



Ministry of  
Human Resource  
Development,  
Govt. of India



*Swachh Bharat Pakhwada*

ACHIEVEMENTS IN SPREADING  
THE MESSAGE OF CLEANLINESS  
AND HYGIENE BY

**UNNAT BHARAT ABHIYAN**

An initiative of Ministry of Human Resource  
Development  
Govt. of India



IIT-Delhi



शुद्धता ही देश विकास का मूल ( पशुधन संवर्धन का अंगण )  
स्वच्छता ही विकास है



**Everyone must be his own scavenger**

*Mahatma Gandhi*

# Swachh Bharat Pakhwada

September 1 to 15, 2016



*The activities carried out by  
Centrally Funded Technical Institutes (CFTIs)  
under Unnat Bharat Abhiyan during  
Swachh Bharat Pakhwada,  
September 1-15, 2016 are . . .*



Hon'ble Minister for Human Resource Development, Govt of India, Shri Prakash Javadekar addressing a key workshop of Unnat Bharat Abhiyan with its leading lights

# IIT-Delhi

Cleanliness drives have been organised at IIT Delhi under Swachh Bharat Mission with the guiding slogan “Cleanliness is next to Godliness” by NSS. Many faculty, staff and students have volunteered for this cause. These kinds of activities have sensitized many people and hopefully most of them changed their minds regarding this issue. Students have also volunteered for cleanliness drive in villages.

Cleanliness drive has changed the scenario of the village. It not only sensitized students of IIT Delhi but also the students of other colleges as well. It is the best way to make students realise their contribution for the society.

Biogas Development and Training Center (BTDC) at IIT Delhi with the support of Ministry of New and Renewable Energy under National Biogas and Manure Management Program is providing technical training and support for quality implementation of various programmes engaged in R&D of biogas related technologies. The major contribution of BTDC is Biogas purification and bottling from Gowshalas, Dairies, Industries and Municipal Solid Waste for thermal and transport applications. This is a good technology for Swachh Bharat Abhiyan in villages and cities for disposal of organic waste for energy and bio-fertilizer production.

One of the clusters at Kaneri village, District Kolhapur adopted by IIT Delhi under Unnat Bharat Abhiyan has been working to link toilets with Biogas plants in every household to fulfil the objectives of Swachh Bharat. It produces gas used for cooking along with bio-fertilizer from cow dung and human excreta. Many villages around Kaneri are having toilet linked biogas plants and are working very well with improved sanitation & hygiene in the villages.

Ekam Eco Solutions has developed several frugal innovations in sanitation – waterless urinals, non-polluting toilets, pre-fab toilet structures, nutrient recovery reactor etc which are at various stages of commercialisation and implementation. A USAID funded Research Project “Fecal Suldge and Human Urine Reuse in Agriculture – Opportunities for Phosphorous Reuse in India” was executed at IIT Delhi between 2013 and 2015.

IIT Delhi has developed “Waterless Urinal Technology Zerodor”. This was commercialised through IIT Delhi’s Technology Transfer Arm ‘Foundation for Innovation and Technology Transfer’ and widely installed across the country in urban institutions, schools and public places. IIT Delhi actively participates in all strategic consultations organised by MoUD and MDWS as part of the Swachh Bharat Abhiyaan and works closely with the PMUs.

With increasing emphasis on water conservation, there is renewed interest in toilets and urinals designed to

minimize the amount of water consumed in flushing to mitigate excessive demands on water supplies as well as on waste water disposal systems.



Toilet with waterless urinal technology Zerodor



Filling Bio-CNG in car



BDTC in IIT, Delhi



A view of toilet linked biogas plant in a village in Kolhapur district, Maharashtra



Swachh Bharat rally in village Lohardaga (Cluster adopted by IIT Delhi under Unnat Bharat Abhiyan)

# IIT-Bombay

The following description provides a snapshot of the work being done by IIT-B in the sanitation sector under the ambit of the Unnat Bharat Abhiyan (UBA).

