सत्यमेव जयते

भारत सरकार

जल संसाधन, नदी विकास और गंगा संरक्षण मंत्रालय

केन्द्रीय जल आयोग

राष्ट्रीय जल अकादमी

स्वच्छ भारत

एक कदम स्वच्छता की ओर

स्वच्छता सर्वेक्षण 2018

Swachh Bharat Mission

स्वच्छ भारत अभियान

TEAM NATIONAL WATER ACADEMY (OFFICERS & STAFF) WITH OUTSOURCED PERSONNEL

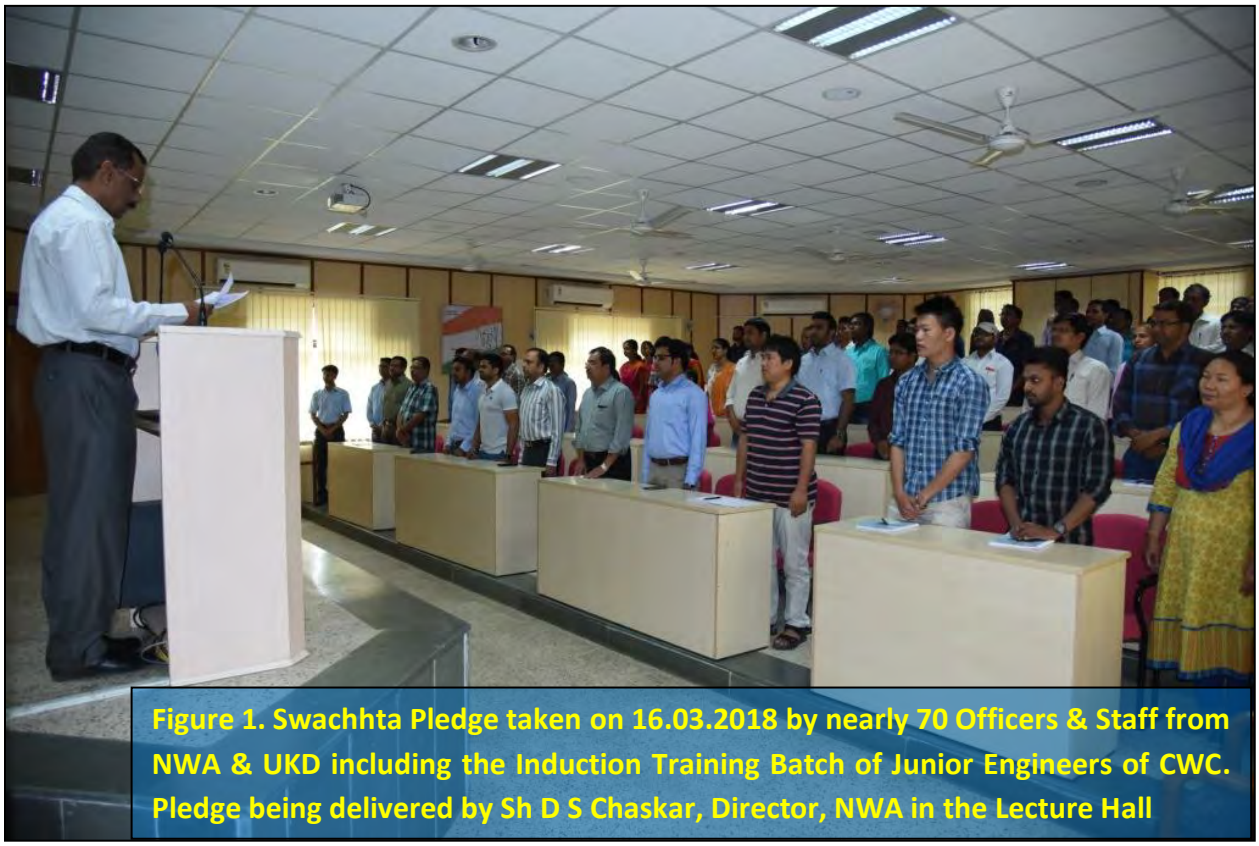


Figure 1. Swachhta Pledge taken on 16.03.2018 by nearly 70 Officers & Staff from NWA & UKD including the Induction Training Batch of Junior Engineers of CWC. Pledge being delivered by Sh D S Chaskar, Director, NWA in the Lecture Hall

Figure 2. Display of Swachhta Pakhwada 2018 "Inaugural Banner" at NWA Main Gate on Day-01 (16.03.2018)

Figure 3A. On Day-01 (16.03.2018) Specimen Bottles were made ready for collecting Water Samples from different strategic locations during Swachhta Pakhwada 2018 for Water Quality Checks (No Bias to the Lab Researcher as locations were kept unknown);

Figure 3B. Physical Parameters testing was done in collaborative effort with Upper Krishna Division (UKD) at their Level-II Water Quality Laboratory inside NWA Campus.

