

"BAMBOO BLOOM : AFFORDABLE AIR PURIFICATION FOR INDIA'S POLLUTION CRISIS"

SHUDDHA SANKALP

"साँस लो, आराम
से!"

SICK OF
POLLUTION



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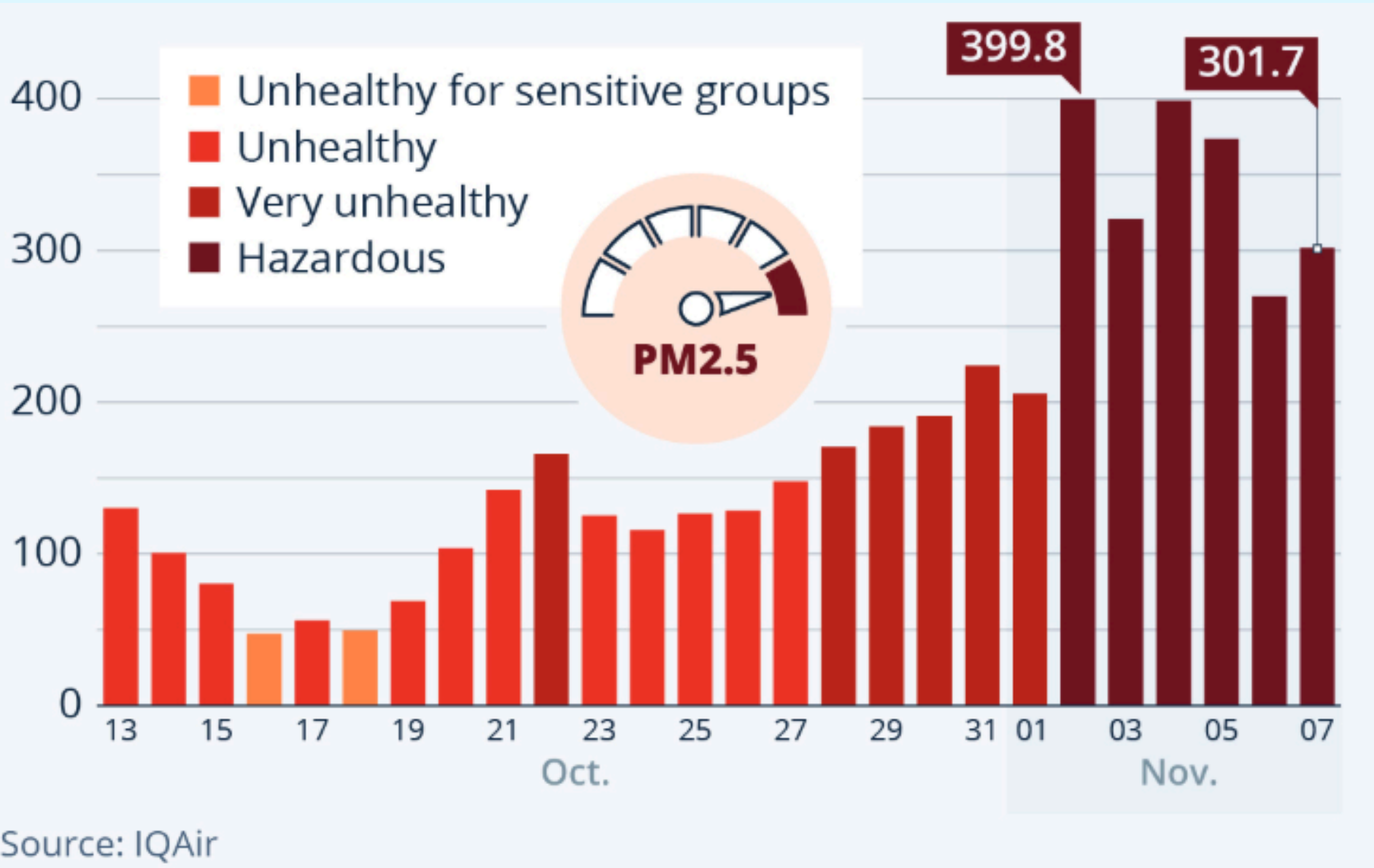
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INDIA'S BREATH: A CRISIS