The team worked on the municipal solid waste management of two towns in Maharashtra [Pen and Igatpuri] covering the following aspects: waste characterization, quantification, current practices, people's perceptions and recommendations.

Students undertook a field based, directed research study of Mohadi village in Dindori taluka, Nashik. One of the components of the study involved an examination of the sanitation and solid waste management practices.



# IIT-Gandhinagar

Activities towards cleanliness have been performed in two villages, Palaj and Vasan (District: Gandhinagar).

1. Importance of health, hygiene and cleanliness has been addressed to the school children.

2. A health awareness camp cum mela for the villagers has been held. Over 1400 persons participated in this. Students, faculty members of IIT Gn and Doctors (general physicians, dentists and eye specialists) volunteered in this activity.

# IIT-Guwahati

An animal health checkup camp was organized at Kating Pahar, Amingaon, North Guwahati and was conducted successfully under Unnat Bharat Abhiyan of the Indian Institute of Technology Guwahati. Early morning vaccines were given to cattle, pig, goat, dog and poultry. The vaccines were given for foot and mouth disease, hemorrhagic septicemia, black quarter rabies and NDV. The clinical cases were treated with antibiotics, anthelmintics, antihistamines and multivitamins. Animals included were goat, dogs and poultry which were also vaccinated and treated accordingly. A total of 45 owners were benefitted by treating 183 animals.

Free Health Camp was organized at Dirgheswari Middle School; Phulung Village by IIT Guwahati under the aegis of 'Unnat Bharat Abhiyan' with the objective of providing free medical check-up and creating awareness about the need for personal hygiene in prevention of serious disabling diseases to the local community. Team comprising of 30 members from IIT Guwahati including doctors, nurses, faculties, staff, and students were complemented by the Railway's medical team to make the event successful. The services that were provided at the medical camp were as follows but not limited to:

- ENT
- Oral and Dental Hygiene
- General Medical for All Age Groups
- Gynaecology
- Child Care

- Diabetic

Apart from free medical check-up, medicines were also distributed as per the need. About 13 local drug suppliers joined hands and provided medical supplies to the patients. In addition, medical questionnaires having some basic set of informations relating to life style and health history were also gathered and are being analysed to get a holistic picture of health issues. The medical camp witness a steady flow of patients throughout the day and many were benefitted through this camp. More than 250 patients (including adults, children) availed the service and consultation from the team of Doctors. The medical camp was truly



a testament to the power of unity and commitment to a cause. Everything, from planning for sufficient medical personnel to acquiring the appropriate drugs to making sure the doctors were comfortable, happened only because of the dedication and sincerity of the team. Their unrelenting follow-up efforts and involvement in logistics was commendable. Last but not least medical camp could not have been successful without the medical personnel as well as the patients who attended the medical camp. Overall the camp was a huge success and created many smiles.



## IIT-Hyderabad

Swachh Bharat activities were carried out with enthusiasm at IIT Hyderabad both in the temporary campus located at ordnance factory and at the permanent campus in Kandi. The IIT community including staff, students and faculty participated in large numbers to ensure a clean and green campus. To ensure safety, all the participants were provided with protective gear (head

gear, face mask and disposable gloves).

Five different locations were identified for the week long activity as shown below, Institute Main Building, Boys Hostel (Mess A side), Boys Hostel (Mess B side), Type V Hostel Area, Postgraduate lab area in Kandi campus.



## IIT-Indore

As part of Swachhta Pakhwada campaign in September 2016, IIT Indore has taken cleanliness initiatives in village Simrol under the Unnat Bharat Abhiyaan(UBA). Seminars were conducted to spread awareness about sanitation and maintenance of a clean environment. Session was organised for school teachers to equip them to sensitize the students about waste processing/disposal/

reuse/recycling. Dustbins were procured and placed wherever required. The color codes of differentiating amongst the kind of waste were also promoted. Packing material like cardboard box, wooden planks were disposed in order to lessen the harmful impact of germs produced during rainy season.