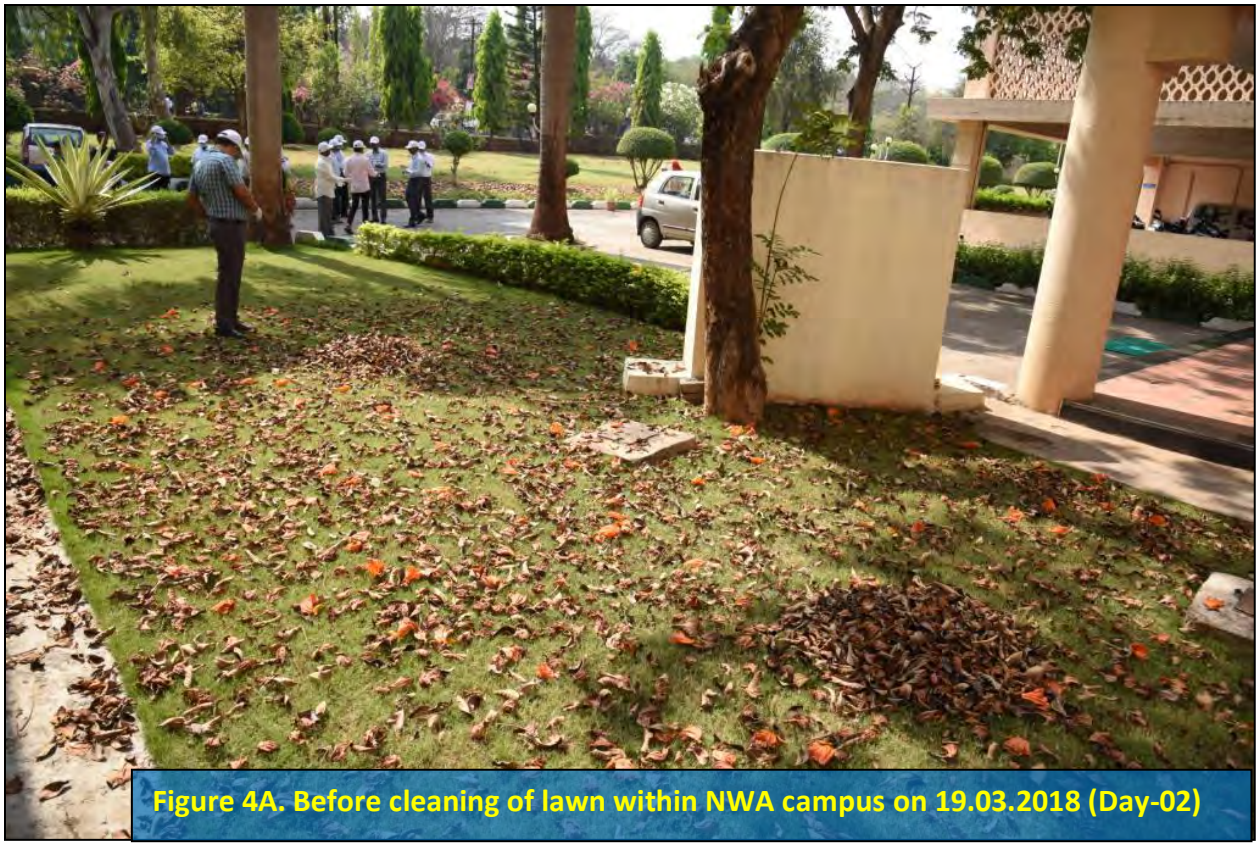


Figure 4A. Before cleaning of lawn within NWA campus on 19.03.2018 (Day-02)

Figure 4B. Clean Lawn after collecting dry leaves by the Officers and Staff of NWA

Figure 5A. Tank of NWA for storing pumped out Ground Water (GW), full of algal growth.

