



SRM
UNIVERSITY
(Under section 3 of UGC Act 1956)



SIXTH INTERNATIONAL GROUNDWATER CONFERENCE (IGWC-2015)

on

*Exploration, Assessment and Management of Groundwater Resources in Arid and
Semi-Arid regions*
December 09-11, 2015

Organized jointly

by

**Department of Civil Engineering
SRM University, Chennai
Tamil Nadu, India**
and

Association of Global Groundwater Scientists (AGGS), India

In collaboration with

Central Groundwater Board, Govt. of India
CSIR-National Geophysical Research Institute, Hyderabad
TWAD Board, Govt. of Tamil Nadu, Chennai
Centre for Water Resources, Anna University, Chennai
Water Technology Centre (WTC), TNAU, Coimbatore, India
Department of Applied Geology, Madras University, Chennai
Department of Geology, Anna University, Chennai
GEOFORUM, Maharashtra

ABOUT THE CONFERENCE

Groundwater resources in arid and semi-arid regions with limited renewable potential have to be managed judiciously to ensure adequate supplies of dependable quantity and quality. It is a natural resource with economic, strategic and environmental value, which is under stress both due to changing climatic and anthropogenic factors. Therefore the management strategies need to be aimed at sustenance of this limited resource. In India, and also elsewhere in the world major parts of the semi-arid regions are characterized by hard rocks and it is of vital importance to understand the nature of the aquifer systems and its current stress conditions.

Monitoring water level over the last four decades (since 1970 onwards), in many parts of India have provided clear evidence of a long-term water-level decline, as a result of increased groundwater abstraction. This resulted in the deterioration of water quality and the widespread drying-up of wells following a 'failure' of the monsoon. Deepening of wells does not appear to be a viable option as most wells already fully penetrate the shallow weathered aquifer. This has resulted only debt trap of farmers particularly from the monsoon climatic countries such as India and African continent. It is under this condition, there were many institutions have been established in India to carry out extensive research on groundwater resources assessment and later management aspect. Central Groundwater Board (CGWB) was established during 1974, Indian Council of Agricultural Research (ICAR), New Delhi has established nine groundwater utility centres at various parts of the country since 1975 onwards. CSIR-NGRI, Hyderabad started groundwater hydrogeology group during 1974-1975 to carry out groundwater exploration through geophysical studies, assessment through geo-hydrological studies (pumping test etc.), estimation of rainfall recharge through isotope techniques and management by mathematical modeling. National Institute of Hydrology (NIH) was started during 1977 at Roorkee in Uttarkhand and various departments at IITs and Universities also started groundwater research around the same time. Many State Governments also started groundwater Departments to carry out groundwater research around the same time.

Though the groundwater research was started much earlier in the western countries, it is during 1970's and eighties the numerical modeling of groundwater flow and mass transport got importance and a lot of good work started and many scientists have contributed immensely towards the development of computer program and modeling. Dr. MacDonald & Harbaugh of USGS who developed the MODFLOW during 1988 is the turning point in the modeling technology of groundwater flow and mass transport in multilayer porous medium.

Apart from modeling aspect during the last four decades, the development of electrical resistivity imaging technique and software 2D and 3D developed by Ron D. Parker and his colleagues at the University of Birmingham, UK to delineate the fresh water zone as well contaminant zone is one of the breakthrough in the groundwater prospecting aspect. During the same period the application of remote sensing and GIS started playing vital role in the assessment of groundwater resources and water quality. Pioneer research work is under way in quantification of soil moisture movement and nutrient migration in the vadoze zone and sea water intrusion studies for coastal aquifer development. The present trend is to study the impact of climate change on groundwater resources and hope to get better results in the near future.

Thus the achievements through scientific development in exploration, assessment and management are commendable from seventies till today could be termed as the **golden age of groundwater research**.

Taking in view of the above glorious period, the sixth International Ground Water Conference (IGWC-2015) is planned during December 09-11, 2015 at SRM University, Chennai, India.

The Conference is aimed at to bring Scientists, Researchers, Students, Engineers, Water Resources Specialists, Government Administrators, NGOs and all those interested in groundwater and environment problems to a common platform and offer the opportunity to exchange ideas, knowledge, experience, techniques and know how in various aspects of groundwater research carried out in the last few decades in India and elsewhere.

