



Report on

Jaltarang

A celebration of

World Wetlands Day

February 2, 2010

Part of

Wetland Management Program



Invitation Card

An invitation for CIDCO & TERI's

JALTARANG

World Wetland's Day celebration; February 2, 2010

मुख्य अतिथि
Chief Guest

Hon. Shri. Ganesh Naik
Minister of State, Non-conventional Energy, GoM

अतिथि माननीय
Guest of Honor

Shri. Vijay Nahata (IAS)
Municipal Commissioner, NMMC

Shri. Gulabrao Pol (IPS)
Police Commissioner, Navi Mumbai

मुख्य अतिथि

Poster dissemination activity
Time: 09:00 am- 10.00 am venue: Vashi Toll Plaza

Demonstrations & Workshop on "Recycle & Reuse"
Time: 11:00 am- 03.00 pm venue: Khandeshwar lake complex, Panvel

Wetland Management Programme
"Stake Holders Meet"
Time: 04:00 pm- 06.30 pm venue: Khandeshwar lake complex, Panvel

Inauguration of "Ravi-Taru" the Solar Tree
at the hands of the Chief Guest
Time: 06:30 pm- 06:45 pm venue: Khandeshwar lake complex, Panvel

With Best Compliments

Shri. G.S Gill (IAS)
Vice chairman & MD, CIDCO

Shri. Satish Deshpande
CE & GM (TECH), CIDCO

Dr Anjali Parasnis
Head, TERI Mumbai

 CIDCO  TERI



"Ravi Taru" – the Solar Tree
Khandeshwar Lake Complex, Panvel

"Jaltarang" is a Sanskrit word meaning concentric ripples created on water surface.



सत्यमेव जयते

**CHIEF MINISTER
MAHARASHTRA**

Special Message
Shri. Ashok Chavan
Chief Minister, GoM



Maharashtra, is one of the most progressive states of India. Owing to most conducive environment for industrialization, effective policy implementation and appropriate resource management, the state has already witnessed, rapid development in terms of infrastructure, improvement in socio-economic status and urbanization.

However, due to rapid growth in population and ever-increasing demand for resources like water and energy from the cross section of the society, keeping up pace with development and striking a balance in resource management becomes a challenge. Specially to address the concerns pertaining to water vows, the state has already taken initiatives to assess resource potential of fresh water wetlands like lakes, rivers and ponds which could be explored as decentralized sources of water supply. Towards this, a sustainable model for wetland preservation jointly developed by CIDCO & TERI is one such fine example which reflects our dedication and commitment towards this noble cause.

While inaugurating NIWARA, I have witnessed transformation of the lake environment brought about by this project. "Jalatarang", an event organized to celebrate World wetlands Day on February 2nd, 2010 deserves a special mention and I am proud that Maharashtra state is once again taking a lead in initiating such projects which will have long term implications.



Special Message

Dr. R. K. Pachauri,
Chairman, IPCC & DG, TERI



Realizing the immense importance of wetlands and their resource potential, TERI in collaboration with CIDCO has taken an important step for their preservation and sustainable management in Navi Mumbai. NIWARA, a dedicated centre for wetland research, especially focusing on issues pertaining to fresh water has been developed by the syndicate to establish a platform for participation of various stakeholders. Jaltarang is a perfect example showcasing extensive efforts of government officials, researchers, environmentalists and students to initiate a dialogue between these stakeholders, which is evident from this report.

TERI being a leading research institution in India aspires to establish a comprehensive and sustainable plan for wetland development in Maharashtra. This programme would facilitate sustainable water management through its activities that highlight the environmental, socioeconomic and resource potential of wetlands.

I thank the State Government for extending excellent support while implementing a forward-looking strategy during the pilot project at Khandeshwar, India, which we hope will continue to receive encouragement and support from the Government.

My best wishes to NIWARA for its endeavors !!