## IIT-Roorkee

Eco Friendly Smart Toilet at village Beladi-Salhapur school is proposed model jointly developed by IIT Roorkee and Sukriti Social Foundation (an NGO whose founders are the alumni of IIT Roorkee) and will be implemented through Sukriti. A practi-

cal, low-cost, self-sustainable (financially) and stand-alone toilet model that consumes least possible water, requires no sewer infrastructure, uses renewable energy, is environment friendly and relies on least manual intervention for maintenance.

### FEMALE ECO JUNIOR

(2 Female Unit)

- Black Water Treatment unit
- Solar Panels
- Automatic flushing
- Automatic lighting
- Automatic floor swiping
- Sanitary Napkin Vending Machine
- Pedal Taps



### MALE ECO JUNIOR

(2 male units, 2 Male Urinals)

- Black Water Treatment unit
- Solar Panels
- Automatic flushing
- Automatic lighting
- Automatic floor swiping
- Waterless and odourless Urinals
- Pedal Taps



## Ecological Restoration of Pond at Village Meerpur

The restoration of the pond at Mirpur village was undertaken by the team.

### Details of Pond

- Name of the water body: Pond 1 (Meerpur)
- Location: Junction of Garh & Meerpur villages, Haridwar, Uttarakhand
- Geographical Coordinates: 29.949758N 77.994725E
- Lake Type: Natural Lake
- Area, (Full water level): 9960.48 sq. m
- Maximum depth, (Full water Level): 3.6 m
- Mean depth, (Full water Level): 2.1 m



## Water Quality and Pollution Status

- Sources: Domestic sewage, Storm-water
- Level: Moderately high
- Pollution status: Eutrophic Biodiversity
- Aquatic Plants: Free floating, Algae, Hyacinth weeds
- Aquatic Animals: Fish, Birds

The restoration of the pond shall be done through Anoxic Bioremediation (ABR Technology) in collaboration with JM Enviro Technologies Pvt. Ltd.

Organized series of workshops in collaboration with Adolescent Reproductive and Sexual Health (ARSH) to inculcate the values of women health, menstrual hygienic management and sanitation among the rural adolescent girls.



## IIT-BHU, Varanasi

IIT(BHU) is celebrating Swachhta Pakhwada in the adopted villages namely Tikri and Sarai Dangri of Kashi Vidyapeeth block of Varanasi district which also belongs to the constituency of Honorable Prime Minister. The following activities are being performed in these villages by the student groups of IIT(BHU) involved in the Unnat Bharat Abhiyan.

- Swachhta Abhiyan.
- Counselling for health and hygiene among villagers and primary school children.
- Consultation with villagers to identify their problems

In this Swachhta Pakhwada, student groups initially interacted with the Gram Pradhans of respective villages and interacted with the people of other locality of villages for knowing their problems.





# NIT-Agartala

NIT Agartala has already adopted five villages in its periphery and UBA Cell has chosen two schools namely Barjala Uchha Buniyadi Vidhyalaya and Bhagaban Kobrapara Senior Basic School for making awareness among the students on swachhata during September 8 & 9, 2016. Besides, the school Teachers & students of respective school, Co-ordinator - UBA cell and

Co-ordinator - Swachhata Pakhwada programme of NIT Agartala were present and delivered their speeches. Students and staff of Mechanical Engg. Department were also present.



# NIT-Calicut

Preparation of Briquetted Leafy Biomass for Rural Households: Dried leaves are seen as a potential source of energy that can meet the energy demand in many rural areas if efficiently used. It is understood that the leafy biomass is never utilized to its potential since its availability is in staggered form. This motivated the researchers at NIT-Calicut to carry an interesting work in the

field of briquetting the leafy biomass. The briquette form of leafy biomass can be easily transported, and used in traditional chulas in rural areas. The briquetted leafy biomass is combustible and also acts an energy source in substitute to wood for gasification plants.



# NIT-Delhi

Various events such as best from waste, t-shirt designing, nukkad naatak, ad-mad, slogan writing, group discussion, guest lecture, etc. were organized.