Figure 5B. Water Tank of NWA after cleaning up green algae, moss and then filled with clear Ground Water used for Horticulture purpose. Day-05 (22.03.2018)

Figure 6A. Jhambulwadi Water Body (Lake): Dried up weeds, litters on the shore before cleaning up on 19.03.2018 (Day-02); These dried grass/weeds would have got putrefied when water level in the lake rises during rainy season.

Figure 6B. De-weeded and cleaned up shore with exposed green grass getting ample sunlight now; Participation of Women in such tiresome activity is noteworthy.

Figure 7A. Jhambulwadi Lake: Weeds underwater creates anaerobic condition validated by water sample tested from this location (Dissolved Oxygen D.O. is Absent); On the contrary, D.O. at middle portion of lake as 4.5 mg/litre is very suitable for aquatic life.

Figure 7B. Jhambulwadi Lake: Shoreline de-Weeded to get rid of anaerobic condition; Water Quality will improve over time. Day-02 (19.03.2018)

Figure 8A: Silt, dirt and dried leaves had clogged the NWA Campus Storm Water Drains thereby reducing their capacity resulting in water logging during torrential rain.

Figure 8B. Storm Water Drains after de-clogging; Fertile silt collected after cleaning the drains were applied to the roots of the plants within the campus on Day-04 (21.03.2018)

Figure 9A. Water Body (River Mutha Left Bank): Solid Waste like rags, plastics, religious wastes, wooden pieces etc were lying astray over the bank creating unhygienic condition

Figure 9B. Water Body (River Mutha Left Bank): Comparatively de-clogged and cleaned; Participation of women in this cleanliness activity was also praise-worthy.

However, the quality of river water tested at this site was found to be of septic condition, grey/black coloured with D.O. absent during 21.03.2018 (Day-04)

Figure 10A. Lady Junior Engineers of CWC undergoing their ITP formed a team and cleaned the outside premises of NWA through "Shram-Daan" on 22.03.2018 (Day-05)

Figure 10B. Clean Roadside view outside the NWA campus, after a batch of 55 Junior Engineers attending their Induction Training Program at NWA participated jointly.