Delhi's AQI hit 500 in 2023, 20 times the safe limit set by the WHO. A call for immediate change



Pollution leads to asthma and lung damage, deeply affecting public health and quality of life across communities



India loses ₹7 lakh crore annually due to air pollution, based on WHO data. This impacts growth and development



Images of people wearing masks highlight the daily struggle. It shows how citizens adapt to hazardous
AIR

CURRENT SOLUTIONS: NOT ENOUGH?



Existing solutions are energy intensive. This may lead to higher running costs and ecological effects.

Smog towers are limited to specific areas and cannot be widely used. Their effect is restricted geographically



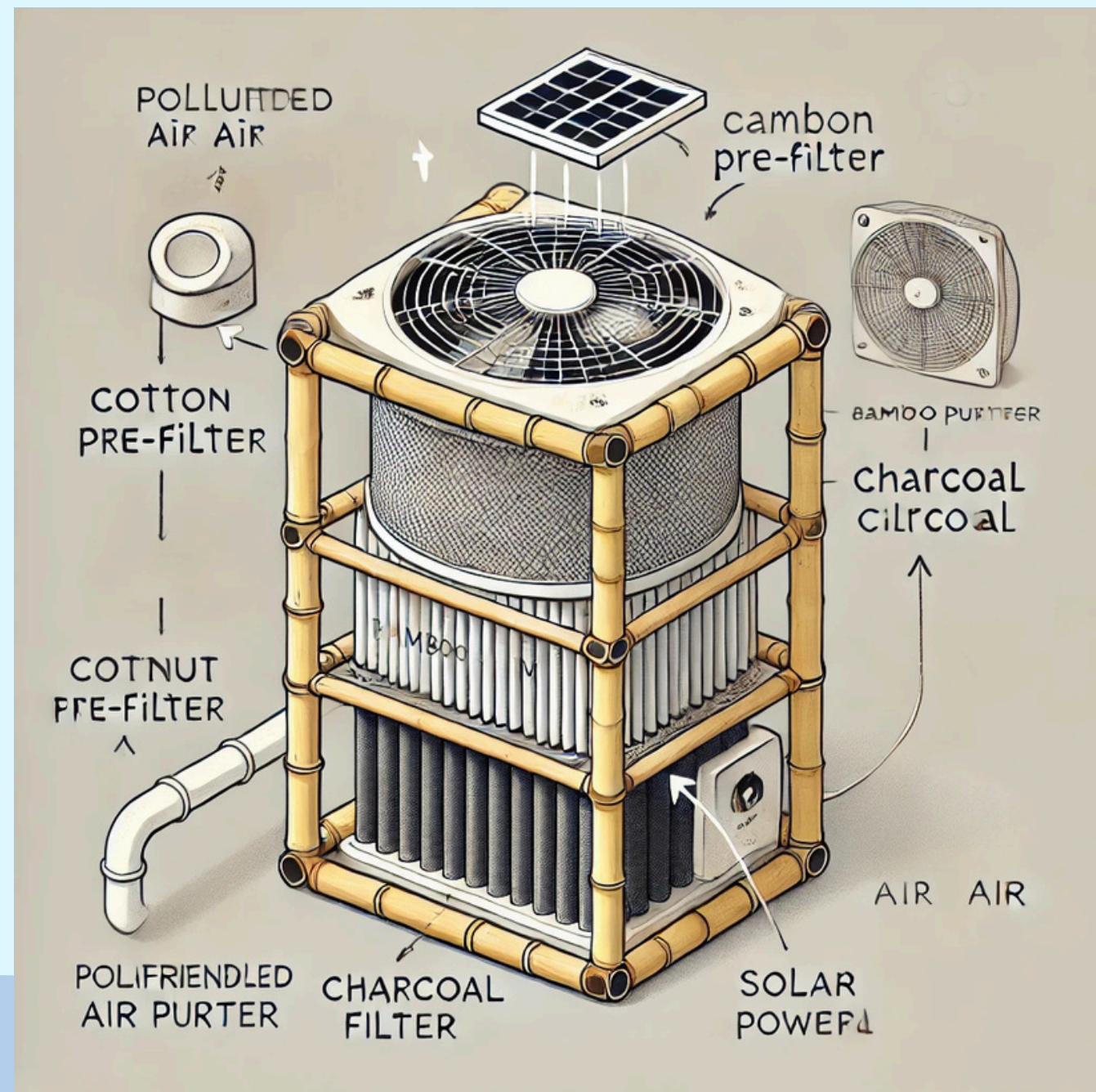
Smog towers are expensive, costing ₹2 crore each, which makes them financially inaccessible for broader application and choosing environmentally friendly alternatives.