Special Message
Shri. G.S Gill, (IAS)
MD & VC, CIDCO



Navi (new) Mumbai has been developed by CIDCO as a counter magnet to Mumbai. Due to its well developed infrastructure, the city has indeed become a “Heart of Living”, throbbing with life in all its aspects. This is evident from the fact that 46% of the total existing population has migrated from Mumbai in search of cleaner and greener surrounding with abundant physical and social infrastructure.

To meet the water demands of this expanding city, all the existing water resources like ponds, lakes and wells need to be tapped. The present condition of these reservoirs does not enable us to exploit its resource potential to the fullest. Hence, development of comprehensive, sustainable plan for resource management is of paramount importance. CIDCO in collaboration with TERI has taken the first step in this direction by starting a project of restoration of wetland called Khandeshwar Lake. The project is already completed at a total cost of Rs 68 million. Besides a permanent institute NIWARA has also been established which will constantly guide the strategies for water management.

I am optimistic that Navi Mumbai will be fountain head for new and pragmatic ideas for conservation of wetlands in Urban Areas.

Acknowledgement

TERI and CIDCO wholeheartedly thank everyone who were involved in making this event a grand success.

We look forward to receiving your continued support.



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Agenda

Lighting of Lamp
Welcome address and felicitation of the chief guest
Wetland Management Project at Khandeshwar; Objectives and way Forward; A presentation
Role of CIDCO in wetlands preservation in Navi Mumbai; A presentation
Keynote Address
Stakeholder's meet- Interaction and Presentations
Appreciation of the Rainbow Team; The project associates of Khandeshwar Lake Project.
Role of the Indian Government, existing policies and resources for wetland preservation
Conservation of lakes in Thane; A case Study.
Collaborative research Initiatives with NIWARA
Vote of Thanks
Visit to NIWARA and lighting of Ravi Taru
Awareness Programmes
Recycle and reuse of waste- Demonstrations and Competition
Potential of Fresh water wetlands- poster preparation and dissemination

Lighting of Lamp and felicitation of the Chief Guest

Mr. G.S. Gill
presented a
poster frame to
welcome the
Hon'ble Chief
Guest, Mr. Ganesh
Naik , Minister,
Non-conventional
Energy, GoM





Dr. Anjali Parasnis,
Head, TERI- Mumbai
(Project coordinator)
elaborated on the
objectives of the
project and future
plans for NIWARA.

Mr. Sanjay Dahedar ,
Executive Engineer, CIDCO
(Project Coordinator)
explained about
CIDCO's commitment and
contribution in developing
sustainable wetlands in Navi
Mumbai.



Stakeholder's Meet- Interaction and Presentations



The stakeholders namely the key decision makers, representatives of government, research/educational institutions, industry and media were brought on a common platform to deliberate on the current status, issues, views and policies pertaining to the preservation and restoration of fresh water resources.



VIBGYOR

The Rainbow Team

Rainbow is a colorful manifestation of light and water and it was also a part of the theme as depicted on the banner. The representatives of stake holders were honored with traditional turbans in 7 colors forming a rainbow pattern. We hope that this message of unity conveyed through Jaltarang would result in a concrete action plan for wetland preservation.



Dignitaries On Dais



(L to R):

Mr. Kiran Kurundkar, Dy Secretary, UDD, GoM, (Guest of Honour), Mr. Rajiv Jadhav, DMA, GoM, (Guest of Honour), Mr. Ganesh Naik, Minister, Non Conventional Energy, GoM, (Chief Guest), Mr. G.S. Gill, VC & MD, CIDCO and Mr. S.C. Deshpande, CE and GM (Tech), CIDCO.

Mr. Kiran Kurundkar, emphasized the urgent need to save water bodies for a safer tomorrow and appreciated the efforts taken by CIDCO and TERI. He added that “While organizations like CIDCO have technical expertise and manpower, research organizations like TERI have experience and knowledge about methods of conserving water bodies. Hence the implementing agencies, stake holders and NGOs need to work hand in hand to protect the fresh water resources ”.



