



सत्यमेव जयते
Government of India

Handbook for ASHA

Air Pollution and its Impact on Health



National Centre
for Disease Control
Government of India



National Programme
on Climate Change
and Human Health



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2024



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**National Programme
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and Human Health**

Centre for Environment & Occupational Health, Climate Change and Health

National Centre for Disease Control (NCDC)

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Preface

Air pollution is recognized globally as the single most significant environmental concern with the potential to profoundly impact people's health. Similarly, air pollution has been reported to affect the health of individuals in both urban and rural areas of India. Consequently, illnesses related to air pollution are considered critical issues concerning climate-sensitive health within the country's National Programme on Climate Change and Human Health. This program has been implementing various health adaptation mechanisms to address the health concerns of people in relation to air pollution within the country.

One of the national mechanisms prioritized under the NPCCHH is the capacity building of health professionals, including community-level health functionaries such as ASHAs, on matters of air pollution and health. These health functionaries possess immediate access to information and play a crucial role in catering to the healthcare service needs of the community. Furthermore, they have the potential to establish stronger connections with vulnerable populations, particularly women and their children, the elderly, and individuals with pre-existing health conditions. This connection can significantly contribute to bridging the gap between the community and the healthcare system by raising awareness about air pollution and its impact on human health.

In light of these considerations, a 'Handbook for ASHAs on Air Pollution and its Impact on Health' has been developed as part of the program's initiatives. Its purpose is to equip ASHAs with a fundamental understanding of air pollution, its primary sources, health effects, and measures to safeguard community health. Conducting training for healthcare functionaries based on this handbook, in collaboration with the respective states, may facilitate the dissemination of awareness and essential messages to the target vulnerable groups.

The creation of this handbook has been overseen by senior health officials associated with the program under the Ministry of Health and Family Welfare. The program also acknowledges the invaluable support from our partners, including USAID India, Jhpiego-NISHTHA, and Cleaner Air and Better Health (CABH) – Vital Strategies, in its development.

The program firmly believes that the booklet titled 'Handbook for ASHAs on Air Pollution and its Impact on Health' will serve as a valuable supplement to the NPCCHH's endeavors in achieving its key objective of enhancing the capacity of the health sector.

About the Handbook

To the ASHAs, Serving Our Communities:

A well-informed community is inherently more adaptable and proactive. This handbook's primary objective is to sensitize and empower ASHAs, enabling them to emerge as community leaders equipped with the requisite knowledge to effectively engage with communities regarding the critical issues of air pollution and its effects on human health across the diverse landscapes of urban and rural India. The handbook will provide ASHAs with comprehensive insights, thereby enabling them to guide their communities toward a more informed and conscious approach to addressing air pollution.

By nurturing a deep understanding of air pollution and its health impacts, ASHAs are poised to function as catalysts for positive change. They will actively contribute to strategies aimed at mitigating and adapting to the challenges posed by air pollution. In doing so, the ultimate objective is to safeguard the health and well-being of the community, fostering an environment that nurtures vitality and sustains wellness.

The objective of this handbook is to enhance ASHA's understanding of air pollution, encompassing its primary sources and its effects on health.



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What is Climate Change?

Climate change refers to long-term shifts in Earth's average weather patterns. It affects nature, weather events, and human health. Human activities such as burning fossil fuels, cutting down trees, transportation, and industrial processes are some of the main reasons of climate change.



CLIMATE CHANGE'S IMPACT ON HEALTH



Noncommunicable Diseases (NCDs) such as heart diseases.



Heat related illness such as heatstroke and dehydration.



Water-related health impacts such as cholera.



Malnutrition and food borne-diseases.



Mental and psychosocial health.



Vector-borne diseases such as malaria or dengue fever.



Injury and Mortality from extreme weather events such as storms, floods.



Respiratory illness such as asthma and bronchitis.



Zoonotic diseases such as rabies.



SAVE PLANET

STOP CLIMATE CHANGE



Chapter 01

Understanding Clean Air and Air Pollution

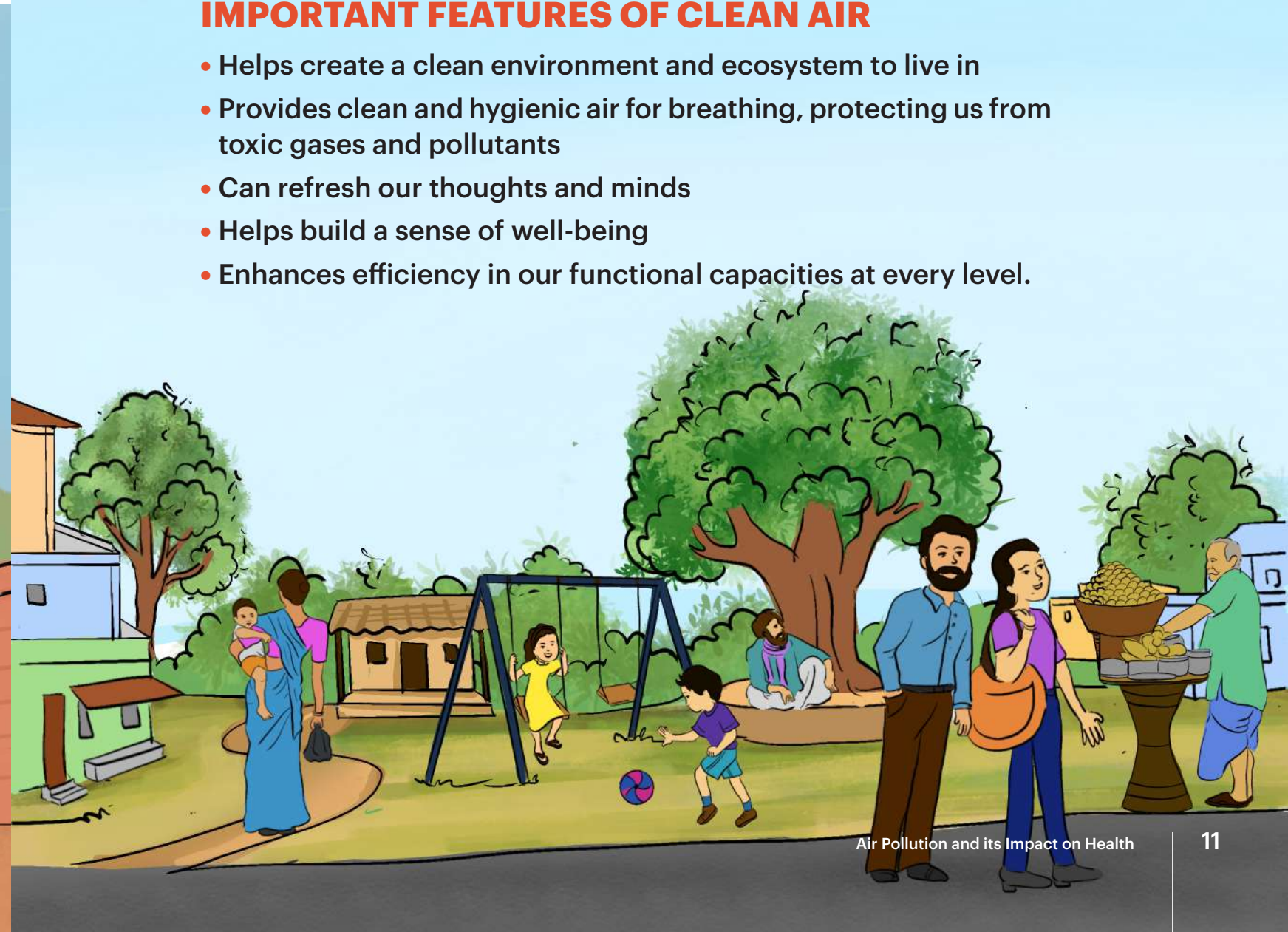


WHAT IS CLEAN AIR?