On the World Ozone day, Greening the Blue was organized by NIT Delhi to create awareness regarding changing climatic conditions and environment.



# NIT-Durgarpur

In order to understand the socio-economic status, and the scope of solar lights at Pratappur, a large scale survey was organized with the help of NSS volunteers. The data collected by the volunteers are being processed. Tree plantation was administered at the village with the help of villagers. Each sapling was allotted to a single child for taking care of that. To create sense of belongingness, small children were involved in tree plantation.



Sanitation drills : The volunteers were engaged with the sanitation work at the common places, such as ponds, schools, club area. They showed the use and effect of bleaching powder for cleaning water logging area.



# NIT-Goa

During Swachhta Pakhwada, Swachh Bharat Ambassador Committee of NIT Goa is conducting programs and drives to clean the institute and surroundings. In order to spread the awareness of Swachhta, various events/ competitions like Essay writing competition, debate competition, poster competition etc. are planned. Mass Swachhta pledge was taken on 6<sup>th</sup> September 2016, and 1st cleanliness drive was conducted on 7<sup>th</sup> September 2016.



# NIT-Hamirpur



*Pledge Ceremony for Celebration of Swachhta Pakhwada*



*The faculty and students associated with NSS cell carried out tree plantation activity followed by the anti-polyethene drive in Distt. Hamirpur (HP).*



*Awareness Rally was also organized by NIT students from NIT Gate No. 1 to Anu Bazar followed by the mass cleanliness drive to create awareness about cleanliness among masses.*



*NIT students carried out mass cleanliness drive in the NIT Campus from NIT Administration Block to Area Silver Jubilee Gate No. 1*

# MNIT-Jaipur

Cleanliness drive has been done in Gram Dhabkanalla Tehsil Amer by educating school kids about health and hygiene through videos, animation movies and motivational lectures, conducting quizzes at different places and schools.

An initiative, by the students of Malaviya National Institute of Tech-

nology, Jaipur, the students were asked to come in teams of five and 125 students came forward for this drive. Students were supplied brooms, garbage disposal bags, hand gloves, masks and sanitizers. The students showed great enthusiasm and spirit to make the campus clean and contributed in making India cleaner..



# NIT-Raipur

After several visits and survey of the villages to understand their problems it was found that sanitation including the management of liquid and solid waste, energy, availability of good quality drinking water, and health issues are closely interlinked and are to be addressed in a wholesome manner. The CEO of Janpad Panchayat has been approached for the details of various sanitation

programs and budget provisions for them so that suitable action can be taken. A training program on best sanitation practices, and best construction practices is proposed to be organized.



*Survey to understand issues*



*Identifying opportunities for waste management*



*Study of existing systems of wastewater disposal.*



*Study of existing sanitation practices with govt officials*

# NIT-Silchar

An initiative on the awareness of cleanliness and hygiene by NIT Silchar, Assam was taken to keep surroundings clean and green.



# NIT-Surathkal

On 03 September 2016, as part of the Swachhta Pakhwada program, all the students and faculty members enjoined in a cleanliness drive. At 6.30 am, the inmates of the boys and girls hostels undertook a drive to clean the hostel premises. Later after breakfast, they all assembled near their respective departments,

and undertook a drive to clean the surroundings of their departments. The NSS and NCC took up the cleaning of the common areas. The program was a real success and everybody felt satisfied and happy.



*Shows the condition of premises before the cleanliness drive undertaken by students and faculty.*



*Depicts the premises after cleaning during the cleanliness drive .*

The water carriage system or the Flush system without water is always a problem in itself, many researchers have come up with the concepts of dry latrines. Some of the dry latrines are - the Zero discharge toilet developed by Prof. V. Tare (2010) of IIT Kanpur and the dry latrine developed by the Prof. K. Munshi of IIT Mumbai (Munshi, 2013).