While highlighting the importance of such demonstration projects, Mr. Rajiv Jadhav suggested that events like World Wetlands Day should be celebrated by all the municipal corporations and invited TERI to organize similar functions in collaboration with other ULBs of Maharashtra.



INTEGRATED LAKE CONSERVATION AND BEAUTIFICATION PROGRAMME FOR THANE: A PRESENTATION

- Mr. Balaji Khatgaonkar, Dy MC, TMC elaborated on the initiatives taken by TMC in preservation of lakes and fresh water bodies. He presented case study on comprehensive Lake Conservation & Management Programme by Bioremediation Technology.



- The model developed by TMC for building artificial immersion ponds during Ganesh festival was well appreciated.



Collaborative Research Initiatives

Mr. Rohan Gupta, represented the research fraternity in general and IIT Mumbai's Sustainability Cell in particular. He suggested that with wetland research as the main focus, NIWARA has the potential to expand its outreach to other aspects of sustainability like renewable energy and energy efficiency. He expressed a strong desire to develop collaborative projects with NIWARA in the area of water treatment and conservation.





NIWARA's action plan (Short -Term)

1. NIWARA shall periodically organize
 - Interactive programmes, film shows, and nature trails for the local citizens to create awareness about wetland ecosystems.
 - Training and debate sessions for students.
2. The database and resource material will be developed for researchers and professionals.
3. Mr. Gill made an announcement of the first eco-picnic to be organized on March 22, 2010 to commemorate the World Water Day.
4. A special resource kit would be made available in Braille script.



Chief Guest Visits NIWARA



Tour of the Lake Complex

Lighting of Ravi-Taru; The Solar Tree

“**Ravi-Taru**”, a first of its kind **solar tree** in the country, has been inspired from the typical structure of trees which are linear at the stalk and branch above to spread their span in order to trap maximum solar energy. The model demonstrates a non-traditional arrangement of solar modules in a compact structure when space is a constraint.

Ravi –Taru is composed of 10 stocks fabricated from high grade stainless steel and clustered together to increase strength. The overall height of the tree is 20 feet.

The solar panels have a capacity of 500 Wp with multi-crystalline silicon modules to meet a total output of 100W. This energy is used for illuminating colourful LED up lighters for 4 -5 hrs per day.





Awareness Programme

Demonstrations
on
Recycle and Reuse

Workshop & Competition
On
Best from Waste



Waste disposal- the challenge to Wetland Ecosystems

- Dumping of plastic, styrofoam, PoP, and floral offerings into the lakes and rivers affects the biodiversity and causes pollution.
- The solution to this critical problem could emerge through:
 1. Efficient waste disposal methods.
 2. Sensitization of citizens
 3. Encouraging recycle and reuse of waste.



Immersion of PoP idols



Accumulation of debris and waste

Jaltarang, 2010

- Out-of-box thinking and unconventional approaches could provide major breakthrough for recycling of old PoP idols, plastic and construction debris.
- Therefore, as a part of this event, live demonstrations and workshop were organized to motivate the stakeholders.
- The experts shared their views and experience on successful applications of waste in fashion technology, rice husk and debris in construction.
- The workshop “Best from Waste” provided a challenging platform for the youth to exhibit their talent and innovative ideas while making their own articles from waste.



WE WALK THE TALK.....



To set the tone and to demonstrate the practicality of the theme, TERI prepared the backdrop banner completely out of waste cloth, pieces of discarded flex banners and cardboard. Similarly, the badges for the team members were also made out of discarded material.





Interactive presentations

Special students from Helen Keller Institute for Deaf & Deafblind demonstrated the reuse of paper for making paper bags and recited the national anthem in sign language.



Students of SNT University, College of Home Science, Pune performed a skit on the impacts & causes of pollution and waste generation.