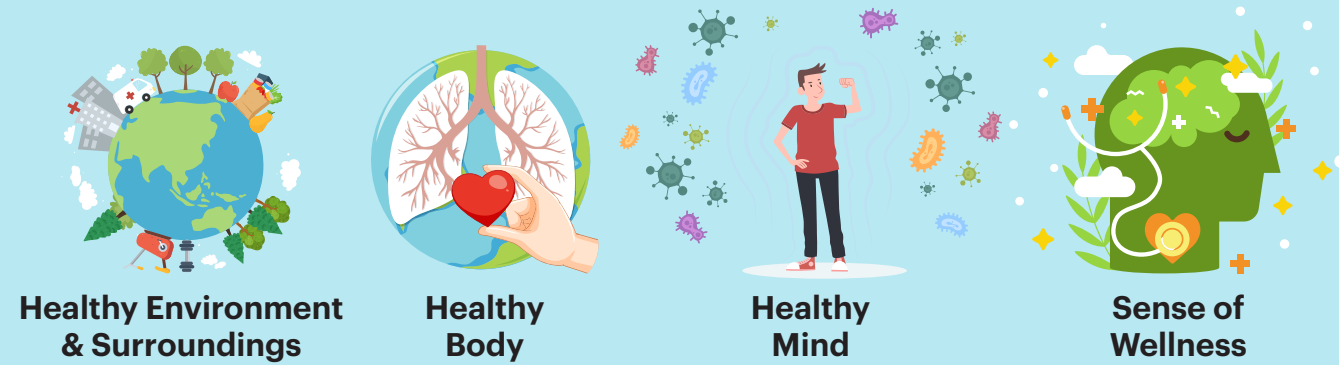
Clean air refers to the air in the environment which is free from pollutants, contaminants, and harmful substances that can negatively impact human health, ecosystems, and the overall well-being of living organisms.

IMPORTANT FEATURES OF CLEAN AIR

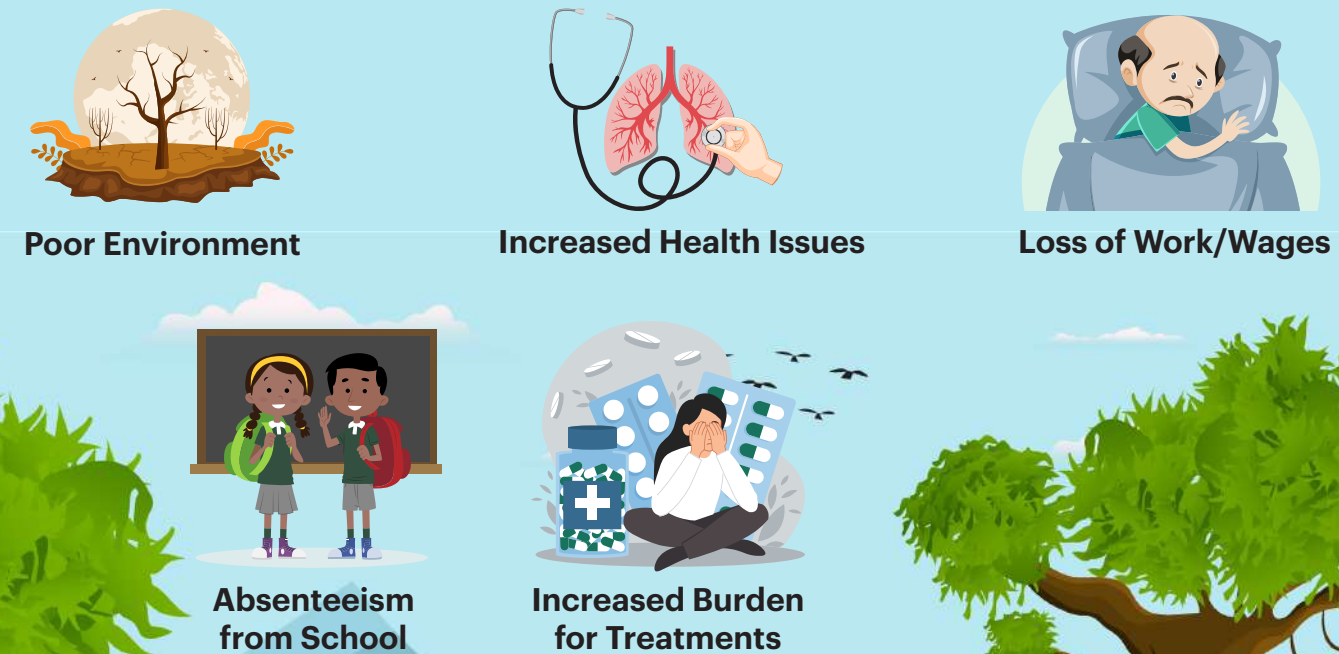
- Helps create a clean environment and ecosystem to live in
- Provides clean and hygienic air for breathing, protecting us from toxic gases and pollutants
- Can refresh our thoughts and minds
- Helps build a sense of well-being
- Enhances efficiency in our functional capacities at every level.