Dr. M.Thangarajan who started his groundwater research work during 1975, carried out an extensive work on groundwater modeling both in India and abroad. He had successfully organized two International Groundwater Conferences (IGW-89 & IGWC-2002) at NGRI, Hyderabad also coordinated four other International Conferences in India (IGWC- Series) and will be the Advisor cum Coordinator for the Sixth International Groundwater Conference (IGWC-2015) at SRM University, Chennai, India.

SCIENTIFIC THEMES FOR IGWC-2015

Sixth International Groundwater Conference (IGWC-2015)

(SRM University, Chennai, India, December 09-11, 2015)

TS-1: ASSESSMENT OF GROUNDWATER RESOURCES AND AQUIFER CHARACTERIZATION

1. *Geophysical and imaging Techniques*
2. *Application of RS-GIS*
3. *Characterization of aquifer parameters*
4. *Isotopes in estimation of effective porosity, dispersion and matrix diffusion*
5. *Aquifer mapping for delineation of fresh water zones*
6. *Issues related to the acquisition of hydro-aquifer data base and its management aspects*
7. *Geo-statistics in the analysis of sparse geo-hydrological data*

TS-2: GROUNDWATER RECHARGE ESTIMATION PROCEDURES AND ISSUES

1. *Various techniques for estimation of rainfall recharge*
2. *Artificial recharge methods for augmentation groundwater resources*
3. *Estimation techniques to quantify the irrigation return to saturated aquifer*
4. *New techniques to quantify evaporation and evapotranspiration*
5. *Conjunctive use of surface and groundwater for optimal exploitation*
6. *Quantification of aquifer recharge from surface water bodies*
7. *Managing Recharged Aquifer (MRA)*

TS-3: IMPACT OF CLIMATE CHANGE ON FRESHWATER RESOURCES & AGRICULTURE

1. *Human activities on the cropping pattern and the socio & economic conditions of rural poor and its remedial measures*
2. *Simulation and Programming techniques in Agricultural Production*
3. *Drip irrigation to ensure security of water*
4. *Optimal cropping pattern for sustainable development and management*
5. *Variation of soil characteristics (Permeability & Storativity) due to frequent draught condition*
6. *The impact of drought and floods on groundwater resources and mitigation process*
7. *New Technologies for Crop irrigation with special reference to rice cultivation*

TS-4: GROUNDWATER POLLUTION AND ITS REMEDIAL MEASURES

1. *Soil water chemistry for groundwater pollutant migration*
2. *Sea water intrusion mechanism and evolving optimal management plans*
3. *Fluoride and Arsenic contamination in groundwater*
4. *Impact of mining activities on regional groundwater flow and environment*
5. *Geochemical Modeling*
6. *Disposal measures for domestic, industrial and nuclear wastes*
7. *Environment impact assessment due to human induced activities*
8. *Waste water treatment and management*
9. *Mitigation measures against pollutant migration in groundwater*

TS-5: FLOW AND MASS TRANSPORT MODELS IN THE ASSESSMENT MANAGEMENT OF GROUNDWATER RESOURCES

1. *Groundwater flow and mass transport modeling*
2. *Parameter estimation through inverse modeling*
3. *Sea water intrusion and management of coastal aquifer system*
4. *Problems & challenges in modeling soil moisture movement in the vadoze zone*
5. *Integrated Remote Sensing and Geographical Information System*
6. *Stochastic theory in characterization of fracture geometry and its parameters*
7. *Application of Equivalent porous medium (EPM), Dual porosity (DP) and Discrete Fracture Network (DFN) Approaches in conceptualizing the weathered fractured aquifer system*
8. *Uncertainty in up scaling the discrete fracture network (DFN) model to the regional scale through stochastic theory*
9. *Challenges in modeling fractured couple weathered aquifer system*
10. *Models and Modeler's ethics in the futuristic management decision aspects*
11. *Case Studies*

TS-6: GROUNDWATER MANAGEMENT POLICIES

1. *Problems and challenges in quantification of water demand and its pricing for effective management*
2. *Economics of groundwater*
3. *Water policy for rural sector*
4. *Role of Community and Regulatory Agencies in the optimal management of water Resources*
5. *Role of NGO's and Sociologists in creating awareness among user communities*
6. *Addressing climate change in long term water resources plans and policy issues*