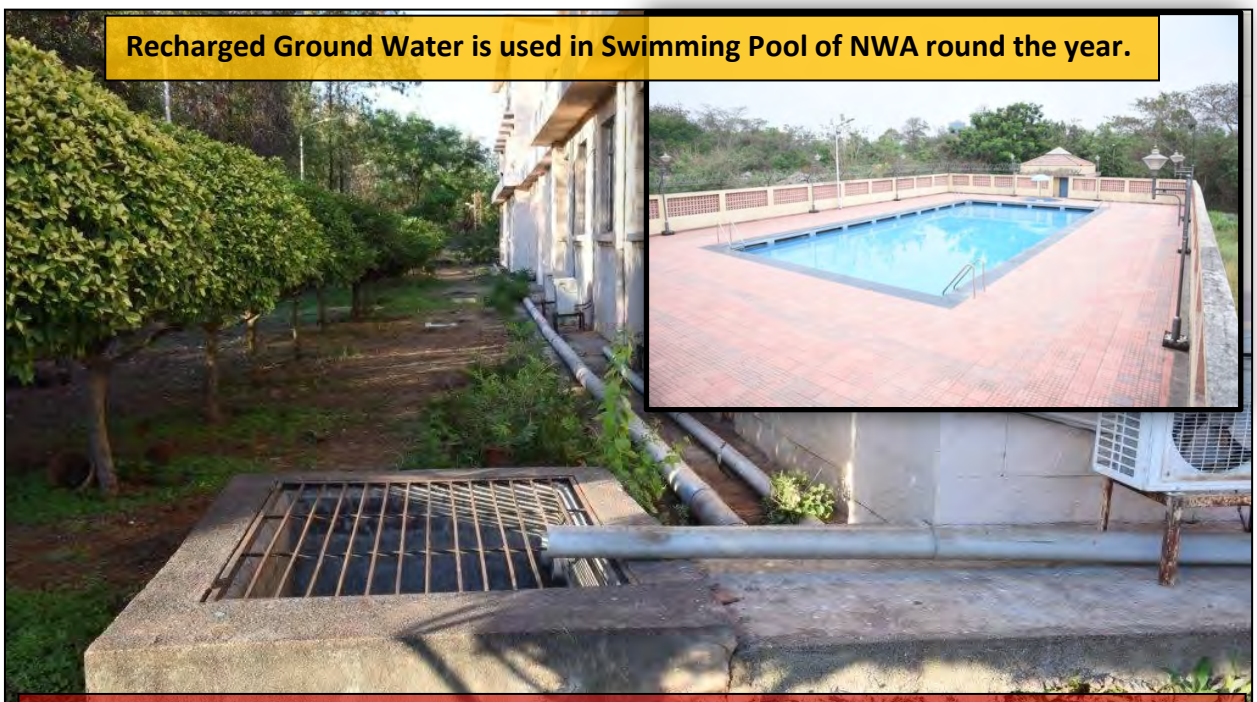


Figure 11A. Rooftop Rainwater Harvesting (RWH) System restored inside the NWA Campus to recharge Ground Water and improve GW Quality. Not letting naturally purified rainwater to drain away & get polluted. Commissioned on Day-06 (23.03.2018)

Figure 11B. The RWH System was got examined by two guest faculty Scientists 'D' from CGWB during a collaborative Training on "Ground Water Management" at NWA; The participants of Training Program from different States were also given a demonstration.

Figure 12. Sustainable Solid Waste Management System of NWA starts with installation of Waste Bins for segregation of waste; "GREEN" for Biodegradable and "BLUE" for Non-biodegradable. Day-03 (20.03.2018)

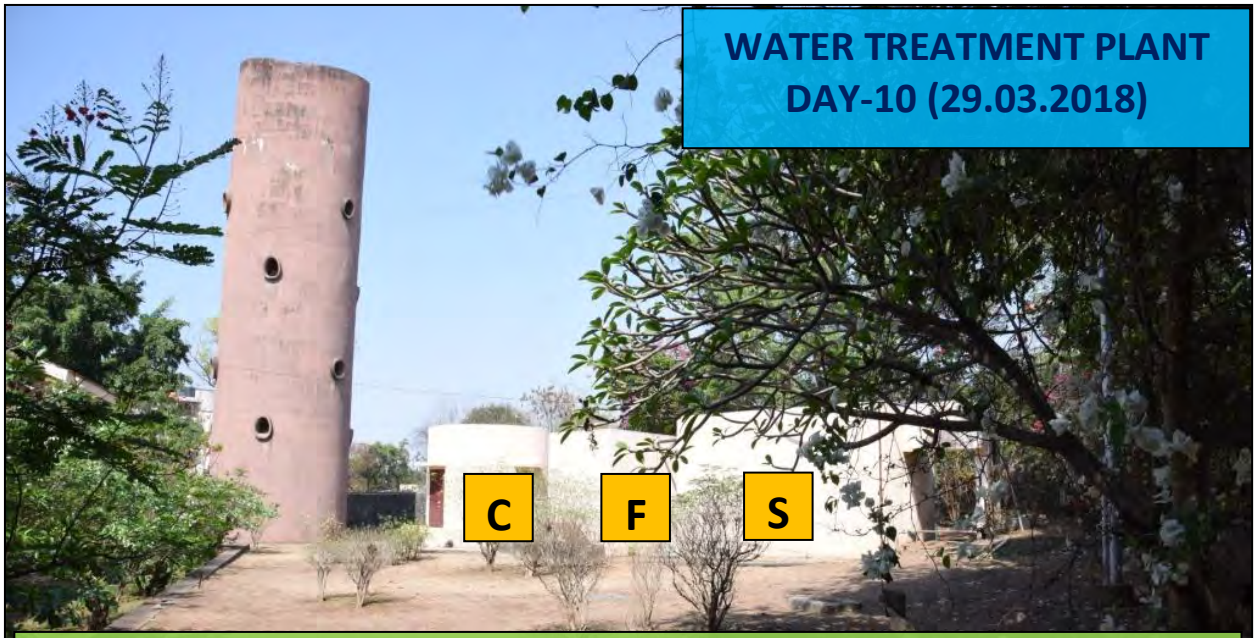
Figure 13A. The new automatic drum type Digester was inaugurated by Head, NWA and the 'Swachhta Inspection Team' of WAPCOS on behalf of MoWR on 26.03.2018 (Day-07). Nearby village Panchayat Sarpanchs have been invited to visit this pilot model for many.

Figure 13B. The Supplier giving a LIVE Demonstration and explaining the Do's and Don'ts for operation of this machine. The organic compost would be used as manure for horticulture thereby reducing load on chemical fertilizers and it's leaching (GW pollution)

Figure 14. Farmers have started adopting innovative Zero Tillage Conservation Agriculture (Saguna Rice Technique) for growing healthy crops. (NO PUDDLING FOR PADDY!! A SILENT REVOLUTION!!)