BENEFITS OF CLEAN AIR

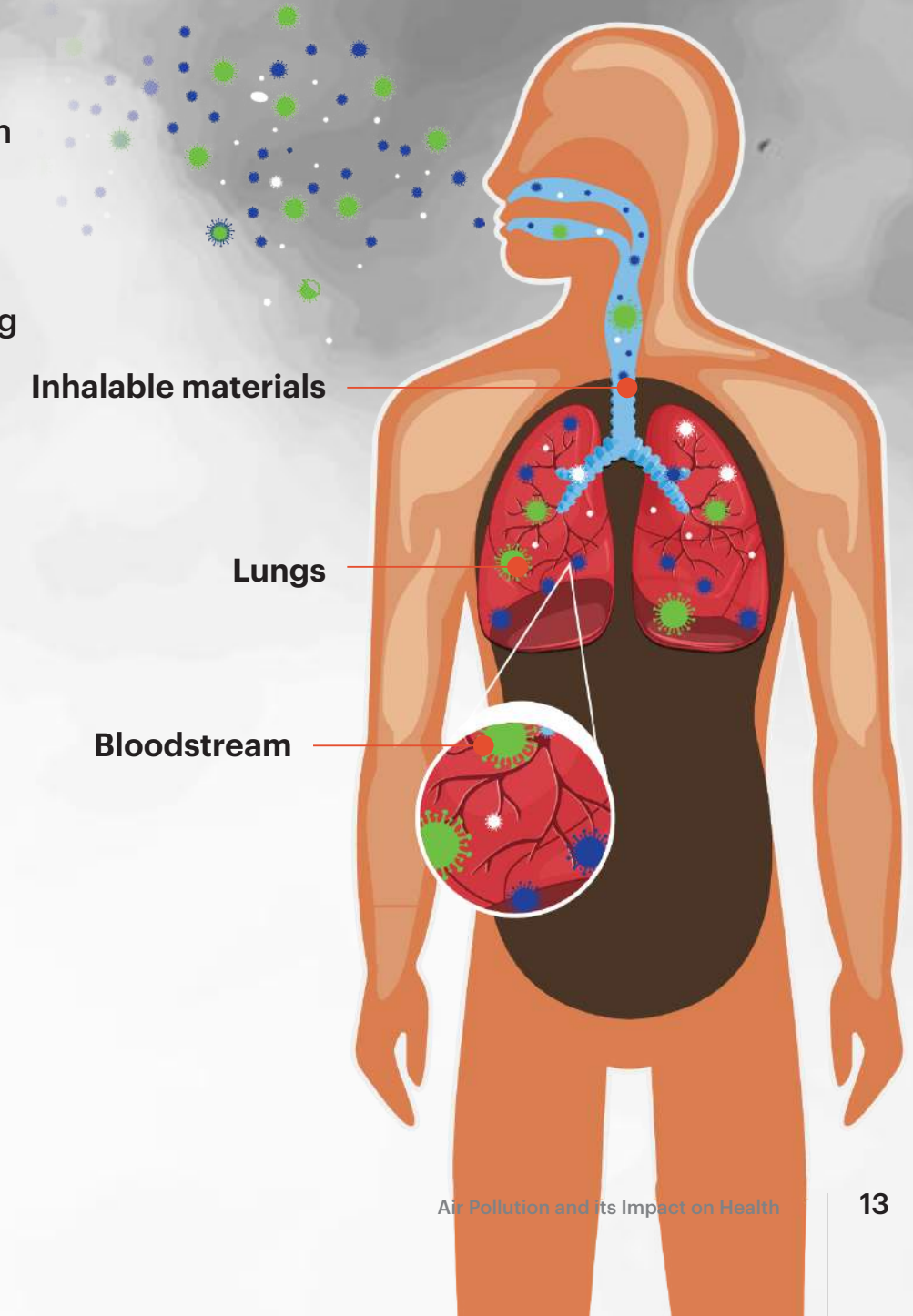


THREATS FROM POLLUTED AIR

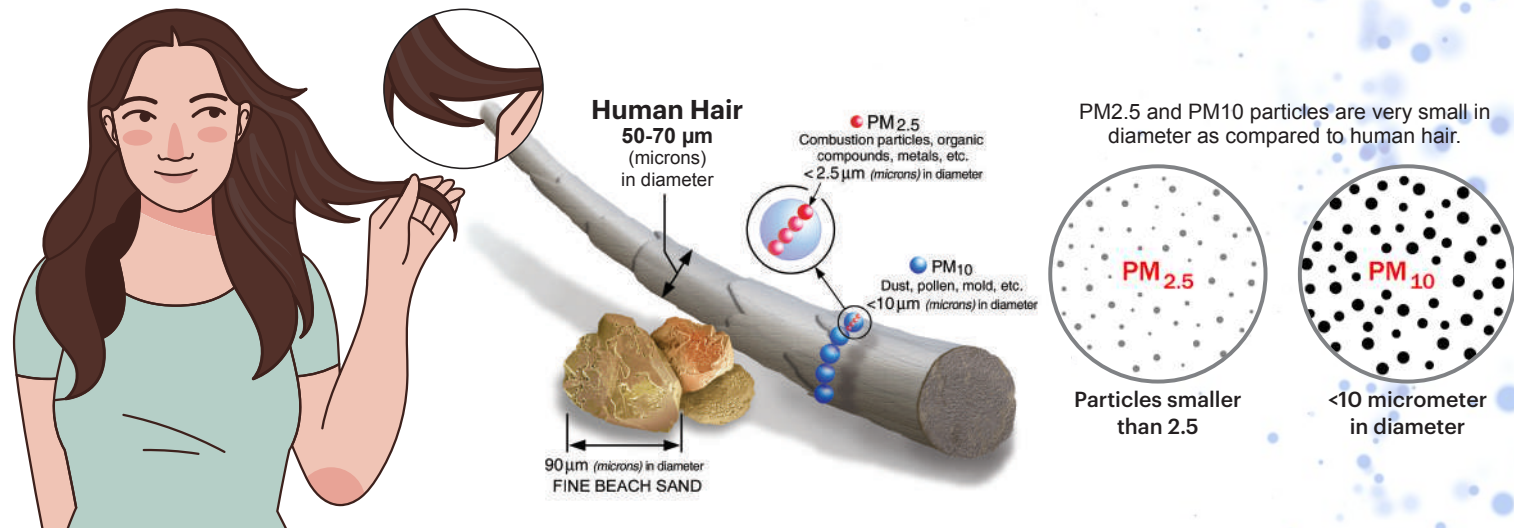


UNDERSTANDING AIR POLLUTION

- Air pollution refers to the impurities in the air, which can be caused by harmful substances such as **chemicals**, **physical**, and, **biological agents**.
- Polluted air contains a mix of particles including gases and small solid and liquid fragments.
- These critical particles can enter our body and lead to harmful health problems like asthma and breathing issues.
- These particles also make the air around us hazy leading to reduced visibility.



1. NPCCHH flipchart for Community Level Training on Air Pollution, NCDC, GoI



CRITICAL AIR POLLUTANT-PARTICULATE MATTERS

Particulate Matter (PM) is a term used to describe tiny solid, liquid, or gas particles in the air, which can be seen as dust, soot, smog, or smoke. These particles can make the air appear dirty and hazy when they are present in large amounts.

HOW CAN YOU KNOW THE AIR QUALITY AROUND YOU?

Air quality is a way to understand the condition of the air around us and determine how clean it is. It is measured using an indicator called the Air Quality Index (AQI), which tells us the level of pollutants or particles present in the outside air.

AQI is an effective and simple tool for communicating air quality status to the general public. There are six AQI categories which is decided based on the ambient concentration values of air pollutants and their likely health impacts.

AIR QUALITY INDEX

0-50

GOOD

51-100

SATISFACTORY

101-200

MODERATE

201-300

POOR

301-400

VERY POOR

401-500

SEVERE

Source: CPCB

Knowing the air quality can help us and the community prepare to protect themselves in advance. As an ASHA, you can use the AQI to educate your community about the harmful effects of pollution on health and raise awareness especially among vulnerable populations, such as the elderly, children, pregnant women, and those with pre-existing lung diseases.

You can find air quality information for Indian regions at two websites: <https://ews.tropmet.res.in> and <https://mausam.imd.gov.in>.

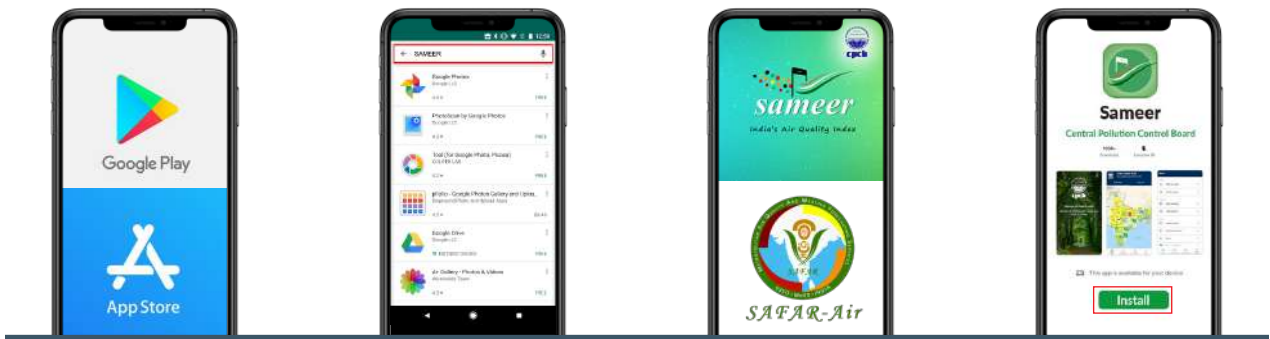
For regular Air quality updates, download the SAMEER & SAFAR apps from the Play Store.



HOW TO DOWNLOAD SAMEER AND SAFAR MOBILE APPLICATIONS?

You can download the SAMEER and SAFAR (System of Air Quality and Weather Forecasting and Research) applications from the Google Play Store (for android users) or the Apple App Store (for iphone user).

Four Simple Step Download



STEP 01

Open the Google Play Store/App store on your Android/iOS device.

STEP 02

Search for "SAMEER" or "SAFAR" in the search bar at the top of the screen.

STEP 03

Select the application from the search results (icons shown below).

STEP 04

Click on the "Install"/"Get" button to download and install the app on your device.

Once the app is downloaded and installed on your device, you can open it and start using it to access real-time air quality and weather forecasting data for major cities in India.

IMPORTANT DAYS ON ENVIRONMENT AND HEALTH

07 APRIL World Health Day	22 APRIL World Earth Day	05 JUNE World Environment Day	07 SEPTEMBER International Day of Clean Air for Blue Skies
26 SEPTEMBER World Environmental Health Day	13 OCTOBER International Day for Disaster Risk Reduction	24 OCTOBER International Day of Climate Action	02 DECEMBER National Pollution Control Day

BE THE CHANGE!

As an ASHA, you have the power to make a difference. Use these climate-specific days along with health days, to educate, engage, and inspire the community. Organize events, share information, and encourage sustainable practices to promote a healthier environment and improve public health. Together, we can create a cleaner, safer world for everyone.



SOURCES OF AIR POLLUTION IN INDIA

The conditions that can cause air pollution in our surroundings can originate from various human activities. Depending on the location where these activities take place, the sources can be broadly categorized as either household/indoor or outdoor.

Household/Indoor Air Pollution

The major sources of household/indoor air pollution are:

4 Smoke from burning tobacco, or mosquito coils, wood, or other plant residue

COOKING

1 Cooking with solid fuels like firewood, cow dung, coal, and kerosene.

LIGHTING

2 Burning coal/charcoal, kerosene, or cow dung for heating.

HEATING

3 Burning waste plastic bottles, and food wrappers.

6 Construction materials like paints, and composite wood products.

5 Small particles produced from machines for heating, & ventilating.

Outdoor Air Pollution

The major sources of outdoor air pollution.