Ms. Neha Govindan, from SWaCH, demonstrated the importance of waste segregation & the challenges with the help of rag-pickers.

Recycling of debris in construction industry was demonstrated by
Mr. N.N. Shirgaonkar YUVA Centre, Navi Mumbai



Construction debris



Concrete blocks



Application in construction

Rice Husk Technology for Roof Insulation demonstrated by
Mr. Sandeep Vidwans, Enercon, Ahmedabad



Rice husk



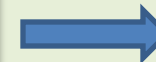
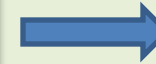
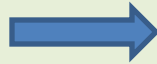
Processing of husk into
an insulate



Application on the roof top

Dr. Reena Aggrawal, faculty, NIFT explained reuse and recycle of material like waste fabric, corn husk in fashion technology and interior designing.

Jaltarang, 2010



She also elaborated on the reuse of fabric waste, innovative use of discarded felt tip pens and used gunny bags.

Jaltarang, 2010



Workshop & Competition
On
Best from Waste

- Six institutions from Navi Mumbai & Pune actively participated in the session.
- A total of XII teams, of five students each, were formed.
- The students were allotted a time limit of one hour to prepare useful articles out of waste material brought by them.



Workshop & Competition
On
Best from Waste

The articles were displayed and the judges assessed the articles with meticulous observation on parameters of relative significance towards the theme, type of material used, innovativeness and presentation.

Ms Manisha Pradhan, Chief Chemist and Pollution Officer, TMC, & Ms Reema Dixit, Social Welfare Officer, CIDCO, encouraged the students while appreciating their efforts and provided their considered judgment.



Prize Distribution to the winners of “Best from Waste”



St Joseph High School, Panvel won the First prize for making a decorative article from waste wood.



The second prize was shared between two schools from Vashi; Sacred Heart High School and Navi Mumbai High School.

Awareness Programme

Potential of Fresh water wetlands- poster preparation and dissemination



Activity Highlights

- A record of 9000 hand made posters, of A2 size were prepared within a month with the help of Educational Institutions.
- Interstate Transport Vehicles were used as an effective medium to disseminate these messages across the country by pasting the posters on the buses, trucks and tempos.





- TERI distributed template posters with catchy slogans pertaining to wetland and water management in three languages - Marathi, Hindi & English.
- Trials were conducted to check feasibility with the help of RTO.
- The students were thrilled to learn that their posters would go nation wide.
- 1000 unique posters were photographed to have a digital database.



Poster Dissemination

Dissemination of posters was initiated at Vashi Toll Plaza, Navi Mumbai by Mr. G. S. Gill, MD, CIDCO in presence of Mr. S. C. Deshpande, CE, CIDCO, Mr. Satish Sahasrabudhe, Jt. Commissioner, Transport, GoM and Mr. Bharat Kalaskar, Dy. RTO, Navi Mumbai Transport.

The chief guest and the guest of honor were presented with framed posters as mementos.



The students were acknowledged for their indispensable role in the success of the poster-making activity.



- The officers, citizens and school children enthusiastically disseminated the posters.
- Similar activity was conducted at six other toll plazas located on exit points of Mumbai on the prime national highways.
- All the posters were successfully disseminated in a single day.





Exhibition at NIWARA



Photo gallery

An exhibition was organised at NIWARA to highlight the makeover of the site. Features of the project were elaborated through display of model and photographs. The display was open to visitors during Navi Mumbai Festival organised by CIDCO during January 23-25, 2010. Thousands of curious local residents visited NIWARA to see the exhibition.



Display of Solar Technologies

A dedicated section elaborating on the application of solar energy was setup. Popular solar products such as lanterns, key chains and torches were displayed in this section. The banners depicted the philosophy of the National Solar Mission through Lighting a Billion Lives campaign.



Books and multimedia CDs related to the central theme of environment, energy and resources were displayed at NIWARA.