Current solutions include smog towers and expensive air purifiers, but they have their limitations



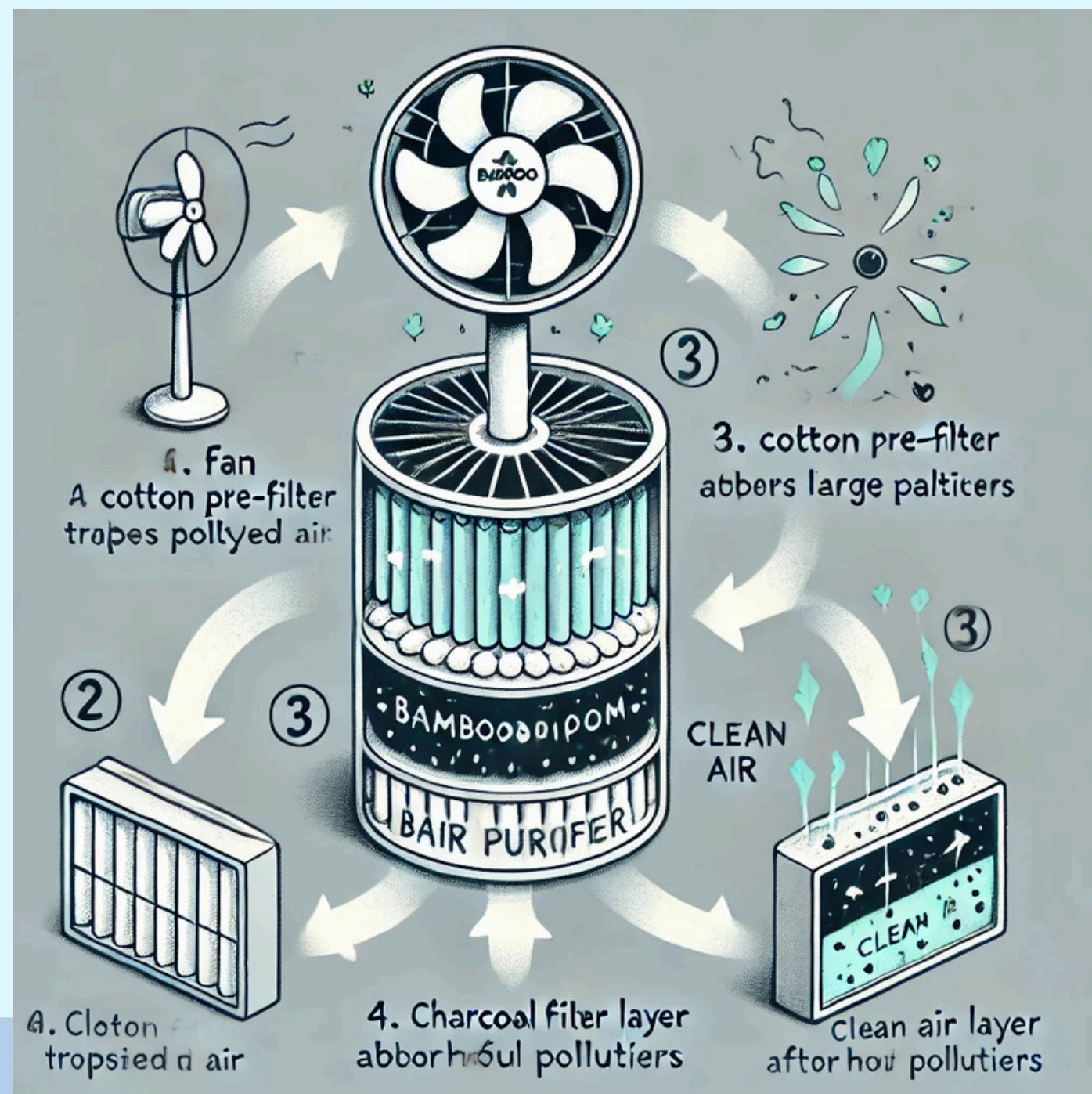
BAMBOOBLOOM: OUR SOLUTION

Our solution uses bamboo frames. They are eco-friendly and renewable, contributing to sustainability



- The filters use recycled materials like coconut charcoal and cotton cloth, which minimize waste and cost
- A solar-powered fan enhances the device's sustainability and cuts down on electricity use in the device
- Targeting a cost of just ₹500. Our solution provides an accessible and affordable pollution control option

HOW BAMBOOBLOOM WORKS



- The fan pulls in polluted air. It starts the purification process as the air goes through various filtering stages
- The cotton pre-filter traps dust. This filter ensures that larger particles are removed before the next filtration
- The charcoal layer absorbs toxins. It removes harmful pollutants from the air, making it cleaner and healthier
- After filtration, clean air is released. The end result is cleaner air that can enhance the breathing environment

TECHNICAL INNOVATION

Our hardware includes bamboo, Arduino, and PM2.5 sensors, integrating natural and tech components

Arduino Serial Monitor - BambooBloom Sensor Data

Timestamp	PM2.5 Level ($\mu\text{g}/\text{m}^3$)	AQI	Sensor Status
12:00:00	45	22	Active
12:00:01	78	39	Active
12:00:02	120	60	Active
12:00:03	56	28	Active
12:00:04	98	49	Active
12:00:05	150	75	Active
12:00:06	65	32	Active
12:00:07	110	55	Active
12:00:08	180	90	Active
12:00:09	90	45	Active