1 Pollution due to construction activities.

2 Smokes released by big factories, thermal power plants, brick kilns.

3 Smoke from the use of solid fuels like wood, and coal in large-scale cooking in local restaurants and dhabas.

4 Diesel-based generator sets used in factories, restaurants, and offices.

5 Pollution from vehicles.

6 Dense smoke from burning of agriculture residue (stubble burning).

7 Natural sources like forest fires, storms with dust particles, etc.

Health Effects of Air Pollution



HOW AIR POLLUTION CAN AFFECT OUR HEALTH?

Air pollution can affect everyone, regardless of wealth or location, and the health effects depend on the pollution level and duration of exposure.

Air pollutants, not visible to our naked eyes, are all around us and enter our bodies through the nose or mouth. They can go deep into our body, bypassing our natural defenses, and can cause serious harm to vital organs like the lungs, heart, and brain.

SHORT-TERM EFFECTS

Redness and Irritation in Eyes



Irritation on Skin



Headache and Giddiness



Running Nose



Coughing and Wheezing



Shortness of Breath



Chest Pain



LONG-TERM EFFECTS

Respiratory Effects

- Respiratory irritation (coughing, wheezing)
- Pneumonia (lower respiratory infection)
- Asthma
- Severe breathing problems
- Decrease lung growth (in children)
- Decreased lung function
- Lung cancer



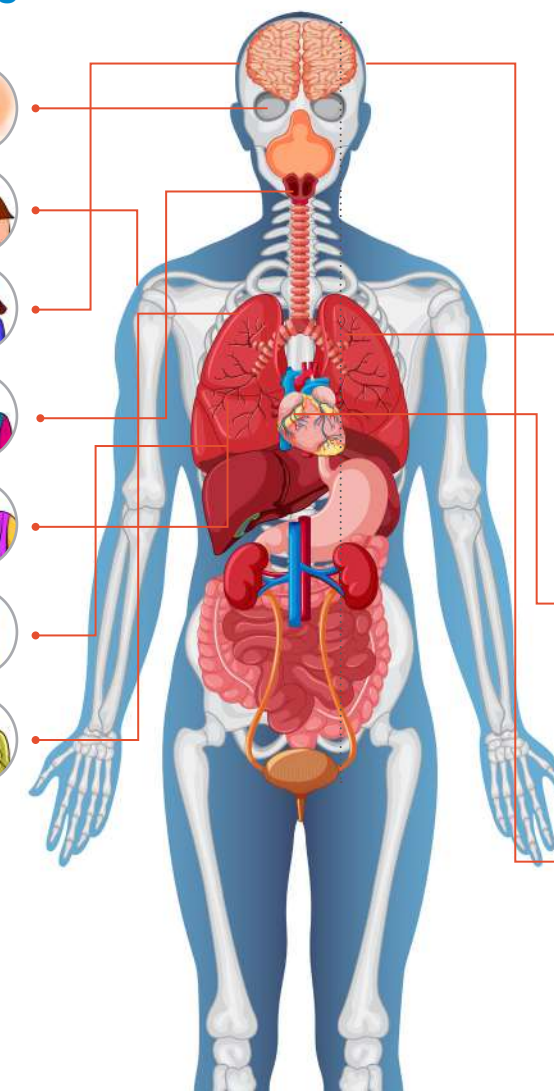
Cardiovascular Effects

- Heart disease
- Hypertension
- Stroke



Mental Health Effects

- Anxiety
- Depression

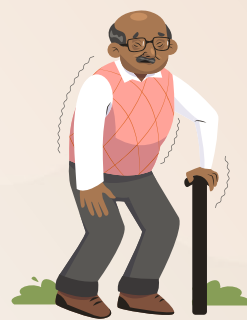


MOST SUSCEPTIBLE/VULNERABLE GROUPS TO AIR POLLUTION

Air pollution affects everyone, but some people are more vulnerable to its harmful effects than others.

Some factors that make individuals more vulnerable to air pollution include:

AGE



Elderly people



Children under 5 years



Pregnant women



Those with underlying medical conditions

OCCUPATION



Farmers winnowing hay



Workers in factories involving fumes, particles, fibres, toxic chemicals



Construction workers



Brick kiln workers



People who work outdoor for long time like traffic police

Counsel community members to visit the nearest health facility if they experience any health issues on exposure to polluted air.

If anyone feels stressed or anxious, encourage them to visit the nearest health facility or connect to a counsellor on Tele-Manas Helpline **14416** or **18008914416**



Chapter 03

Protecting Communities from Air Pollution



WHAT ASHA CAN DO TO PROTECT COMMUNITY?

As an ASHA, you have an important role in sharing correct information about air pollution, its causes, and its effects on the health of the community. You have been chosen by your community as you understand their needs well and can identify practices and beliefs that may harm their health.

HOW CAN ASHA RAISE AWARENESS ON AIR POLLUTION AND ITS IMPACT ON HEALTH?

ASHA can support Health and Wellness Ambassadors in conducting awareness sessions in schools.



Raise awareness among workers working outdoors (such as farmers and municipality workers).



During routine visit while filling CBAC form advocate for clean air and other sustainable practices such as energy conservation, water and waste management.



Conduct household visits to counsel families on air pollution and its effects, as well as measures for prevention, conservation of rainwater, and its reuse for irrigation or horticulture purposes.



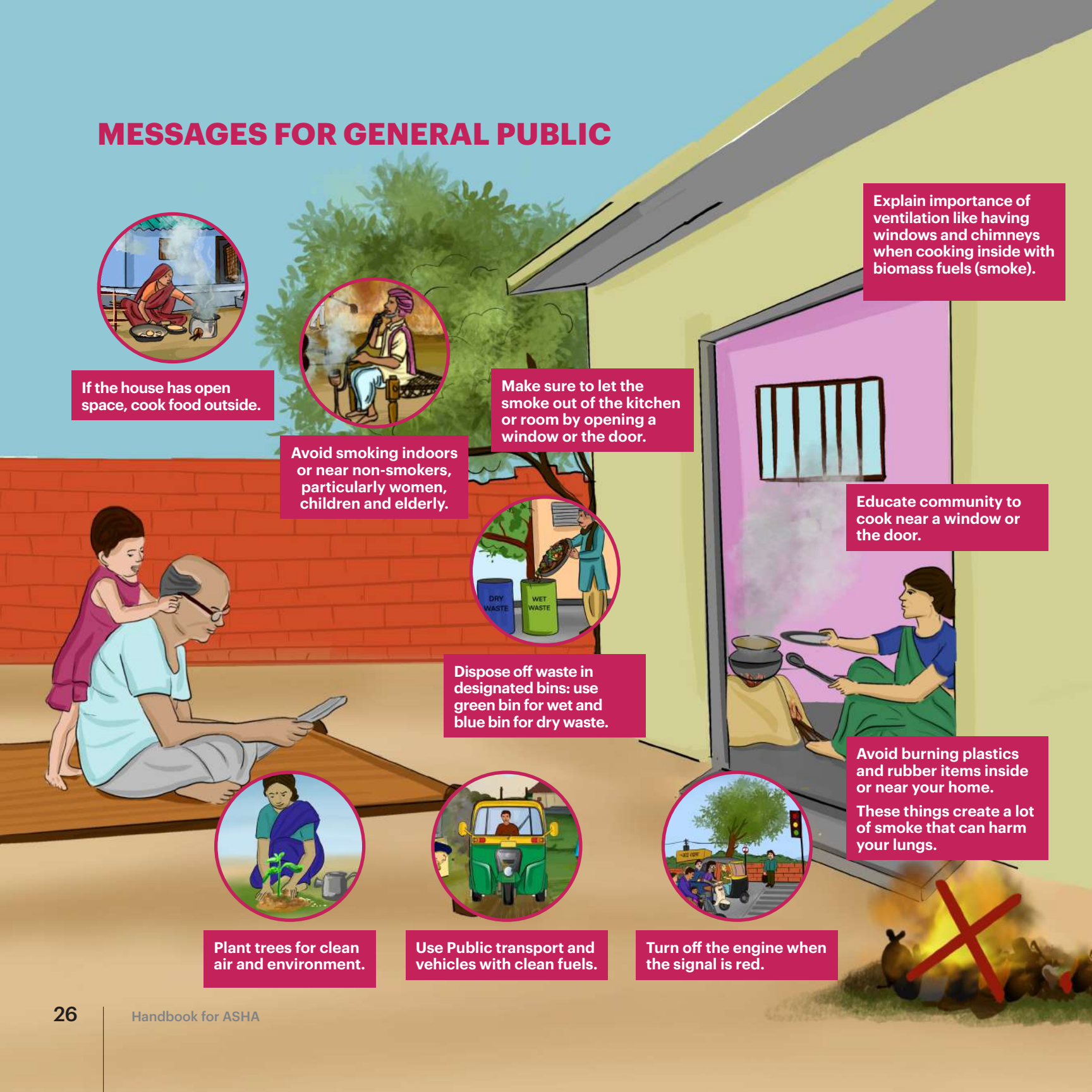
Sensitize communities by utilizing other platforms such as Jan Arogya Samiti (JAS)/ Mahila Arogya Samiti (MAS) and Village Health Sanitation and Nutrition Committee (VHSNC).