Audio-visual Facility

Multimedia films and documentaries on environment-related issues were periodically screened during Navi Mumbai Festival and Jaltarang.





Background Information:

1. Wetland Management Programme.
2. Features of NIWARA.
3. Impacts of the Project
4. Ramsar Convention.

Wetland Management Programme

A sustainable approach

- An initiative to preserve more than 150 freshwater bodies in Navi Mumbai.
 - Lake at Khandeshwar, Panvel, Navi Mumbai developed as a model.

Highlights of the Project

- NIWARA, a roof for wetland research
- Demonstration of green technologies
- Sustainable solutions
- Fund raising strategies



Khandeshwar Lake



W2E using
Biomethanation



Solar Tree



**Eco Friendly
Technologies**



Energy Efficient
Building



Water conservation
through drip
irrigation



Paddle Boating



Root Zone
Treatment

Features of NIWARA

- Monitoring cell of the complex
- Interactive Centre for awareness generation
- Data hub for fresh water wetlands
- Research on water recycling and conservation
- Exhibition area, Audio-visual Room & library
- Eco Picnics and workshop facilitation.
- Centre for preparation of DPR (Detail Project Report)
- Conservation cell of lake Biodiversity



NIWARA at Khandeshwar Lake Complex



Model of Khandeshwar Lake complex

Statistical Information

- Area of the complex 4.7 hectare
- Area of the lake 1.7 hectare
- NIWARA 4500 sq ft
- Total Project cost (Rs) 5 crores



Theme Park



Shops for local artisans

**Revenue
Generating
options**



Recreational facility



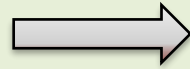
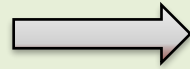
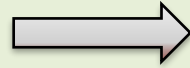
Cafeteria

Inauguration of NIWARA

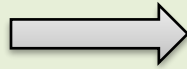
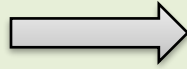
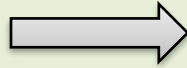
NIWARA was inaugurated on January 25, 2010 by Shri Ashok Chavan, Hon. Chief Minister, GoM in presence of Dr. R. K. Pachauri, Director General, TERI, Mr. G.S. Gill, MD, CIDCO, senior Government Officials and other dignitaries.



Impact of the project



Impact of the project





- February 2nd is observed as the ‘World Wetland’s Day’ to mark the date of adoption of the Ramsar Convention on Wetlands in 1971, in the Iranian city of Ramsar.
- This intergovernmental treaty provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources.
- There are presently 158 Contracting Parties to the Convention, with 1718 wetland sites, totaling 159 million hectares.
- TERI has been celebrating WWD from the past two years to sensitize the end users and the stakeholders about significance of fresh water ecosystems.

Media Coverage

राज्यात दहा हजार वाहनांद्वारे पाणी बचतीचा संदेश

विकास महाडिक
नवी मुंबई, ३१ जानेवारी

राज्य शासनाच्या अनेक योजना, उपक्रम, अभियान एसटीच्या माध्यमातून खेडेपट्टी पोहचविण्याचा सरकार प्रयत्न करित असते. मात्र राज्य परिवहन विभागाच्या मदतीने प्रथमच 'टेरी' वा खासगी संस्थेने दोन फेब्रुवारी रोजी 'वर्ल्ड वेटलॅण्ड डे' चे औचित्य साधून वाशी टोलनाक्यावर टोल भरण्यास उभ्या राहणाऱ्या दिसभरातील दहा हजार वाहनांवर 'पाणी वाचवा'चा संदेश चिकटला जाणार आहे. विरोध म्हणजे हो सर्व रंगीबेरंगी पोस्टर नवी मुंबईतील वीस शाळांतील विद्यार्थ्यांनी तयार केली आहेत.

