



# INSPIRE AWARD- MANAK

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SYNOPSIS

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**Name of the project:** Dip in Sewage Machine

**Topic:** Swach Bharat Abhiyan and Development of rural and semi-urban places

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## Problem Identified

As we all know India is a developing country, and developing countries lack behind in many aspects like financially, infrastructure, urbanization, social awareness, cleanliness etc.

In the developing countries we can see few perfectly infrastructure urbanized cities. Most of the places in India are in semi-urbanized and rural state. So there are many schemes and solutions which the government has been implementing to uplift these towns and villages.

I live in a semi-urban town of Karnataka, which is Chitradurga. Here the population of this town is about 2-4lakhs. Chitradurga has well improved in education, culture, economic etc. But when it comes to the sewage system, here it is not well defined. As being the semi-urban town here we can find open sewage system. So open sewage system is very beneficiary when its rainy because it allows the flow of water in the drainage. But if the same drainage is blocked with waste and non-biodegradable wastes then it will cause very huge problems. It will not allow the flow of sewage water properly through the drainage. It blocks the way for the rain and the rain water gets accumulated in the drainage which over flows on the road. The blockage of this drainage water causes foul smell in the locality which effects in the health of the people. So we have to ensure that the waste which gets accumulated in the open drainage system

should be cleaned frequently through the manual scavengers (municipality workers). When the manual scavengers clean the waste through the drainage they dump the removed waste near the drainage itself. This has been observed by me and my family members frequently in our locality. This dumping of the sewage waste near the open drainage have caused many issues like foul smell in the locality, animals like dog or cow try to eat that waste, it blocks the path way, it lets the insects like mosquito to accumulate leading to malaria, dengue etc. Even we have observed that the manual scavenger clean the open drainage by getting inside the drainage which they feel very uncomfortable and it also causes diseases related to skin to them. Even some of the drainage cleaners [manual Scavengers] have faced death due to this. So I have found a solution which will help the municipal cooperation to clean the waste in the open sewage system easily and the manual scavengers do not need to get physically into the drainage.

Here is a recent article about a day in the life of a manual scavenger who gets into the manhole without any safety gear, cleans the hole and earns a daily wage of just 400/-.

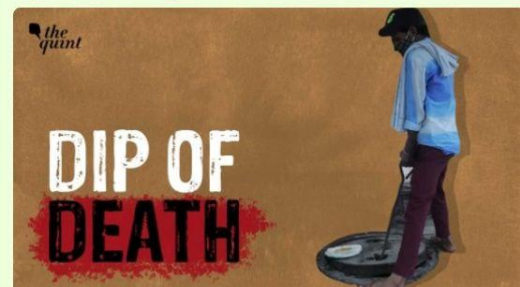
Published on Apr 2 ,2022

[https://www.thequint.com/news/india/a-sewer-cleaner-in-delhi-every-time-i-go-inside-a-sewer-i-fear-the-worst?utm\\_source=WhatsApp\\_mWEB&utm\\_medium=Social&utm\\_campaign=socialsharebuttons&utm\\_content=33020494-a4fd-4cb2-96ba-c6c24ed3aeb3\\_1648876196244](https://www.thequint.com/news/india/a-sewer-cleaner-in-delhi-every-time-i-go-inside-a-sewer-i-fear-the-worst?utm_source=WhatsApp_mWEB&utm_medium=Social&utm_campaign=socialsharebuttons&utm_content=33020494-a4fd-4cb2-96ba-c6c24ed3aeb3_1648876196244)

TheQuint

'Every Time I Go Inside a Sewer, I Fear the Worst': A Sewer Cleaner in Delhi

The 20-year-old belongs to the Valmiki community, and asks why "only members of my community have to do this work?"



Sewage dumped near the open drains in our locality.



People protesting against manual scavenging.



Manual Scavengers



## Solution for the problem identified

So my solution to the above mentioned problems will give many benefits in rural, semi-urban and maybe at urban cities. It includes all the aspects in Swach Bharath Abhiyan. So my prototype is known as, **DIP IN SEWAGE MACHINE**. Its features are as follows:

- It helps in picking up the sewage waste from the drainage easily without letting the manual scavenger to get down in the drainage.
- It helps in keeping the drainage clean and unblocked from the wastes.
- A unblocked drainage helps in easy flow of the rain water and sewage water, which results in no foul smell and no insect accumulation.
- It is easy to use and easy to transport the sewage place.
- It is made up of metal and strong fiber body.
- Easy to take the machine from one place to another.
- It picks up all the solid wastes from the drainage thoroughly.
- It is cost effective with 2-3years guarantee on the machine.
- The machine is of 2 different parts. One part collects the sewage waste from the drainage and the other part is to collect the waste removed in the closed container.
- Generates employment. Its eco friendly.
- The storage is about 3-4kg of sewage wastes.

- The total cost ranges from 10k to 15k per machine.
- It is adjustable according to the depth of the drainage.

## METHODOLOGY

The machine is of 2 different and separate bodies, known as the dipper and the collector. The dipper is held in both the hands of the worker and then dipped inside the drainage adjusted according to the depth of the drainage. The dipper is made up of metal body and consists of holes, which collect only solid wastes. The dipper should be dipped in the drainage in order to remove the non-biodegradable waste and strain off the drainage water through holes or mesh. And the collector is where the accumulated wastes are dumped. Both the components can be together called the DIP IN SEWAGE MACHINE. The collector has wheels beneath in order to move easily from one place to other. This project will not only help in keeping the locality clean it also generates employment.



# PROTOTYPE



**COLLECTOR**

**DIPPER**

## Future Plans For the Project

This project will bring a lot of difference in the society of India. It will help the Safai Karmacharis to work in a safer and easier way.

The model will be of metal body and fiber body so that the durability of the machine stays as long as possible. As my research the DIP IN SEWAGE MACHINE has 3 years warrantee. The weight of the machine will be as light as possible. It will be easily portable from one place to other. 1 person is enough to use the machine. This prototype is inspired from a shopping cart. This idea can become a huge success when brought into effect. This will bring a whole new revolution in the treatment of sewage waste.

It can be later modified by using more effective technology. But my idea of the machine is to keep it manual rather than automated as employment generation is the need for India.

## Conclusion

I am very happy that INSPIRE AWARDS MANAK 2020-21 has provided a wonderful opportunity for the youngsters even in this pandemic so that the students can show up their creative ideas. I am extremely glad to exhibit my idea on rural and semi urban cities development.

This project helps in ATMNIRBHAR BHARAT.

## Acknowledgement

Firstly I would like to thank our school VIDYA VIKASA VIDYA SAMASTHE, because they helped me and guided me to participate in this competition. With the help of all the teachers and under the guidance of Guide Teacher SAMPATH SIR, I am working on the project and hoping for the best.

Next I would like to thank my parents for supporting me to participate in the competition. Lastly to my friends and relatives who helped me in the project in various ways.

## References

References are Google for the pictures and survey through common people in the locality.

THANK YOU