# NIT-Trichy

Swachh Bharat Pakhwada celebrations in villages adopted under Unnat Bharat Abhiyan 11<sup>th</sup> Sept. 2016

NIT Trichy has adopted five villages under the Unnat Bharat Abhiyan scheme proposed by Prime Minister of India. It is to help in improving the quality of life in the rural areas of India. NIT Trichy celebrates “Swachhata Pakhwada” from 1<sup>st</sup> to 15<sup>th</sup> September as per the instruction of Ministry of Human Resource Development.

a) A medical camp was set up and medical services such as BP and diabetics check-ups; medicines were availed free of cost. Doctors and medical staffs from NIT Trichy hospital were called to medical camp to provide best possible prescriptions and suggestions. About 300 people were offered diagnosis, medicines and suggested further course of treatment.

b) The students and staff members were also involved in cleaning the villages. They cleaned school areas, temples and public places with the help of sanitary staff.

c) Sessions were also held in which the villagers were made aware about the importance of hygiene to improve quality of life and increase life expectancy. Hand-outs were distributed to children and adults.

A number of training and development programmes for youth and women with an objective of dramatically achieving socio-economic development in villages is planned in the next two years.



# IIIT-Allahabad

This year IIIT Allahabad organized following program during Swachhta Pakhwada from 1-15 Sept 2016:

- Weeding out of old files, records were effectively ensured in accordance with the rules
- All kind of waste materials like broken furniture, unusable equipments, defunct vehicles etc. completely removed from the premises

- Organized cleanliness drive throughout the campus
- Organized an essay competition
- Organized painting competition
- Organized a Debate on Swachh Bharat Abhiyan
- Placed Swachhta Awareness Messages at appropriate places in the Institute Campus



# IISER-Bhopal



*Our volunteers explained the importance of cleanliness & hygiene*



*Children were educated about the importance of cleanliness.*



*Potted plants for the village school.*



*IISER volunteers involved in cleaning drive.*

# IISER-Thiruvananthapuram

Swachh Bharat Pakhwada was celebrated by spreading the message of cleanliness in the villages adopted under the Unnat Bharat Abhiyan (UBA), various activities were carried out at the institute by the students, staffs and faculties which included a cleanliness drive, pledge on swachta etc.



# IIM-Ranchi

IIM Ranchi believes that each one of us can play a vital role in achieving the “Swachh Bharat” by observing personal cleanliness as well as cleanliness of surroundings. IIM Ranchi has decided to undertake various activities as reflected below:

- Inspection of Sanitary Facilities.
- Displaying of Banners on Swachhta.
- Removal of waste materials.

Carrying out cleanliness activities in and surrounding places of the hostel building, campus area.

Following has been conducted with respect to Swachh Bharat Abhiyan on 6<sup>th</sup> September 2016

1. Displaying of banner outside the main gate of IIM, Ranchi, Suchana Bhawan.
2. As discussed above considering the targets set by IIM Ranchi, an inspection of sanitary facilities was carried out on September 6<sup>th</sup> 2016. Staff were briefed on the importance of cleanliness, hygiene and also on how to take care of themselves while work-

ing with housekeeping products /chemicals. It helped to bring awareness about the importance and necessity of cleanliness and hygiene in day to day life among the housekeeping staff.

3. In order to create awareness regarding basic hygiene and sanitation, training was provided to all the housekeeping staffs.



# IIM-Trichy

Under the aegis of Unnat Bharat Abhiyan IIM Trichy also participated in the Swachh Bharat Pakhwada during September 2016. Some of the initiatives included are:-

Rural Outreach and Render Program was created to reach out to the students and their families of Govt. Hr. Sec. School, Poonampalayam, Trichy, eventually reaching a larger proportion of the rural community to spread awareness regarding the importance of safe hygiene practices.

Child Abuse Awareness and Hygiene Campaign for Kids at St. Philomena Hr. Sec. School, Kattur, Trichy was conducted. Great awareness has been raised about sexual violence against women.

Creating Awareness about the Importance of Education among the Underprivileged Section of the Society (Raja Aided Primary School, Pichandar koil street, Trichy) was done.

