

Environmental Science & Technology | Assignment 2

Name: Sudipta Halder | Roll: 2021202011

Ganesh Chaturthi



Introduction

- Ganesh Chaturthi is a Hindu festival which is celebrated all over India on the birthday of Lord Ganesha (also known as Ganapati, Vinayaka).
- He is the son of Goddess Parvati and Lord Shiva.
- The festival is majorly celebrated in western parts of India like Maharashtra, Goa.
- The festival marks Lord Ganesha's departure from the Kailash mountain with his mother, the goddess Parvati, and their entry into the human realm.

Way of Celebration

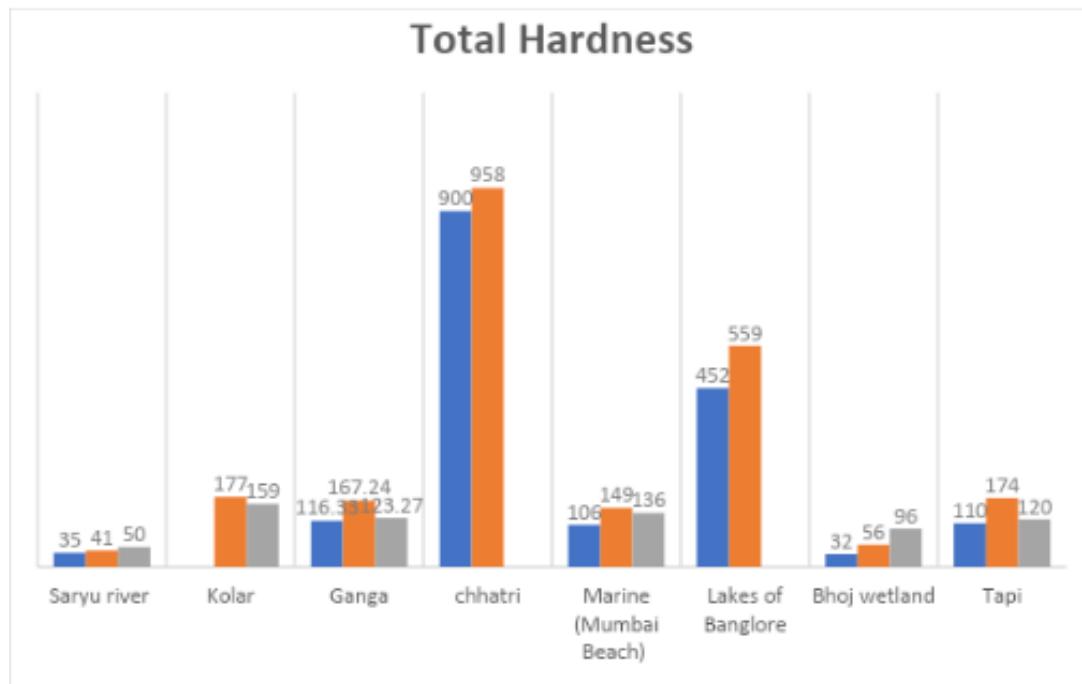
- When it comes to the intensity of the celebration, Ganesh Chaturthi is somewhat comparable to Durga Puja in West Bengal.
- Various celebrations take place over the course of the festival's **eleven** days. Maharashtra constructs more than 10,000 pandals to commemorate the event.
- Lord Ganesha is offered food, particularly sweet things like modaka, as part of the adoration. Some religious folks even fast during this time.
- Ganesh idols are being worshiped over this time. They are very tall and generally kept on streets so that everyone can get access to them.
- After the end of the festival, the devotees submerge the idols of the deity in the nearest body of water, such as a pond or lake. This ritual is also known as ‘visarjan’.

Environmental Impacts

During celebration, it's quite natural that people don't put too much attention towards the environmental aspect. Various types of pollution like Air, Water, Sound pollution takes place due to various activities performed during the festival.

- **Water pollution:**
 - The main culprit is the Plaster of Paris(POP) which is the main compound of the idols.

- The problem with POP is that it takes several months to completely dissolve.
- Hence, Ganesh idols which are made of POP take several months to completely dissolve into water.
- The second problem is synthetic colors used in idol painting.
- The colors contain mercury, lead which also gets mixed with water as and when the idol dissolves.
- As a result, the acidic content, heavy metals, TDS gets increased in water destroying the balance of the mentioned things.
- For all these things, the so called marine life (aquatic plants and animals) gets harmed (killed) which leads to damage of the water ecosystem.



Idol immersions: a critical analysis of cases on water pollution and the precautionary principle - iPleaders

● Air pollution:

- Due to the festival, traffic always remains high since all the people gather to witness such a huge festival and want to be part of this happening.

- Due to traffic jams, vehicles release air pollutants which creates air pollution.
 - The percentage of harmful gases like SO₂, CO gets increased in the air.
 - The next problem is the burning of crackers by people.
 - Due to this, toxic substances and harmful gases like Cadmium, Mercury, Nitrite, Barium, Sodium are released in the atmosphere causing heavy damage to the atmosphere.
 - The level of RSPM also goes high due to injection of small particles into the atmosphere by these crackers.
- **Noise pollution:**
 - During festivals, we witness loud music listening (kirtans, bhajans) using huge speakers which definitely contribute to the noise pollution.
 - Also due to traffic jams, vehicle horns contribute largely to the noise pollution.
 - The sound crackers also create noise pollution.
 - Children and senior citizens are mainly the victims of this noise pollution.