NWA is promoting Mass Awareness of SRT through Training Programs and innovative "BANNERS". SRT enhances organic carbon in soil & consequent microbial activities with NO burning of crop residue (drastically reducing Air Pollution, Water Pollution & Soil Erosion). Day-06 (23.03.2018)

SRT is a simple yet effective technique to combat 'CLIMATE CHANGE' and ensure 'FOOD SECURITY' simultaneously.
(http://srt-zerotill.com)



WATER TREATMENT PLANT
DAY-10 (29.03.2018)

Figure 15A. In NWA, the regular Water Supply (from CANAL) is treated in the Sedimentation chamber (S), Sand Filter Bed (F) and Chlorination unit (C) before being pumped in the Overhead Tank. Treated water is checked for Water Quality and used for all day to day uses. Reverse Osmosis Units treats this water further for drinking purpose.

WASTE WATER TREATMENT & MANAGEMENT

Day-09 (28.03.2018)

Figure 15B. In NWA, the Waste Water Management is done regularly through on-site treatment in decentralized Septic Tanks and then treated water is recharged into the GW through Soak Pits. Zero Effluent is discharged outside the campus.

Figure 16. Mass cleaning activity within and outside NWA Campus by deploying JCB: Before, During and After cleaning of rubble, waste, etc and subsequent Leveling on Day-08 (27.03.2018)

Figure 17A. Colonel Sathe retired from Indian Army spreading awareness to the gathering regarding the work being done by the NGO "Green Thumbs". NWA invited the village level Panchayat Sarpanch, Upp-Sarpanch and others to this program of cleaning of water body (Reservoir Rim) under Swachhta Pakhwada Day-07 (26.03.2018).

Figure 17B. NWA in association with Green Thumbs an NGO for environmental cause organized the cleanliness and tree plantation drive on Day-07 (26.03.2018) on the Reservoir rim of Khadakwasla Dam; Retired Army Personnel are committed to the task of De-silting the live storage of a dam to make space for priceless water.

Figure 17C. Catchment Area Treatment is being taken up in a big way by the NGO and NWA is promoting the same to the Trainee participants, local villagers etc. Another initiative for adapting to Climate Change & must be emulated by all Dam Authorities.

Figure 17D. The trees, bushes, planted along the rim and the catchment would check soil erosion. On the same day i.e. 26.03.2018, tree plantation was also carried out at NWA in presence of WAPCOS Inspection Team.

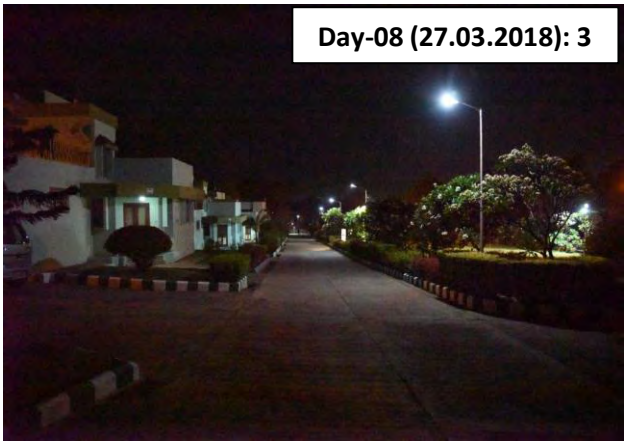


Figure 18. Innovative Measures for Cleanliness & reducing pollution load in NWA Campus: 1. LED Display Board used for info graphics, 2. Green Net Shed as Nursery for growth of plants allowing 50% of incoming solar radiation, 3. Energy Efficient LED Outdoor Lighting to reduce carbon footprint and save environment, 4. Sprinkler system reduces soil erosion and Water Use Efficiency, 5. Green Building promotes natural light and air/ ventilation, 6. Cleaning dust from Solar Panels used for heating purpose.

Figure 19. Regular Measures for Cleanliness round the year in NWA: 1. Water Tank cleaned twice a year, 2. Colour/Painting of interior and exterior surfaces of all Buildings, 3. Getting Pollution Test Certificate for NWA Vehicles, 4. Regular cleaning of sofa, carpet etc by Vacuum Cleaner, 5. NWA Kitchen/Mess cleaning and hygienic crockery, 6. Weeding out of Files, Newspapers etc as per extant Government Norms.