Institute organised a drawing and painting workshop in the school as a part of extra-curricular activity to encourage and motivate the students about education and create interest in it. The intention behind this workshop was to convey the message to the children that school going was fun.

It was acknowledged well in the locality and not only kids but their parents also participated in it with equal enthusiasm.

Plastic Free Zone in Tiruchirappalli was conceptualised with keen observation during the three day campaign and collective



feedback from various shopkeepers, local hawkers and the general public. IIM Trichy documented a 10 point proposal which, when followed will reduce the usage of plastic bags significantly.



## MGIRI-Mahatma Gandhi Institute of Rural Industrialization

Plant Growth Promoter a Novel Agro nutrient has been developed from Waste Human hair. Based on a survey conducted by Mahatma Gandhi Institute for Rural Industrialization (MGIRI) at Wardha, normally an individual visits hair cutting saloon 4-5 times in a year and on an average 20-25gm hair is generated and is getting waste. Based on this estimation every year approximate 2500-3000MT hair is available at free of cost.

Keeping the above in mind MGIRI, Wardha has developed low cost technology based on waste to wealth and creating employment for the Indian youth and making significant contribution towards Swachh Bharat Abhiyan as it was the dream of our father of the nation, Mahatma Gandhi and Narendra Modi our Hon'ble Prime Minister of India.

Applications, doses and shelf life of the product: For all crops in agriculture, horticulture and flowery culture, this can be applied at the rate of 1.5 -2.0 litre per acre in 200-250 litre water through foliar spray or through drip irrigation. The shelf life of the product is 3 years from the date of manufacturing

Training provided: Participants from various states e.g. Maharashtra, Bihar, Gujarat, Tripura, Andra Pradesh, Uttar Pradesh, Uttara Khand, Delhi, Haryana, and Madhya Pradesh. Total no. of training provided 150 youths for the production of noble agro-nutrients based on waste hair and some of them has started their business in this area.





# NIRDPR- NATIONAL INSTITUTE OF RURAL DEVELOPMENT & PANCHAYATI RAJ HYDERABAD

Swachh Bharat Mission initiatives started off, at the National Institute of Rural Development & Panchayati Raj (NIRD&PR), Hyderabad with setting the home in order before moving on to setting the next door right. It has put in place a series of internal measures to correct some of the local practices that were not in alignment with the values and principles that Swachh Bharat Mission (SBM) would approve of. The Institute has banned the use of plastic carry bags, and promotes reusable cloth bags and eco-friendly nonwoven bags. Waste segregation arrangements have been made in the dining halls so as to introduce the practice of sending all kitchen refuse into gasification plant being set up. Incinerator is being set up for safe disposal. Bharati Vidya Bhavan Vidyashram School children have been sensitized on the 3R's in Waste Management. Sanitation Contract of the