Conduct meetings with adolescent groups to raise awareness about air pollution and its impact on health.



MESSAGES FOR GENERAL PUBLIC



If the house has open space, cook food outside.

Avoid smoking indoors or near non-smokers, particularly women, children and elderly.

Make sure to let the smoke out of the kitchen or room by opening a window or the door.

Explain importance of ventilation like having windows and chimneys when cooking inside with biomass fuels (smoke).

Educate community to cook near a window or the door.

Dispose off waste in designated bins: use green bin for wet and blue bin for dry waste.

Avoid burning plastics and rubber items inside or near your home. These things create a lot of smoke that can harm your lungs.

Plant trees for clean air and environment.

Use Public transport and vehicles with clean fuels.

Turn off the engine when the signal is red.

MESSAGES FOR INDIVIDUALS AND FAMILIES



Use cleaner fuels like LPG, biogas, or a solar cooker.



Cover eyes, nose, and mouth with a cloth or face mask.



Take a break and step out of the kitchen, whenever possible.



Use dry wood instead of wet wood for cooking.



If the house is close to the road, close the windows during peak traffic hours.



Counsel children and the elderly to be away while cooking.

MESSAGES FOR VULNERABLE POPULATION

Some individuals in our communities are more susceptible to air pollution than others and they need to take additional measures. Some of the preventive measure are listed below:



Stay indoors when pollution level is high (Poor to severe).



Restrict outdoor activities and avoid heavy exercise on days when air pollution is high.

Stay away from areas with heavy traffic or other sources of pollution.



Use a cloth or face mask to cover your eyes, nose, and mouth.



Close doors and windows on days when the Air Quality Index (AQI) is severe.



Use Personal protective equipment to minimize the risk of exposure.

Periodic health check ups is recommended to identify early signs of respiratory and other pollution related illness.

Consult the doctor if you experience health issues and keep your medications readily available.

3 Billion

people use traditional stoves (chulhas) with poor-quality fuels causing indoor air pollution. In 2019, this resulted in about **38 lakh** premature deaths globally and **6 lakh in India**.

DID YOU KNOW?

The following section will now focus on key messages that you can share with various groups in your community.

MESSAGES FOR SICK INDIVIDUALS

If you come across any individual having a short-term/long-term symptoms of air pollution,



Ask the caregiver to bring the sick family member to the Sub-Health Centre-Ayushman Arogya Mandir or Primary Health Centre-Ayushman Arogya Mandir for consultation with the CHO/MO. Inform ANM and CHO about the patient.



Ask the patient to wear a mask while going outside of their homes to avoid further exposure to pollutants.



If the patient has breathing difficulty, suggest them to avoid going out of the house.



Ask the patient to drink ample water.



Inform the family members to strictly avoid burning items like mosquito coils, tobacco etc. near the sick individual.



In case of young children, ask the caregiver to feed them watery dal with mashed vegetables to improve their energy levels.



KEY ACTIONS TO MINIMIZE EXPOSURE DURING COOKING



Cover the pots while cooking to make the food cook faster.



Clean the bottom of the pot to make it heat up faster.



Soak pulses like chanaa, rajma beans, dal overnight for quick cooking. Soak rice before cooking it.



Cut the wood into small pieces so it burns quickly and completely.



Put dung on the wood or sticks. Once it dries, these sticks will burn better and produce less smoke.



Open windows or switch on exhaust while cooking.

AQI Levels, Health Effects and Protective Health Measures

Air Quality Index (AQI)	Possible Health Consequences	Messages for General Population	Messages for Vulnerable Population
Good (0-50)	Low risk	No special precautions	No special precautions
Satisfactory (51-100)	May cause: <ul style="list-style-type: none">Minor breathing discomfort in vulnerable populations	<ul style="list-style-type: none">No need for special precautions	<ul style="list-style-type: none">Use face masks*/cloth/scarves to cover the nose while going outAvoid physical exertion for long periods
Moderate (101-200)	May cause: <ul style="list-style-type: none">Breathing or other health discomforts in vulnerable populations	<ul style="list-style-type: none">Use mask or cloth to cover noseAvoid physical exertion for long periods	<ul style="list-style-type: none">Use face masks*/cloth/scarves to cover the nose while going outAvoid physical exertion for long periodsEnsure taking frequent water breaks between work
Poor (201-300)	May cause: <ul style="list-style-type: none">Breathing discomfort in healthy peopleBreathing or other health discomforts in vulnerable populations	<ul style="list-style-type: none">Avoid outdoor physical exertion, if possibleTake frequent water breaks between workUse to mask/cloth to cover nose while going out	<ul style="list-style-type: none">Use face masks*/scarves to cover the nose while going outAvoid heavy exertion when outside and take lot of water breaksIf working in a closed space like office or shop, keep external doors and windows closed to reduce exposure to outdoor pollution. However, ensure sufficient ventilation
Very Poor (301-400)	May cause: <ul style="list-style-type: none">Respiratory illness in healthy peopleSevere breathing illnesses in vulnerable population	<ul style="list-style-type: none">Avoid outdoor physical activitiesAvoiding additional sources of pollution such as burning, candles, or smoking tobacco products indoorsUse close fitted N95 or N99 mask to cover the nose while going out	<ul style="list-style-type: none">Remain indoors as much as possible and keep activity levels lowUse close fitted N95 or N99 mask to cover the nose while going outTake healthy diet and lots of waterAvoiding sources of pollution such as burning, candles, or smoking tobacco products indoors
Severe (401-500)	May cause: <ul style="list-style-type: none">Respiratory illness in healthy peopleSevere breathing illnesses in vulnerable population	<ul style="list-style-type: none">Avoid outdoor physical activitiesUse close fitted N95 or N99 mask to cover the nose while going outAvoiding sources of pollution such as burning, candles, or smoking tobacco products indoorsDrink lot of water	<ul style="list-style-type: none">Remain indoors and keep activity levels lowAvoiding sources of pollution such as burning, candles, or smoking tobacco products indoorsAlways use close fitted N95 or N99 mask while stepping outside the houseStep out of the house only if urgent

As an ASHA, you can use the AQI to educate your community about the harmful effects of pollution on health and raise awareness especially among vulnerable populations, such as the elderly, children, pregnant women, and those with pre-existing lung diseases.

Chapter 04

Protecting the Environment & Our Health from Air Pollution



HOW TO REDUCE AIR POLLUTION?

As an ASHA, you represent your community and can influence their actions to reduce air pollution through awareness generation.

Thus, you can play an important role in motivating community members to take actions for clean air campaigns.



Encourage people to plant trees near homes, schools, and localities.



Encourage walking, cycling, or using public transport.



Adopt and Switch to cleaner fuels (LPG).



Do not burn waste materials like plastic or crop residue near home.



Avoid burning woods, coal, plastics indoors for heat during winters.



Practice reducing, reusing, and recycling wastes at home or in the locality.



Dispose of waste in designated bins: use green bin for wet and blue bin for dry waste.

HUMAN BEHAVIORS INFLUENCING AIR POLLUTION ADAPTATION

Positive Behavior



Checking the AQI at your workplace and try to follow health-activity advisories.



Staying away from pollution sources such as vehicles, factories, and construction sites and take appropriate measures.



Using cleaner fuels for cooking, heating, and lighting at home.



Staying indoors if the AQI level is poor, especially in the morning and evening.



Using public transport or car pooling

Negative Behavior



Burning coal or wood indoors or in confined places during winters.



Burning leaves and agricultural residues near your house or designated waste collection areas.



Smoking.



Going out in the morning and evening when air quality is poor, and during conditions such as dust storms and incidents of low air quality levels.

