

**BENEFIT ACHIEVED:**

- Lowered Operational costs for long time sustainability
  - Annual water saving to the tune of 18.0 lakhs gallons/year
  - Annual energy saving to the tune of 1.20 lakhs kw/hr
  - Resultant CO2 emission reduction contribution from building is about 1.40 lakhs tons/year
- High energy cost savings by use of high performance building materials such as insulated wall panels, high performance glazing, lowered lighting power density & high efficiency AC system.
- Enhanced fresh air systems in all regularly occupied spaces. State of the art fresh air system specifically brought from Italy ensures to pump fresh air into each space to maintain 'good indoor air quality'.
- Increased employee productivity due to the fact that good indoor environmental quality has been maintained.
- Use of energy efficient LED lighting fixtures which reduces the total lighting power density inside the office space upto 60%.
- Use of onsite 24 KWP Solar PV to the tune of 25% of the total energy consumption reduces the use of fossil fuel based electricity considerable throughout the year.
- Reduced consumption of portable water use for domestic water use in toilet flushing, landscape irrigations etc. Also 100% of rainwater is collected, harvested and reused back in the site.
- Use of onsite sewage treatment plant to reuse treated waste water in toilet flushing and landscape irrigation has complete eliminated the use of portable water.
- Overall, this effort leads to reduction in CO2 emission and support in protecting environment for the entire life of the building

**OTHER SITE IMPLEMENTED PHOTOGRAPHS:**



Electric Car Parking

Storm Water Pond



**ABOUT LEAD CONSULTANCY & ENG SERVICES, BENGALURU: GREEN CONSULTANCY CONSULTANT**

LEAD was established in the year 2008 to offer design consultancy services in the sphere of MEP design & Green Consultancy Services. In just a matter of Eight years, LEAD has become a leader, pioneer and trend setter in its business. LEAD has completed successfully more than 150 green projects from a very diverse range of clients and segments, across India, leading to immense pride and satisfaction to all their stakeholders.

LEAD, with its national presence, offers a gamut of design consultancy services that includes complete Green building services & MEP design services under one roof. As we march forward in our journey to create sustainable designs that leave an everlasting legacy, we, the team at LEAD, promise and dedicate ourselves to deliver the very best possible design solution for the benefit of built environment to sustain its operation for the entire life.

LEAD was appointed as the green building consultants for the project to facilitate and deliver the coveted LEED Platinum Rating under the GBCI.

**“BRINGING GLORY TO STATE OF ODISHA”**



**CENTER FOR MANAGEMENT OF COASTAL ECOSYSTEM  
STATE POLLUTION CONTROL BOARD, ODISHA, PARADEEP  
(UNDETAKEN THROUGH ICZM PROJECT)**

**AWARDED COVETED LEED PLATINUM RATING  
FOR THE PROJECT FROM**



**GREEN BUSINESS CERTIFICATION INC (GBCI), WASINGHTON DC  
(FIRST OF ITS KIND IN THE STATE ODISHA IN GOVT. SECTOR)**

**CMCE building achieved Leaderships in Energy & Environment Design (LEED) Platinum Certification from GBCI**

**ABOUT CMCE:**

SPCB, Odisha is one of the pilot executing agencies (PEA) under the Integrated Coastal Zone Management Project (ICZMP) being funded by the World Bank; which is operating since November 2010. The NPMU & SPMU at State and National Level respectively are the supervising authorities for the implementation of the project. The Dept. of Forest & Environment, Govt. of Odisha is the Nodal Agency for the ICZMP in the State.

The establishment of a laboratory at Paradip was revisited to a **Centre for Management of Coastal Ecosystem (CMCE)** with different sets of objectives, considering laboratory activities to be functioned at Central Laboratory of SPCB, Bhubaneswar as per CRZ Clearance for analysis of parameters. Activities to be taken up at CMCE are

- Monitoring Planning & movement from the coastal stretch from Paradip to Dhamra (80kms) in the Bay of Bengal & sample reception for transferring to the Coastal Laboratory at Bhubaneswar
- Biological Oceanography Activities by microscopic observation
- Real time online AAQMS for following parameters: PM<sub>10</sub>, PM<sub>2.5</sub>, TSP, NO<sub>x</sub>, SO<sub>2</sub>, H<sub>2</sub>S, Ozone, NH<sub>3</sub>, CO, VOC and BTEX
- Setting of GIS (Geographical Information System) Lab: Geo-scientific database using Geographic Information System (GIS) by **developing GIS based information system for selected critical habitats in the coastal areas in Paradeep-Dhamra coast.**
- Vessel Management: The Vessel Management Cell is an operational wing of CMCE to proficiently manage the running, operation and maintenance of Pollution Monitoring Vessel.
- This centre would act as a referral center and would play a vital role in the sustainable management of coastal ecosystem.

