



IMA INITIATIVE OF BIOMEDICAL WASTE MANAGEMENT IN KERALA “I M A G E”

The entire Bio-medical Waste generated in the State of Kerala is managed by IMAGE (IMA Goes Eco-friendly) initiative of IMA Kerala State Branch. The biomedical waste segregated at source is collected, transported and scientifically treated by IMAGE as per the Rules and Regulations stipulated by the **Bio-medical Waste Management Rules 2016** [Amended in 2018].

IMAGE[Indian Medical Association Goes Eco-friendly]:IMAGE Project was launched on 21st October 2001 by the Indian Medical Association, Kerala State Branch and the IMAGE Plant, the Common Biomedical Waste Treatment and Disposal Facility (CBWTF) established at Kanjikode, Palakkad, was commissioned on the 14th December 2003 for the scientific management of biomedical waste generated from health care facilities in Kerala. IMAGE was conceived and launched to support the healthcare providers to overcome the challenges of disposal of hospital waste in accordance with the provision of the Biomedical Waste (Management and Handling) Rules 1998 with the approval of Kerala State Pollution Control Board.

IMAGE Management:

Under the auspices of IMA Kerala State, IMAGE is managed by a Management Committee consisting of Chairman, Secretary, Treasurer, Vice Chairman, Joint Secretaries and District Representatives. Apart from this there is a Purchase Committee, Vigilance Committee & Committee for upcoming Projects. These Office-bearers are elected/nominated from among the IMA Members who regulate and manage all the activities through IMAGE Administrative Office functioning at IMA Head Quarters, Thiruvananthapuram.

IMAGE PLANT, PALAKKAD

IMAGE PLANT is situated in the midst of 23 acres of land at Manthuruthy, Kanjikode, Palakkad. There are 5 main Buildings & few small buildings for the plant with a total plinth area more than 60,000 sq.ft. **IMAGE is now the largest Biomedical Waste Treatment Plant in India which has the capacity to treat more than 40 tons of Bio-medical waste per day.**

The plant machinery includes 5 huge **Incinerators**(equipped with Online Continuous Stack Emission Monitoring System (O-CEMS), 5 **Autoclaves**, 4 **Shredders**, 150 meters long scrap sorting **Conveyor belt system**, 3 **scrap grinders** with washing equipment, 2 **Hydraulic bundling machines**, 2 **Bottle sorting machines**, and two 125 KVA Generators and one 380 KVA **Generator**. There is a **vehicle wash area** of 2000 sq. ft. and a modern **Effluent Treatment Plant** with capacity to handle 4.5 lakhs liters per day for disinfecting all the effluents coming out during treatment of the waste. There are 64 **Surveillance Cameras** recording the activities within the plant, which is available for monitoring 24 hours a day. IMAGE has multiple rain water harvest systems including Micro-Watershed Based Rain Harvesting. There is a huge **Green-belt** surrounding the plant.

IMAGE is operated by about 500 staff working together for IMAGE, GJ Multiclav, Scrap dealers & Security agency.

Segregation of Bio-medical Waste at the source: Colour coded bags and containers are provided to HCIs through IMA PEPS authorised dealers for segregation and collection of waste at source. Special training is imparted to hospital staff regarding segregation, collection & transportation to the common storage area within the HCI.

Transportation of Biomedical Waste: 53 (Fifty-Three) GPS installed covered vehicles are arranged for collection of biomedical waste within 24 hours from the entire length & breadth of Kerala, which are specially designed as per the Biomedical Waste Management Rules and approved by the Pollution Control Board, which ply a total distance of 12,000 km per day. Out of which 30 vehicles reach the image plant; Each vehicle-crew includes a driver, a sanitary worker and a supervisor. Each vehicle collects segregated biomedical waste daily and are taken to the district transfer stations, from there directly to the plant at Palakkad taking all safety measures. All these vehicles are monitored through GPS Satellite Monitoring using AVL View Software Application. The movements of waste collection vehicles are monitored through GPS system and the waste collection is monitored through the mobile application system. Barcode based biomedical waste management has been implemented by IMAGE to monitor each waste bag from the collection source till the scientific treatment at the plant.

Biomedical waste treatment details: On an average, about 40 Tonnes of Biomedical waste reaches the IMAGE plant daily, of which 20 Tonnes are Incinerable waste (collected in Yellow bags), 14 Tonnes are Autoclavable waste (collected in Red bags), 5 Tonnes are Glass-wares & Metals (collected in Blue Boxes) and 1 ton is Sharps (collected in white puncture proof containers). This 40 tons of biomedical waste is collected from all 14830 healthcare centers across the state of Kerala within 24 hours of its generation.

Affiliation Details as on 30.09.2018:

1. Private Health Care Institutions:	13599
2. Government Healthcare Institutions:	1103
3. ESI & Other Healthcare Institutions:	61
4. Private Non-healthcare Institutions:	67
<u>TOTAL</u>	<u>14830</u>

The approach road to IMAGE CBWTF is through 1.1 Kilometer (Forest-area from Anakkal Road to IMAGE Plant) is in a very dilapidated condition with lots of potholes and big rubbles which made it impossible for transport as mentioned above 30 Bio-medical collection vehicles reaching our plant every day and also staff transporting vehicles, Plant Ambulance are running through this road. Actions may be taken to laying pavement block on the approach road at the earliest as decided by your good office.