HIGH POLLUTION DAYS REQUIRES USE OF PPE TO MITIGATE EXPOSURE TO HARMFUL AIR POLLUTANTS

- N95 or N99 protects against fine particulate matter (PM2.5 and PM10), the most harmful component of air pollution and also protects against allergens, dust, and other airborne contaminants, particularly for individuals with respiratory conditions like asthma or COPD.
- Proper use of mask is important to reduce the exposure to air pollution. It should fit on users' mouth and nose. Ensure there are no gaps between the mask and your skin. Do not pull the mask down below the nose or mouth; this reduces its effectiveness.
- Paper masks, handkerchiefs, scarves and cloth are not effective in case of poor to severe air pollution
- Disposable N95 masks must be discarded after one day of heavy use or when they become dirty or wet.



As an ASHA, you can motivate and support your catchment population to adopt clean energy and fuels for cooking. The Government of India has launched many schemes for rural and vulnerable populations to support them economically in adopting these practices.

Pradhan Mantri Ujjwala Yojana, 2016

Provides free LPG (liquefied petroleum gas) connections to women from below poverty line (BPL) households. This initiative offers benefits against household air pollution.

Pradhan Mantri Kisan Urja Suraksha Evam Utthaan Mahabhiyan

Support farmers using solar energy for irrigating their fields. Subsidy provided to farmers for solar pumps for agricultural purposes.

City Gas Distribution Project

For clean and affordable natural gas for domestic, industrial, and transport sectors in Indian cities. Reduces pollution by promoting use of clean fuels (CNG, PNG).

Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles (FAME)

The Scheme is launched under National Mission on Electric Mobility in 2011/ National Electric Mobility Mission Plan 2020. The scheme aims to encourage the use of affordable and efficient electric and hybrid vehicles.

Unnat Jyoti by Affordable LEDs for All (UJALA)

Launched by the Hon'ble Prime Minister of India on January 5, 2015, it has helped in reducing annual household electricity bills. Consumers have been able to save money, improve their quality of life, and contribute to India's economic growth and prosperity.

For more information on these schemes, connect with the Gram Panchayat Mukhiya or the Block Development Officer.

MISSION LIFE – LIFESTYLE FOR ENVIRONMENT

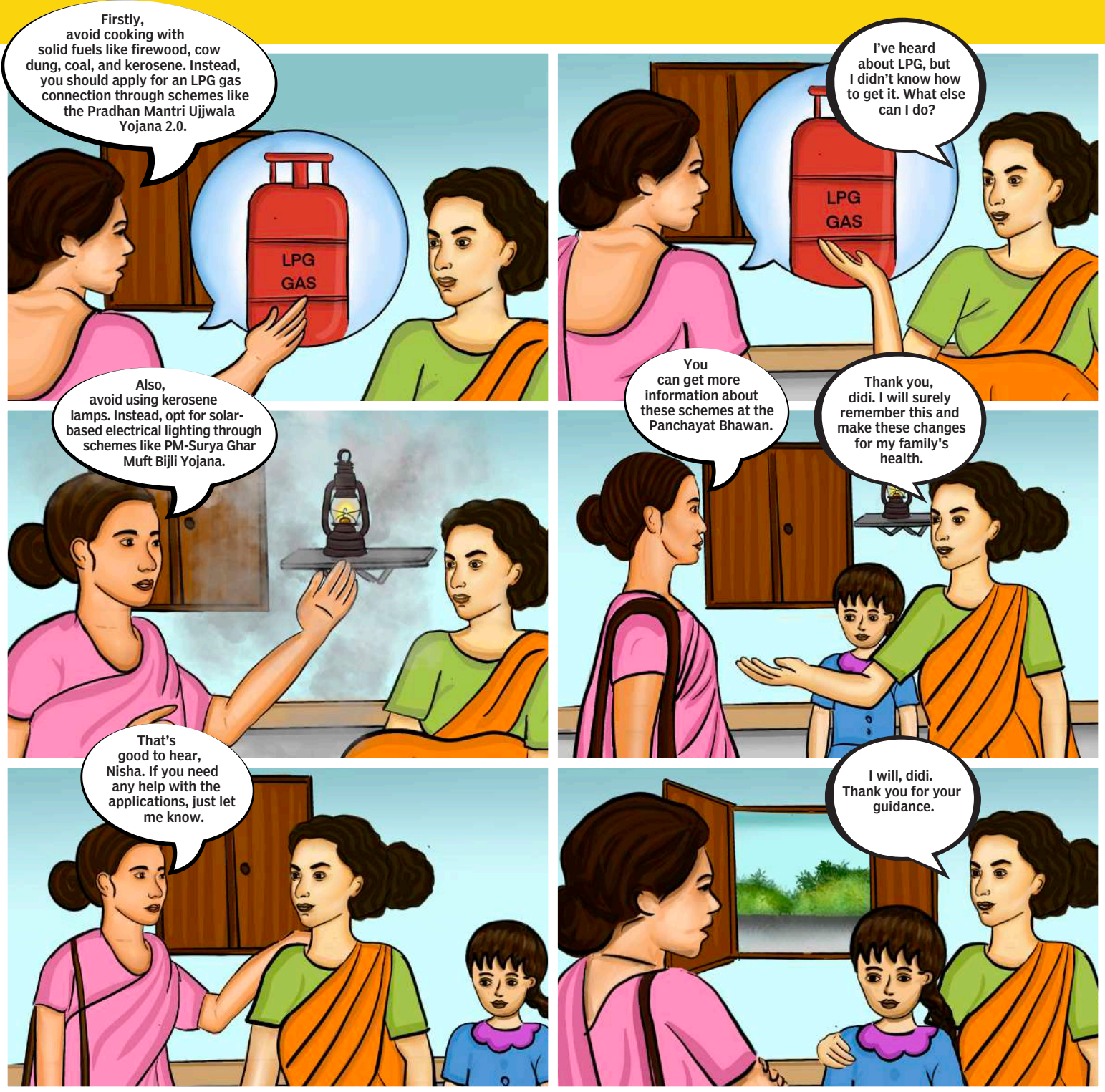
India-led global mass movement that will spur individual and collective actions to protect and preserve the environment.



**BE A CHANGEMAKER.
BECOME A LIFE CHAMPION TODAY!**

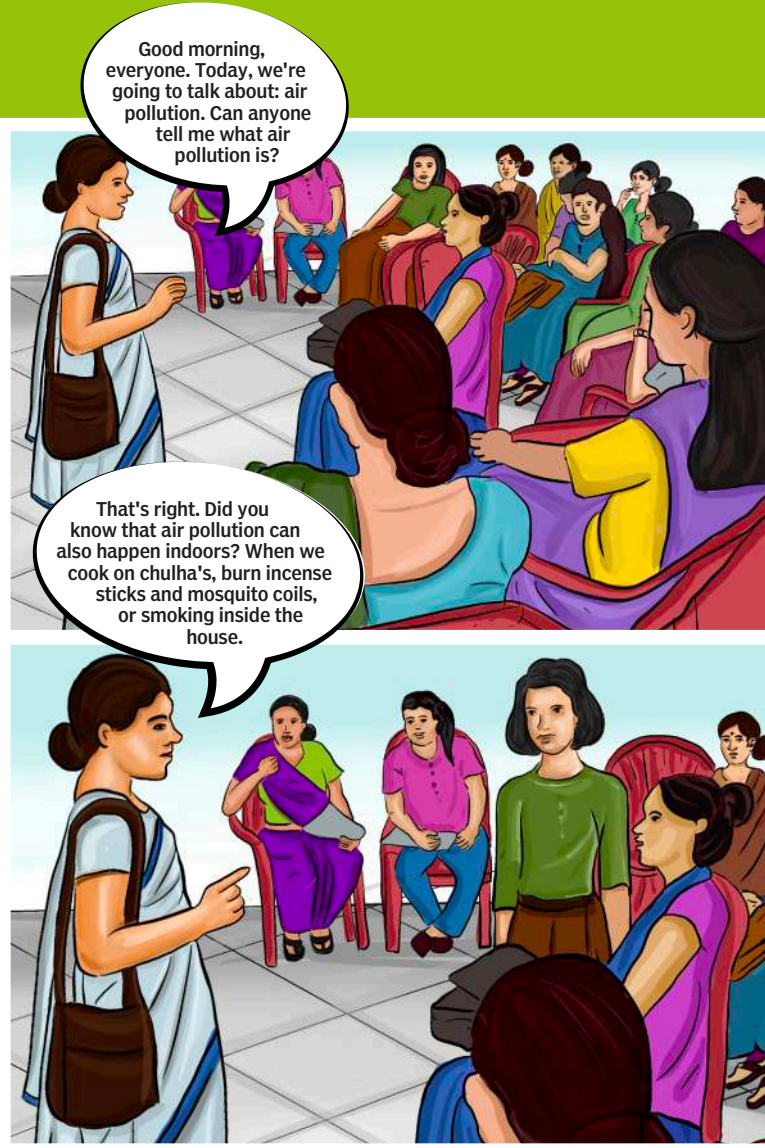
Case Study 01

Indoor Air Pollution Awareness (Rural)



