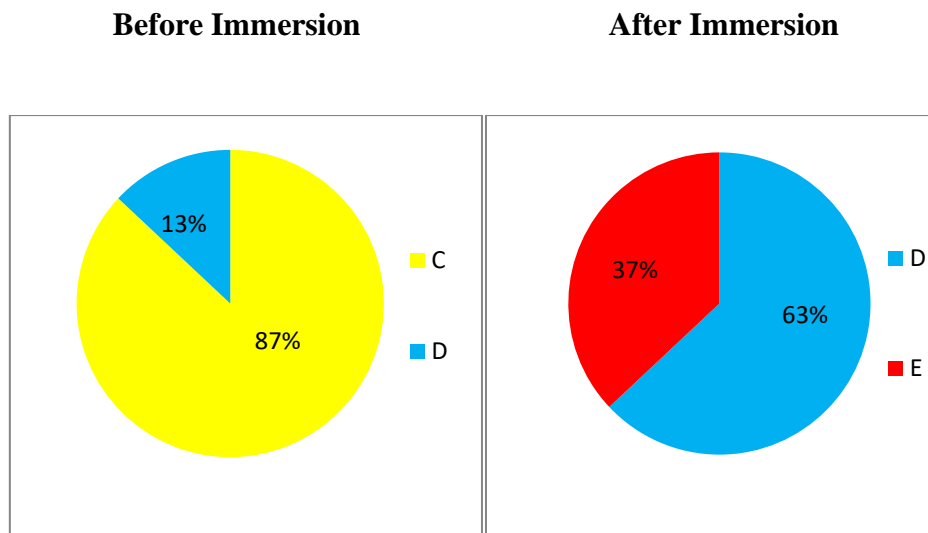
Sl. No	Year	Class of Lakeswater quality (in percentage)											
		Before idol immersion						After idol immersion					
		A	B	C	D	E	<E	A	B	C	D	E	<E
1	2014	-	-	87	13	-	-	-	-	-	33	67	-
2	2015	-	-	87	13	-	-	-	-	-	63	37	-
3	2016	-	-	35	65	-	-	-	-	-	52	48	-
4	2017	-	4	48	48	-	-	-	-	4	48	48	-
5	2018	-	4	15	81	-	-	-	-	-	77	23	-
6	2019	-	-	9	91	-	-	-	-	-	-	100	-
7	2020	-	-	47	47	6	-	-	-	5	90	5	-

From the above monitoring data, it is concluded that “**when compared to the monitoring results of previous years i.e 2014-19, deterioration of lakes (Class ‘E’) during Ganesh Festival-2020 is very less (i.e 5% in Class ‘E’) due to awareness created and measures taken by the Karnataka State Pollution Control Board**”.

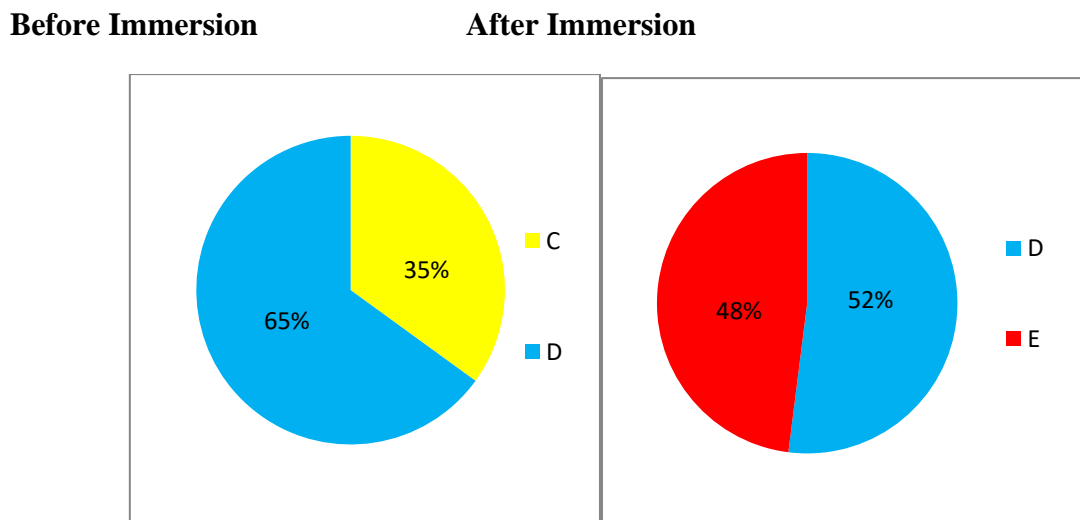
1. Lake water quality (26 lakes) of Bengaluru during Ganesha Festival-2014