जगात तिसरे महावृष्ट पाण्यावरून लढले जाईल असे म्हटले जाते. त्यामुळे पाणी बचतीचे संदेश वारंवार दिले जातात. मुंबई तर पाण्याच्या समस्यांचा मोठा सामना सध्या करीत आहे. दहा टक्के पाणी कपातीची झळ मुंबईकरांना आताच सोसावी लागत आहे. या महासमस्येवर 'घणघळी' ही एक नामी उपाययोजना असून 'टेरी' सारखी देशातील एकमेव संस्था या विषयावर काम करीत आहे. आपल्या पूर्वजांनी पाण्याचे उत्तम नियोजन करताना तलाव, विहीरी सारखी नैसर्गिक पाण्याचे स्रोत निर्माण केले व ते अनेक वर्षे टिकवून ठेवले होते. पण या स्रोतांचा उपयोग करण्याऐवजी ती बुजवून त्या ठिकाणी टोलेजंग इमारती बांधण्यात आल्या. तर काही तलाव, विहीरी सरकारनेच बुजवून टाकल्या. नळाद्वारे घरात येणाऱ्या पाण्याची आस सर्वाना लागल्याने आता ही तळीं,विहीरी नकोशा झाल्या. त्यामुळेच दहासय मध्ये नगरसेवकांना विहीरीच्या पाण्याचा पुन्हा आधार घ्यावा लागला.

'टेरी' ने ही जागतिक समस्या ओळखली असून त्यांनी गेली वर्षभर नवी मुंबईतील २०० तलावांचे जतन करण्याची मोहिम उघडली आहे. सिडकोने या कामी 'टेरी' ला मदत केली असून खांदेश्वर येथे तलावांच्या संवर्धनाचे एक मॉडेल तयार करण्यात आले आहे. खांदेश्वर तलावांच्या आजूबाजूचा दहा एकर परिसर या संस्थेने सुरक्षित केला आहे. खांदेश्वर तलावांचे पाणी आता घरगुती उपयोगासाठी वापरण्याजोगे झाले आहे. पाणघळी वाचवण्याचा हा मंत्र संपूर्ण देशात जावा यासाठी 'टेरी' ने एक अभियान हाती घेतले आहे. राज्य सरकारच्या परिवहन विभागाने या अभियानाला सर्वांतोपरी मदत करण्याचे आदेश नवी मुंबई उपप्रादेशिक कार्यालयाला दिले आहे. नवी मुंबई आरटीओनेही या संस्थेला मदत केली आहे. अनेक टूक टेम्पो असोशियनशी बोलून मंगळवारी पाणी बचतीचा संदेश चिकटवाला जाणार आहे.

मंगळवारी वाशी टोलनाक्यावर टोल भरण्यास उभ्या राहणाऱ्या प्रत्येक शासकीय वाहनांवर तसेच खासगी वाहनमालकांनी परवानगी दिली तर त्यांच्या वाहनांवर 'तले राखील तो पाणी चाखेल', 'कल के लिए कदम उठाव नदी और तालाब बचाव' या सारख्या संकेतचिन्नांना साकार होणारी रंगीत पोस्टर चिकटवली जाणार आहेत. शंभर शब्दरीत्या एका चित्राची भाषा परिणामकारक ठरणारी आहे या उद्देशाने ही संकल्पना निवडण्यात आली आहे. ही वाहने मुंबईत तसेच मुंबई बाहेर राज्यात तसेच देशात पाणघळी वाचविण्याचा संदेश घेऊन जाणार असल्याचे 'टेरी'च्या मुंबई विमुख अंजली परसनीस यांनी 'लोकसत्ता' ला सांगितले.

Saving wetlands in Navi Mumbai

Tasneem K.
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YASHI / KHANDESHWAR: Citizens and organisations came together to celebrate World Wetland's Day on February 2.

The day-long event, Jal-Tarang, by The Energy and Resources Institute (TERI) began with a poster dissemination drive at Vashi toll naka. Posters with slogans pertaining to wetland and water management were handed out. They were also sent to educational institutions in Navi Mumbai.