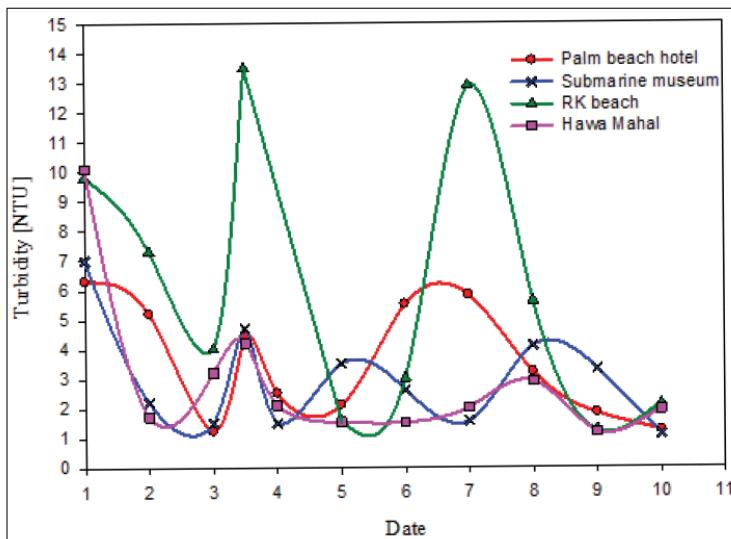


Figure 3 Turbidity variations at different location in September 2014.

Studies on Sea Water Contamination at Visakhapatnam Sea Coast in India Due to Ganesh Idol Dissolution | Insight Medical Publishing (Source:

<https://www.imedpub.com/articles/studies-on-sea-water-contamination-at-visakhapatnam-sea-coast-in-india-due-to-ganesh-idol-dissolution.php?aid=22259>

- **Solid Waste pollution:**

- Use of plastic, polythene, thermocols is rapid during festive season. They get accumulated in the sewage. So, the government needs to spend a huge amount of money to clean all these things.

Tracing the history that portraits environmental and ecological dimension (positive) of the festival

- **Material of Idol:**

- **Before:** Previously the idols used to be of clays only. In those days, there was no concept of Plaster of Paris(POP) or synthetic elements.
- **Now:** Now, Plaster of Paris(POP) and different synthetic elements have been introduced due to which the amount of pollution is increasing year after year.

- **Material of Painting in Idols:**

- **Before:** Previously the colors used to paint the idols used to be natural and environment friendly. Generally turmeric was used for painting of idols.
- **Now:** Now, synthetic colors are used in the idols, which are not environment friendly and are causing water pollution.

- **Large Scale(Now) vs Small scale(Then):**

- **Before:** Before, the festivals used to be much smaller. The arrangements used to be much simpler and environment friendly. Also, the number of pujas and pandals used to be much smaller.
- **Now:** Now, due to industrialization and budget increment, the number of pujas and pandals have increased havoc. Also, the arrangements are quite costly now. Lightings, speakers, tall idols, mikes, food distribution, 11 days of puja all prove that the festival has become quite large now.

- **Intervention of Social Media:**

-
- **Before:** Previously there was no presence of social media, due to which the festivals used to be confined at the local level only. The local people and maybe people of nearby cities used to participate in festivals.
 - **Now:** After social media came, the picture has changed quite a lot. The festivals have become global. People from different states participate in different festivals. This definitely increases the harmony and camaraderie among people. So, the festivals have become quite large now.
- **Political Agenda and incentive**
 - **Before:** Previously, there was not much political attention in this field. So, the cash flow in these festivals were pretty low or almost null from different parties.
 - **Now:** Now, due to different political agendas, parties invest hugely in these festivals. So, the puja committees have a huge budget now. So, they can spend accordingly to make their arrangements huge. Huge pandals, idols, good lighting, speakers, mics etc.
 - **Introduction of Fire Crackers:**
 - **Before:** There was no concept of firecrackers before. So, the environment used to be much safer before.
 - **Now:** After the introduction of fire crackers, the air pollution and sound pollution have increased quite a lot. Also, this is a source of income for many people. So, the government can't totally ban this also.
 - **Population growth**
 - **Before:** During 1800, the population used to be much smaller. So, the number gathering etc. used to be quite small in number. Also, there was no concept of traffic then.
 - **Now:** Now, the population has increased a lot. So, an enormous number of gatherings, traffic jams take place nowadays. No matter how much effort the government puts to control these things, during peak time, the administration faces a real challenge to tackle these issues like controlling the mob, traffic etc, during festive season.

Measures to be taken to lessen the effect of the Ganapati Festival on the environment

- **Improvement regarding idol:**

- Natural clay can be used in place of Plaster of Paris(POP) to make idols.
- Permanent idols can be made up using Copper, brass which can be utilized for many years. This would solve the overhead of ‘visrajan’ and also will be cost effective in the long run.
- The idols can be reused till the time it’s reusable.
- Immersion of idols can be done into tanks or bucket of water at home.

- **Improvement regarding Immersion:**

- Environment friendly natural clay can be used so that after immersion it gets dissolved immediately.
- Also, idols can be reused to avoid immersion every year. This would both decrease water pollution and sound pollution by decreasing traffic.

- **Fire Crackers:**

- The burning of fire crackers should be controlled if not stopped.
- It would decrease the air and noise pollution to a great extent.

- **Creating awareness among people:**

- People should be made aware about all these types of pollution and how they create a negative impact on the environment.
- Government should arrange campaigns often and NGO's should also work at ground level to spread awareness among people.
- Only then this would be resolved and we would be able to keep both Lord Ganesh and Mother earth happy at the same time!!

References

- <https://www.ppsthane.com/blog/effects-of-ganapati-festival>
- <https://www.vedantu.com/english/ganesh-chaturthi-essay>