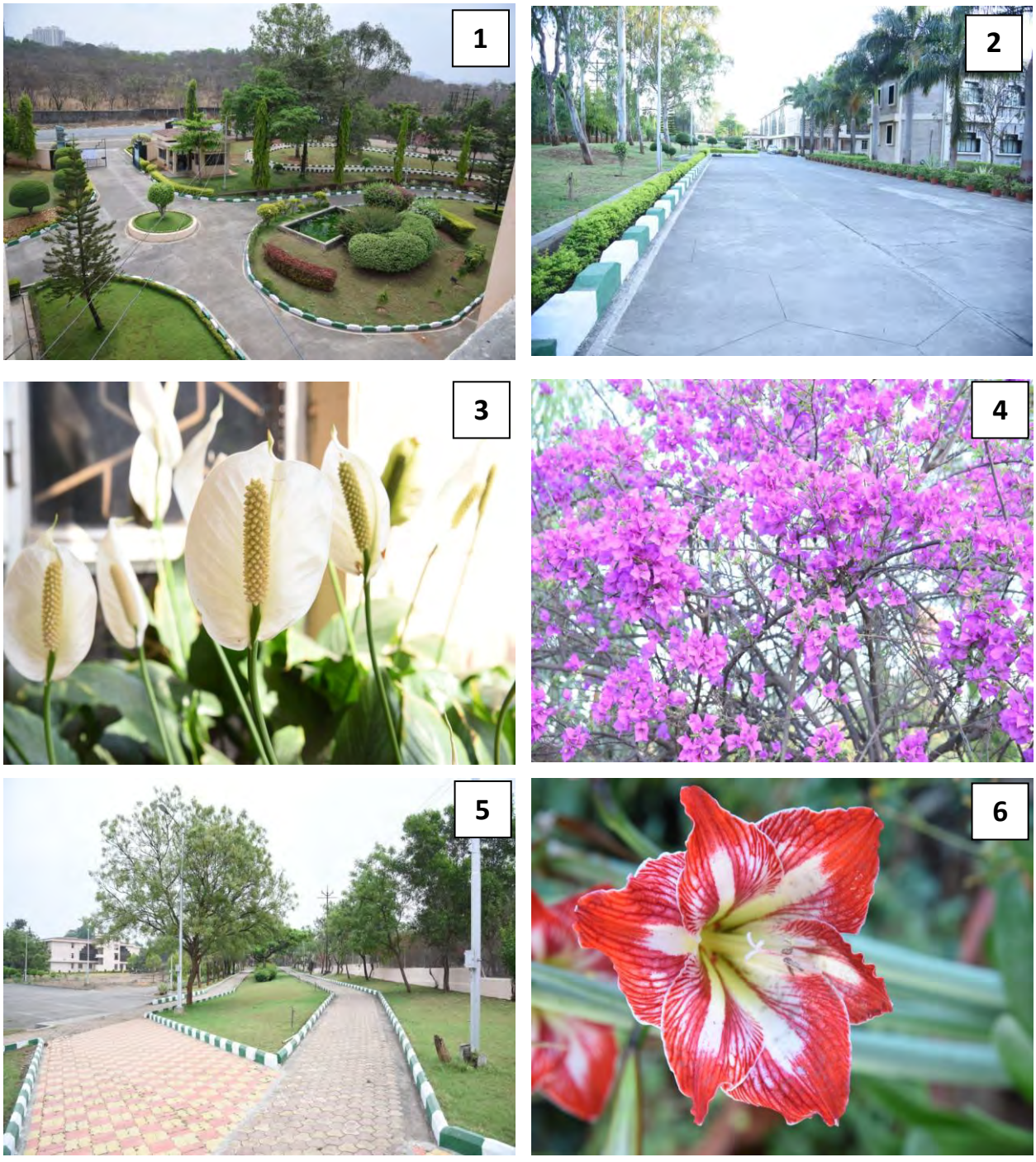


Figure 20. Regular HORTICULTURAL ACTIVITIES round the year in the beautiful NWA Campus: 1. Top View of the Green Garden at the Main Entrance Gate, 2. Clean Campus near the Annexe Building & Lecture Halls, 3. A rare flower inside our Campus, 4. Pink Bougainville flowers, 5. Jogging Track integrated with Boulevard, 6. Beautiful Lily welcoming all at NWA.

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