Said Anjali Parasnis, fellow and coordinator: "Over 9,000 posters were distributed at the toll plaza. We wanted our awareness campaign to reach throughout the place through these motorists as they headed to various destinations."

Programmes were also organised at the newly inaugurated Wetland Resource Centre at Khandeshwar, referred to as the National Institute for Wetland Analysis, Research and Application.

A workshop on re-cycling and reuse was organised here.

Said Parasnis: "Wetlands are often used as wastelands. In addition to the non-degradable floating waste in the form of styrofoam and plastic, the lake bottom is often saturated with plaster of Paris (PoP) accumulated when idols of gods, lamps



Volunteers gave away posters at Vashi toll naka with slogans pertaining to wetland and water management. SEPTA SAMAZEE

TERI, IN COLLABORATION WITH CIDCO, HAS UNDERTAKEN THE INITIATIVE TO PRESERVE AROUND 150 FRESH WATER WETLANDS IN NAVI MUMBAI

which were followed by a competition to make the best possible article using waste material," she added.

A presentation on the objectives of the Wetland Management Programme undertaken by the City and Industrial Development Corporation and TERI was also part of the event.

Ravi-Taru, the first-of-its-kind solar tree, was also lit up to promote and demonstrate applications of solar energy.

The renewable energy sculpture is designed to generate 100W of energy with the help of solar panels, which in turn is used to illuminate the LEDs set at the bottom of the 6-meter stainless steel structure.

and other religious offerings are immersed."

"This workshop was organised with an objective to motivate students to come up with innovative ways to recycle PoP and other waste material. In the first half of the workshop, experts gave live demonstrations of successful applications

Loksatta
February 1, 2010

Hindustan Times
February 3, 2010

Media Coverage

Research centre to preserve water bodies



NIWARA organised an exhibition to spread awareness on mangrove conservation at Vaid station on January 24.

Tasneem K.
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NAVI MUMBAI: In an attempt to preserve freshwater bodies in Navi Mumbai, the City and Industrial Development Corporation (CIDCO) and The Energy and Resources Institute (TERI) came together to form NIWARA (National Institute for Wetland Analysis Research and Application - A Roof for Wetland Research).

Chief Minister Ashok Chavan inaugurated the wetland research centre in Khandeshwar on January 25. NIWARA is the first of its kind research centre dedicated to wetland management in Navi Mumbai.

Said CIDCO's Public Relations Officer Mohan Naware: "NIWARA is a step to preserve more than 150 freshwater bodies in Navi Mumbai."

The 450-sq-ft centre that cost Rs 6 crore was inaugurated in the presence of Director General of TERI and Chairman of Intergovernmental Panel on Climate Change (IPCC) H.K. Pachauri and CIDCO Vice Chairman and managing director G.S. Gill. The first solar tree of the country was inaugurated on this occasion.

Wetlands are areas where water is the primary factor controlling the environment and the associated flora and fauna.

Said Dr. Atiqul Paranas, fellow and coordinator, TERI: "There is a lack of awareness about the resource potential of these wetland ecosystems among all sections of the society. Efficient management systems and development of sustainable models which would help maintain the natural characteristics of wetlands while

THE CENTRE HOUSES AN AUDIO-VISUAL ROOM WITH MULTIMEDIA FACILITY, A LIBRARY, DATA ROOM AND A DISPLAY ROOM

also exploiting its potential to meet the socio-economic and recreational needs of communities is highly required".

Asurvey by TERI indicated that freshwater wetlands in Navi Mumbai are being destroyed at an alarming rate due to several anthropogenic activities like dumping of solid wastes (including debris, release of sewage and destruction of catchment area).

"For long-term preservation of freshwater wetlands in Navi Mumbai, TERI conceptualised a pilot project at Khandeshwar Lake in Navi Mumbai. Khandeshwar Lake has been chosen as a model to demonstrate sustain-

AFTER Dr. PILLAI'S REVOL

Learning is fun. Evaluation is not reduced to a single examination pen. Emphasis is on development of analytical skills.