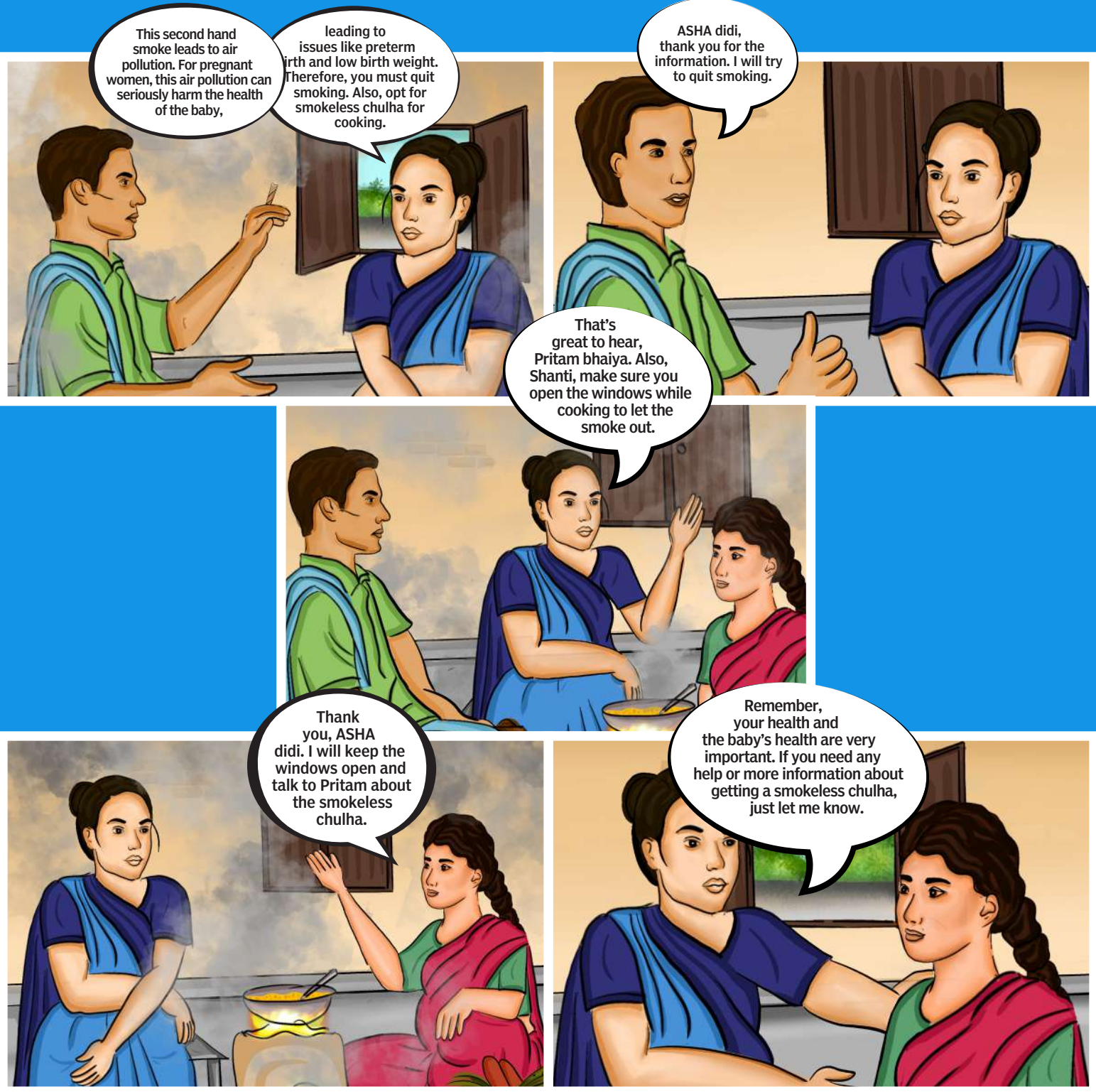
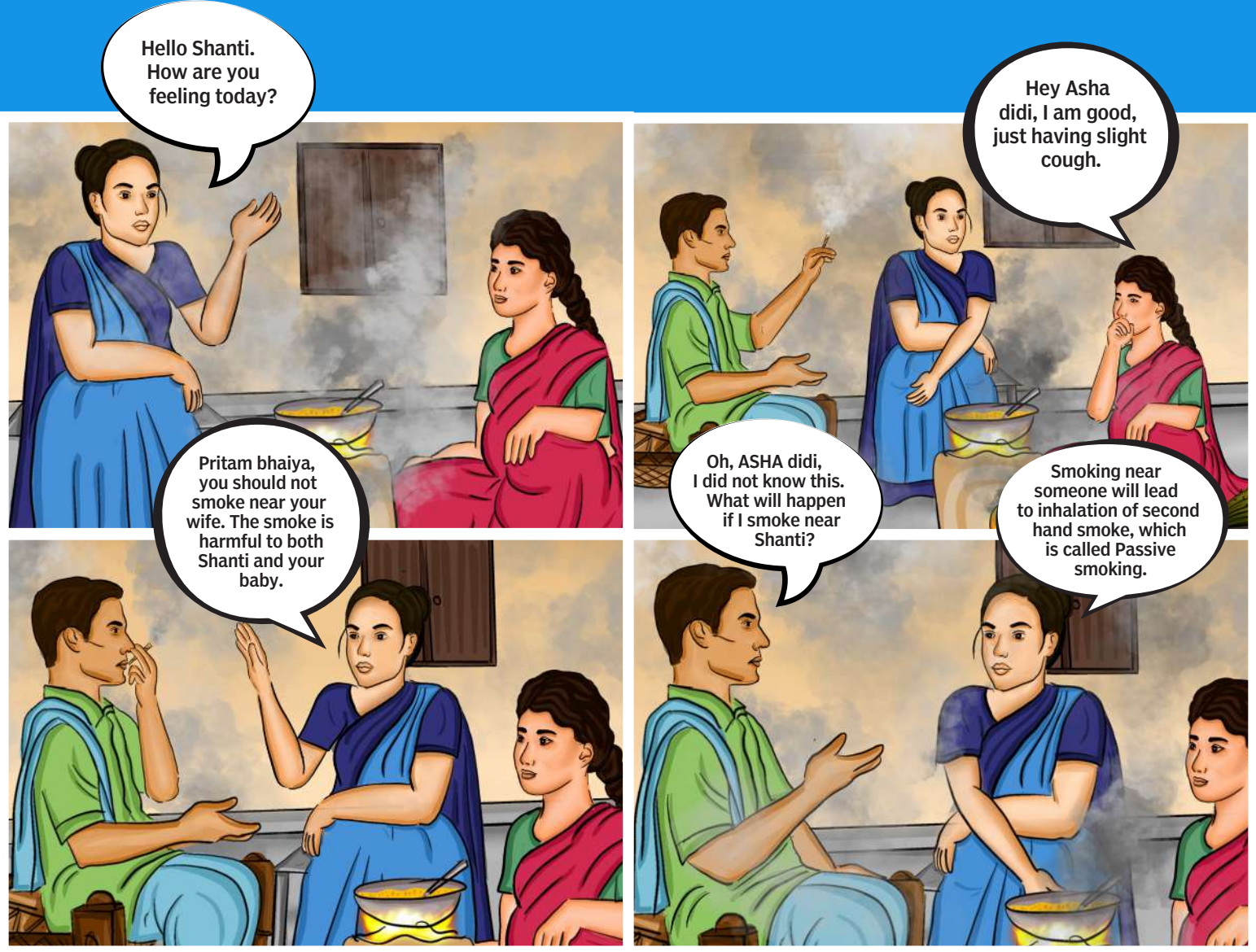
Case Study 02

Air Pollution Awareness (Urban)



Case Study 03

Air Pollution Awareness



AIR POLLUTION WARRIORS

The community health workers, called *Mitanins* (mean female friends in local dialect) in Chhatisgarh, have played a vital role in implementing health initiatives at the grass-root level since early 2020. They organically became a part of adaptation plans against climate change-related health issues. They were trained in air quality monitoring, air sampling and related health need overtime imparted authenticity to their campaigns, regarding them “air pollution worriers”.