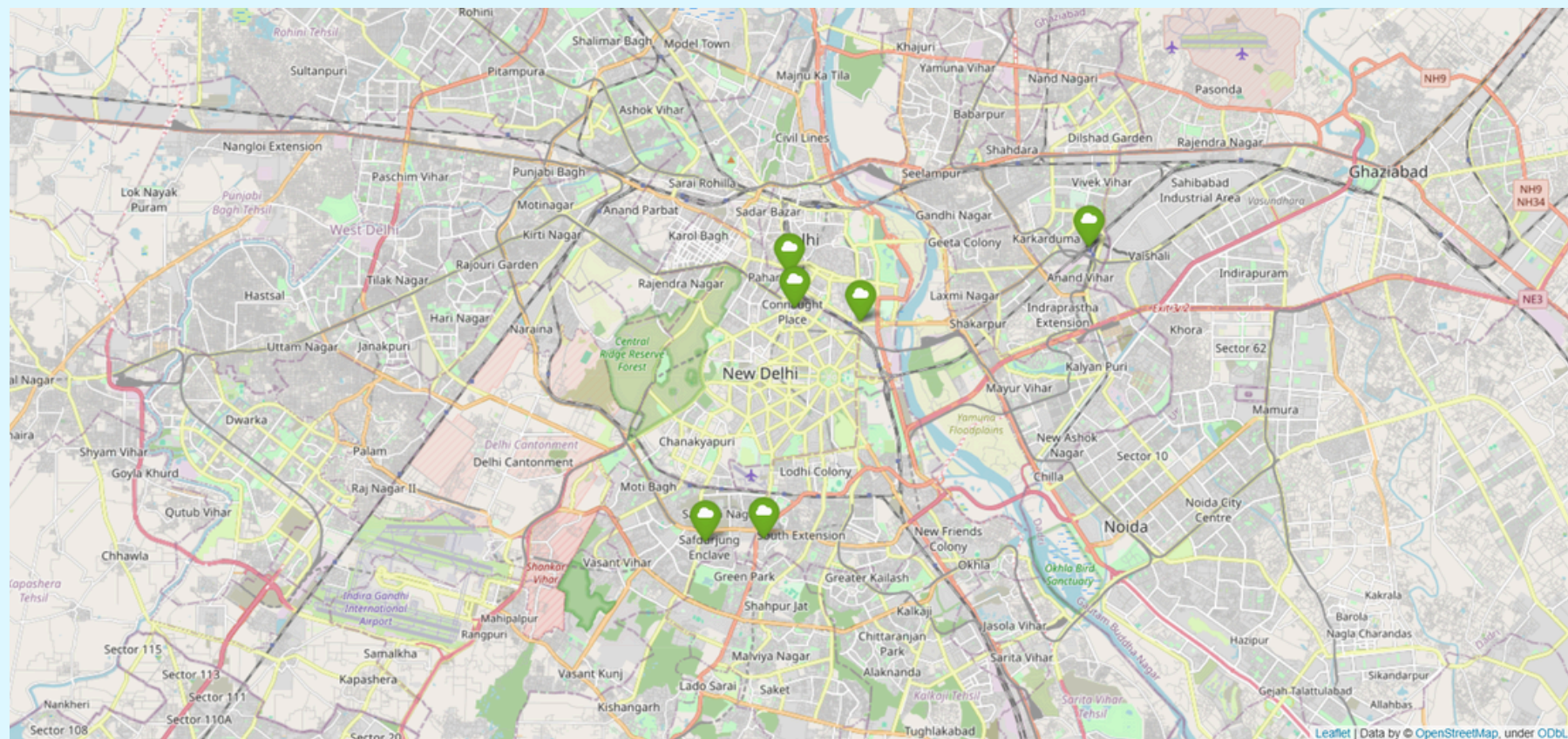
Real-time AQI dashboard shows sensor data on a mobile app. It offers air quality

Costing around ₹500, it is 10x cheaper than commercial purifiers. This allows for great cost savings