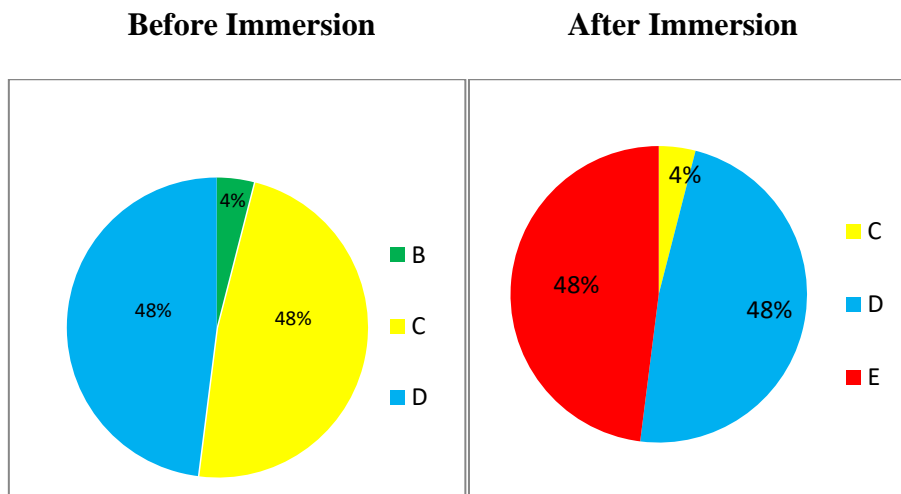
2. Lake water quality (26 lakes) of Bengaluru during Ganesha Festival -2015



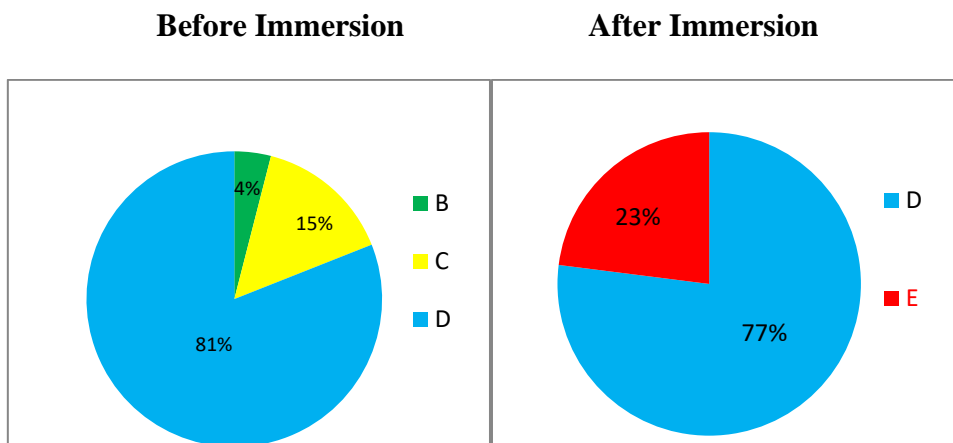
3. Lake water quality (26 lakes) of Bengaluru during Ganesha Festival -2016



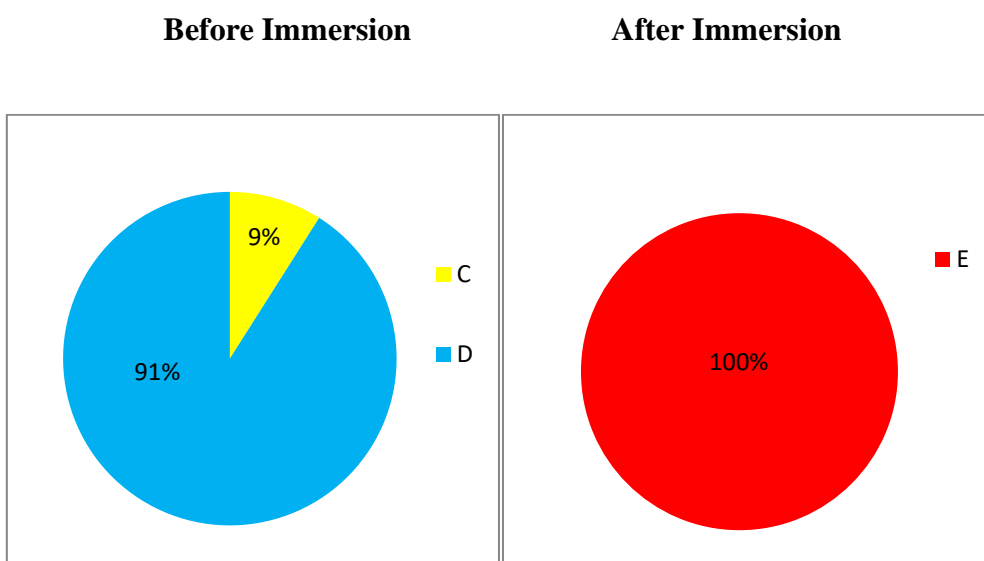
4. Lake water quality (26 lakes) of Bengaluru during Ganesha Festival -2017



5. Lake water quality (26 lakes) of Bengaluru during Ganesha Festival -2018



6. Lake water quality (26 lakes) of Bengaluru during Ganesha Festival -2019



7. Lake water quality (26 lakes) of Bengaluru during Ganesha Festival -2020

Before Immersion

After Immersion