Local health professionals were also inspired to get involved. So far, 6,000 *Mitanins* and 500 doctors are trained and engaged in raising awareness. These efforts made communities more vigilant to sources of air pollution in and around their houses, raise concerns and take small measures to mitigate the exposure. The behaviour change included steps like willingness to adopt smokeless stoves, if a transition to cleaner energy source was unaffordable, and smaller measures like burning single incense instead of burning the whole packet, proper disposal of waste instead of burning etc. health messaging. Additionally, their observations and experiences while caring for their own community’s.

Not just the land, human beings are turning infertile too. I am a Mitadin. When I meet people, I see so many miscarriages, stillbirths.
~ Ms. Meena (a Mitadin from Korba)



Annexure

Household Checklist* for ASHAs: The checklist is a guide for key messages around preventive measures for air pollution.

HOUSEHOLD AREAS		
Indoor Household Spaces	Questions	Precautions
Ventilation	<ul style="list-style-type: none">Is the house adequately ventilated??Does the kitchen have an exhaust fan or chimney?	<ul style="list-style-type: none">Ensure windows and doors are open when cooking or when using mosquito coils, kerosene lamps, etc.
Kitchen	<ul style="list-style-type: none">Who does the cooking?Who is present in the kitchen/ home while the cooking is going on?What cooking method is used?Which cooking fuel is utilized?Is there a separate cooking space at home?	<ul style="list-style-type: none">Biomass (wood, cow dung etc.) burning for cooking is harmful for health of those involved in cooking and also for those who breathe in the fumesRemember to open a window while cooking to ensure good ventilationSwitch to clean cooking fuels to reduce pollution and for good health
Washroom/Toilet	<ul style="list-style-type: none">What substances are used for cleaning?	<ul style="list-style-type: none">Reduce use of cleaners, air fresheners, sprays as they can be harmful especially to people with pre-existing breathing and health conditions etc.Do not burn any residue or waste which can worsen air quality and also affect breathing in children.
Pests/Mites/ Pets/Animals	<ul style="list-style-type: none">Has any pest control treatment taken place at home?Are there any pets at home?	<ul style="list-style-type: none">Make sure that no family member, and especially a child or anyone with a respiratory illness, is present indoors during pest control treatment.Dogs/cats/pets may carry mites and can aggravate breathing problems or cause complications for people with existing respiratory illnesses.
Construction Materials	<ul style="list-style-type: none">Has asbestos been used in the construction of the house?	<ul style="list-style-type: none">Exposure to asbestos can occur through indoor air in households containing friable (crumbly) asbestos materialsAll types of asbestos cause lung cancer, mesothelioma, cancer of the larynx and ovaries, and asbestosis (fibrosis of the lungs).If the house is old: check for old paint chips on the floor or by the windows. The paint may contain heavy metal lead (Pb). Children must not be allowed to eat these paint chips, because they are very harmful.

HABITS AND BEHAVIOURS		
Indoor Household Spaces	Questions	Precautions
Heating or Lighting	<ul style="list-style-type: none">Is wood burnt for creating a warmer environment or for heating purposes?Who usually manages the heating process at home?	<ul style="list-style-type: none">Gases released from wood stoves and heaters can irritate eyes, nose, throat and may also cause shortness of breath.Use new devices for heating that do not use materials such as firewood etc.Avoid directly inhaling fumes or blowing into the fire through metal tubes to start the fire, as the gases released can cause respiratory illness in the long run.If no other heating alternative is available, make sure that the person who handles the fire does not have any pre-existing medical conditions. Also, in case wood burning takes place indoors: make sure there is proper ventilation and precaution is taken to avoid anything/anyone from catching fire.Always extinguish fires before going to bed for the night
Cleaning	<ul style="list-style-type: none">What materials are being used for cleaning?What are the timings for cleaning?	<ul style="list-style-type: none">Use a damp cloth for cleaning surfaces.Restrict sweeping which can lead to suspension of dust particles in the air; change the timings to the afternoon rather than early morning or late eveningDo not use sprays/ chemicals etc.Remember to be careful when cleaning around people with asthma or any lung related ailment or /breathing problems
Smoking Indoors/ in Proximity of Homes	<ul style="list-style-type: none">Are there any smokers at home?Are any members exposed to passive smoking?	<ul style="list-style-type: none">Smoking has serious ill-effects on health. Along with poor air quality, it can affect the health of not only the smoker but also passive smokers (anyone who is nearby). This is called secondhand smoking. Pregnant women and children are especially susceptible to harmful effects of cigarette/ bidi smoke).Discourage visitors/ family members from smoking tobacco/ hookah.Prevent smoking at home/avoid second hand smoke.

HABITS AND BEHAVIOURS		
Indoor Household Spaces	Questions	Precautions
Agricultural Activity	<ul style="list-style-type: none">How is waste dealt with?Are pesticides/ insecticides used, how are they stored?	<ul style="list-style-type: none">Try to use alternatives for burning agricultural waste or stubble as this worsens air qualityFollow precautions and wear necessary protective equipment to reduce threat of illness from exposure to pesticidesDo not store insecticides/pesticides inside the home (as they contain harmful chemicals).Remember to change clothes at home after using such substances in the fieldImmediately wash your hands, face, feet and any parts exposed during spraying, or handling of chemicals. Take a bath and leave your clothes outside to be washed separately.Stop spraying or touching chemicals if you feel dizzy, have numbness in the arms and legs, have problems breathing, or start vomiting. Go to the nearest doctor. These symptoms could be a sign of chemical poisoning.
Health Seeking	<ul style="list-style-type: none">Is anyone or has anyone shown symptoms such as breathing problems and nasal congestion/ runny nose, nausea, dizziness, eye irritation, headache, burning or stinging eyes, etc.?Does anyone have severe difficulty breathing or feel a tightness in their chest, along with a fever that has lasted for several days?	<ul style="list-style-type: none">Seek medical help if anyone shows symptoms of fever, cough, or difficulty in breathing, etc.Wear a mask to protect yourself and others.Wash your hands with soap and water when taking care of someone who is ill.Do not let children or family members near a sick family member.Contact the nearest health facility or get in touch with us (ASHA or ANM)Do not self-medicate or delay in case of prolonged illnessRemember to keep the mobile numbers or contact information of ASHA, ANM or the nearest health centre.

*Note: Adopted from The National Program On Climate Change And Human Health (NPCCHH), Training Manual for Community Level Training on Air Pollution and its Impact on Women's Health.

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- Handbook for health professionals on air pollution and its impact on health, National Programme on Climate Change and Human Health, National Centre for Disease Control, Ministry of Health and Family Welfare, Government of India 2021.

Resource Material for ASHA

- Training module for Community level training on Air Pollution and its Impact and flipchart on women's health and children. <https://ncdc.mohfw.gov.in/national-programme-on-climate-change-human-health/>
- Manuals on Air Pollution and human health for women, children, traffic police and municipality workers. <https://ncdc.mohfw.gov.in/national-programme-on-climate-change-human-health/#main-content>
- Posters on Air pollution and human health. <https://ncdc.mohfw.gov.in/national-programme-on-climate-change-human-health/#main-content>
- Resources on Air Pollution: <https://ncdc.mohfw.gov.in/centre-for-environmental-occupational-health-climate-change-health/>
- Mission LiFE – Videos on water conservation, plastic waste and healthy lifestyle. <https://missionlife-moefcc.nic.in/Download-Creatives-Save-Energy.php?id=NQ==>
- Mission LiFE knowledge material (Hindi flipbook). <https://missionlife-moefcc.nic.in/Download-Creatives-Save-Energy.php?id=MTE=>
- Dos and Don'ts. <https://cpcb.nic.in/Do-s-and-Don-ts/>

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This handbook on air pollution and human health for community health functionaries like ASHAs is developed under NPCCHH. The purpose of this handbook is to create awareness on the subject among the community members particularly women, elderly and children and to enable them to adopt such practices and behaviors which could bring changes to build a healthy community.



**CLEANER AIR &
BETTER HEALTH
PROJECT**