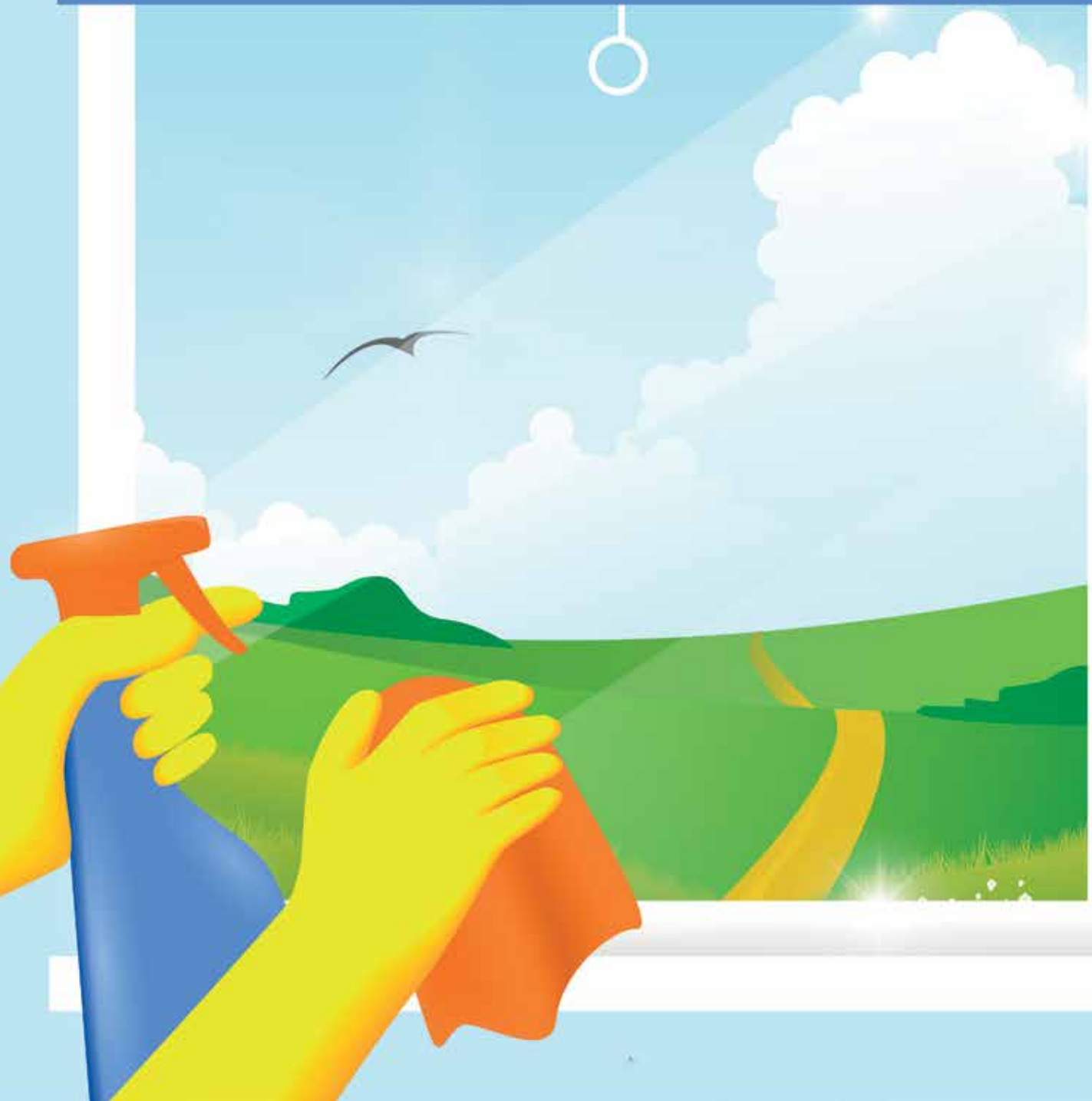
NIRD&PR has been revised, to fall in line with the Swachh Office SOP issued by the Ministry of Drinking Water & Sanitation and MoUD. NIRDPR has brought out handbooks, and IEC materials such as posters, leaflets, and folders that further the idea of SBM. The children of Bharatiya Vidhya Bhavan Vidhyashram (BVBV) at NIRD&PR campus are periodically involved in campus cleaning through shramadhan. They also plant trees in the campus.

The NIRD&PR, Hyderabad together with B R Ambedkar Institute of Panchayats and Rural Development, Kalyani West Bengal got down in a cleanliness action initiative at Kalayani town. Ten year old garbage from a street at Kalyani Municipality was cleaned up in five days' time. Pictures show 'before-after' stage.



*Keep your surroundings clean*

*In the final analysis we all breathe the same air...*



## *act now*

ENSURE THROUGH OUR ACTIONS  
THAT, WHAT WE LEAVE FOR OUR  
CHILDREN IS A WORLD WHERE  
THEY CAN BREATHE FRESH AIR,  
DRINK PURE WATER AND EAT  
HEALTHY FOOD.





“  
*A clean India would be the best tribute  
India could pay to Mahatma Gandhi  
on his 150 birth anniversary in 2019*”

**Narendra Modi**  
Prime Minister, India



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