**ABOUT GBCI:**

**Green Business Certification Inc. (GBCI) is the premier organization independently recognizing excellence in green business industry performance and practice globally. GBCI is the Leading institutes in the World for certifying green buildings.**

GBCI is comprised of 140+ staff experts and 600 consultants apportioned into three teams that form a paramount organization through certification, credentialing and customer support. With locations in both the U.S. and India, GBCI supports project teams and professionals in over 160 countries.

GBCI provides third party verification services for certification and credentialing through a scientific process by which a product, process or service is reviewed by a reputable and unbiased third party to verify that a set of

**CMCE building achieved Leaderships in Energy & Environment Design (LEED) Platinum Certification from GBCI**

criteria, claims or standards are being met. Certification and credentialing is used within the global green building industry to demonstrate credibility, provide a metric for comparisons and add significant value.

**ABOUT LEED RATING:**

**No matter where a LEED project is, its certification is an achievement in green building that's recognized around the world.**

LEED, or Leadership in Energy and Environmental Design, is a certification program for buildings and communities that guides their design, construction, operations and maintenance toward sustainability. It's based on prerequisites and credits that a project meets to achieve a certification level: Certified, Silver, Gold and Platinum.

**LEED 2009 for New Construction rating scale:**

Certified	40-49 points
Silver	50-59 points
Gold	60-79 points
Platinum	80 points and above

CMCE Project has achieved 'Platinum Level' of rating the highest possible level under the LEED Rating system for building.

**LEED RATING PROCESS FOLLOWED AT SITE:**

Bangalore based firm M/s. LEAD Consultancy services (india) Pvt Limited, provided entire hand holding support along with other stakeholder involved in this project process to reach this unique milestone. Based on the additional costing and technologies suggested in order to reach platinum level, approval of the same was given to proceed. Site implementation works was monitored for a period of 6 to 8 months. Design & Construction documents were collated and later submitted to GBCI. Additional clarification was sought by USGBC to be clarified by project team by submitting additional documentation. Final review was carried out by USGBC and final rating under Platinum Level was awarded.

**LEED PLATINUM CERTIFICATE**



**CMCE building achieved Leaderships in Energy & Environment Design (LEED) Platinum Certification from GBCI**

**KEY 'GREEN FEATURES' DEMONSTRATED / IMPLEMENTED IN THE CMCE BUILDING ACHIEVING PLATINUM RATING ARE:**

**SUSTAINABLE SITES**

- CMCE project is "PLATINUM " rated green building certified by GBCI under LEED for New Construction
- Occupants here have good access to public transport and basic amenities
- Occupants have preferred parking spaces for bicycle, electric vehicles & carpool commuters

**WATER EFFICIENCY**

- Reduction of potable water consumption is more than 41%
- Installed efficient water fixtures to minimize wastage of water
- Water meters are installed to monitor and control water consumption
- High Efficiency irrigation system has been installed

**ENERGY & ATMOSPHERE**

- The annual energy consumption is reduced by 43%
- Eney efficient lighting and AC system inslatted
- Insulated wall and high performance glazing to reduce heat ingress
- High reflective paints for roof to reduce heat ingress from roof
- Occupancy sensors are installed in closed rooms
- Energy meters are used for constant monitoring of energy
- On site Solar PV to the tune of 24 KW panel has been installed to cater to 25% of the energy demand

**MATERIALS & RESOURCES**

- 96% of construction wastes has been diverted from disposal
- Materials used for interior fit outs have 10% of recycle content
- More than 80% of materials used are locally manufactured

**INDOOR ENVIRONMENT QUALITY**

- The entire building has been declared as "NO SMOKING" zone
- Paints, adhesives and sealants used have negligible VOC content
- Low VOC content composite wood & agrifibre products used
- Fresh air fans to increase occupants comfort and for improved health