Our solution is 100% biodegradable. This aligns with sustainable practices

IMPACT AND SCALABILITY

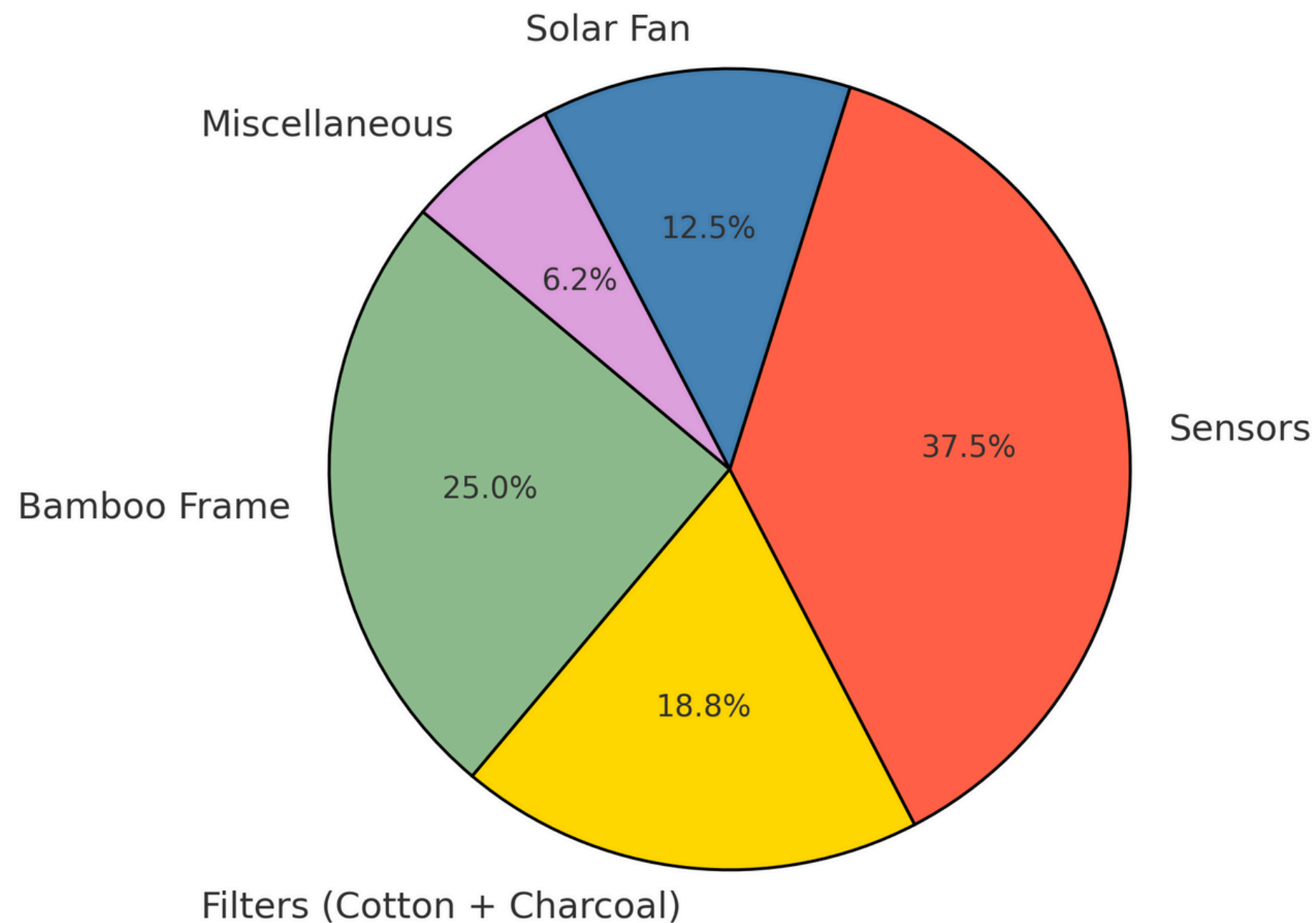
Our tests show a 50% pollution reduction within a 10m radius. The tests show real positive influence



- Future goals include installations at traffic signals, improving air quality at high exposure areas
- We plan to install it near schools to provide students with healthier air. This supports improved learning
- We aim to put it in construction sites. They mitigate dust and pollution. This protects the worker
- We want to partner with the government for CSR projects to make it widely available. We work for wider adoption

BUSINESS MODEL

Cost Distribution of BambooBloom Air Purifier



1. Revenue via government tenders (₹10,000 per unit). They are secured through a competitive bidding process.
2. Corporate CSR partnerships allow for joint social responsibility programs. This will foster collaboration.
3. Bamboo costs ₹200. Bamboo is a cost-effective, renewable and readily available building material.
4. Filters cost ₹150. Recycled filters are cost-effective and environmentally friendly.
5. Sensors cost ₹300. These give real-time data for performance monitoring and reporting



THANK YOU

1. Let's make India breathe again! We want you to collaborate with us to build a healthier future
2. For collaborations and partnership you can contact us. We will be looking forward to you
3. We ensure a clean sky and environment for our kids to grow up.
4. Feel free to reach out to our team with the mail provided.
5. Thank you for listening to our presentation. We have shown all the details.