Development of social skills to imitate from other countries is an important part of the atomic table.

Teamwork, skilled communication citizenship are valued as much, if not more, as securing cent percent marks in the



Solar concept to light up city

First-of-its-kind design is joint work of CIDCO and TERI

Falguni Banerjee, VASH

In order to commemorate World Wetland Day on Tuesday The Energy and Resources Institute (TERI) along with CIDCO has organised a day-long programme 'Jaharang' to bring together all the stakeholders of the wetland system on a single platform through various activities.

As part of the programme, a number of activities will be held at Khandeshwar Lake located near New Panvel. The highlight of the function will be lighting up of 'Ravi Taru', a first-of-its-kind solar tree at the hands of Maharashtra Excise Minister Ganesh Naik.

'Ravi Taru' has been implemented in India as part of the project to promote and demonstrate applications of solar energy. The renewable energy sculpture is designed to generate 100 watts of energy with the help of solar panels which in turn is used to illuminate the LEDs set at the bottom of the six meter tall stainless steel structure. The tree is attracting a lot of attention from the locals and hence is successful in arousing interest and curiosity about renewable energy resources.

TERI has also implemented various eco-friendly technologies at the complex, which will be displayed through an exhibition. The programme will be attended by senior government officials, municipal commissioners, dignitaries, celebrities besides students and teachers from various schools and colleges.

CIDCO in collaboration with TERI has undertaken the initiative to preserve more than 150 fresh water wetlands of Navi Mumbai. The Khandeshwar Lake has been developed as a sustainable model. The total area of the lake complex is around 4.7 hectares comprising a dedicated Wetland Resource Centre referred as National Institute for Wetland Analysis, Research and Application (NIWARA) and a theme park.

In order to ensure long-term sustainability of these water bodies, options of revenue generation have been integrated in the model, which include a boating facility, a small cafeteria, theme park, shops for local artisans, play area for children and so on.

NIWARA would contribute some revenue through organising activities like workshops for professionals, nature trails and eco-penics for the youth and students.

TERI would lend its expertise to preserve the lake in healthy condition and also help develop activities within the complex that will make the entire project sustainable.

TERI also hold poster dissemination programme on Tuesday as part of which ETO and transport officials will paste nearly 900 posters prepared by students of more than 15 educational institutions of city on vehicles at the main to 11 plazas of Mumbai. A workshop on 'recycle and reuse' will also be held on Tuesday.

NIWARA would contribute some revenue through organising activities like workshops for professionals, nature trails and eco-penics for the youth and students.

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Ravi Taru, the solar tree installed at Khandeshwar Lake

Times Property
February 6, 2010

Hindustan Times, ht
LIVE, Navi Mumbai
January 31, 2010

DNA, Navi Mumbai
February 2, 2010

Abbreviations

CE	Chief Engineer
CIDCO	City and Industrial Development Corporation
DG	Director General
DMA	Director of Municipal Administration
DPR	Detailed Project Report
Dy	Deputy
EE	Electrical Engineer
GM	General Manager
GoM	Government of Maharashtra
Hon.	Honorable
IIT	Indian Institute of Technology
LED	Light Emitting Diode.
MC	Municipal Commisioner
MD	Managing Director
NGO	Non-Governmental Organization
NIFT	National Institute of Fashion Technology
NIWARA	National Institute for Wetland Analysis, Research & Application
POP	Plaster of Paris
RTO	Regional Transport Office
SNDT	Shreemati Nathibai Damodar Thackersey
SWaCH	Solid Waste Collection and Handling
Tech	Technical
TERI	The Energy and Resources Institute
TMC	Thane Municipal Corporation
UDD	Department of Urban Development
ULB	Urban Local Body
VC	Vice-Chairman
WWD	World Wetland's Day



Take home message