Abstracts pertaining to the above themes are accepted. All abstracts not exceeding 250 words (in duplicate) should reach to Prof. R. Annadurai, Department of Civil Engineering, SRM University & Conference Convener IGWC-2015, at annadurai.r@ktr.srmuniv.ac.in and copy to Dr. M. Thanagarajan, Conference Coordinator at karvimrajan@gmail.com and also to Prof. C. Mayilswami, Secretary, Scientific Advisory committee at ceemayil@gmail.com on or before November 30, 2014. Abstracts will be reviewed by the Scientific Review Committee on the basis of Scope / Theme of IGWC-2015 and will be classified as ORAL or POSTER presentation. Acceptance will be communicated by February 28, 2015.

Authors will have to submit full manuscript of the paper(s) (with original figures, if any) to the Conference Secretariat by May 31, 2015. Necessary instructions regarding preparation of the manuscript(s) will be sent along with the acceptance and author(s) are requested to submit the final text in electronic form (CD).

Please contact Prof. Dr. R. Annadurai, Conference Convener, IGWC-2015 or Dr. M. Thangarajan, Conference Coordinator (IGWC-2015) and or Prof. C. Mayilswami, Secretary for AGGS, and Scientific Advisory Committee ((IGWC-2015) for further clarifications, if any, on

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About the Venue –Chennai

The present name Chennai was renamed from Madras city which was originally called Madarsa Patanam by East India Company. Initially it was a fisherman hamlet in the East Coast of Thondai Mandalam under Chennappa Naicker's regime (Representative of Vijayanagaram Empire) and the English East India Company purchased the land during 16th century and developed it as a settlement for their business and later it became the capital of Madras Province under their rule till August 1947 and continued till 1969 when the name was changed as Chennai in the memory of Chennappa Naicker who sold the land to British.

Madras Patanam (Town) alias Chennai was born on 22nd August 1638 AD and is 375 years old. It is the fourth biggest Metro of India as well a port city having 4.6 million habitant (as per 2012 census) and it is not only the capital of the State of Tamil Nadu (Madras State was renamed as Tamil Nadu during 1967) but also it is the cultural capital of South Indian culture. Chennai city is well connected by Road and Train from all over India. The city is also well connected by domestic and International flights.

About the Host Institute - SRM University

Sri Ramasamy Memorial Engineering College (SRMEC) was started in the academic year 1985-86 at Kattankulathur, Kancheepuram District, Tamil Nadu. This is one of the first of a few engineering colleges started under the self financing scheme of the Tamil Nadu Government to meet the increasing demand for technical education. SRM Engineering College has obtained the highest grade of accreditation from National Board of Accreditation, New Delhi.

After the birth of SRM University in the year 2003, the Faculty of Engineering & Technology (E&T) was carved out which now contains all the schools and departments related to Engineering & Technology, Management and Architecture. SRM University is one of the top ranking Universities in India functioning in four campuses located at Kattankulathur, Vadapalani and Ramapuram in Tamil Nadu besides a fourth campus at Modi Nagar, Ghaziabad, with over 40,000 students and 2,600 faculty, offering a wide range of Undergraduate, Postgraduate and Doctoral programs in Engineering,

Management, Medicine and health Sciences, and Science and humanities. The main Kattankulathur campus is located in a sylvan campus skirting the National highway (NH45), about 15 kilometers from Tambaram. The campuses occupy a total area of 600 acres.

The campuses consist of buildings with a built-up area of about 7, 89,650 sq.m. with a variety of facilities, state-of-the-art laboratories, libraries, Wi-Fi, knowledge centre, 100 online classrooms, Hostels for boys and girls with premium facilities, endless convenience on campus include banks with ATMs, post office, bookstores, dining options, cafeterias, gymnasium, indoor game centres, prayer halls, staff quarters, guest house and other facilities.

Further the University has a multipurpose Dr. T. P. Ganesan Auditorium having a seating capacity for 3100 persons. In addition, there are two fifteen storied building – Tech Park and University Administrative building, which houses the University Library.

SRM added a feather to its already glorious cap by hosting The Indian Science Congress 2011 where the distinguished delegates including six Nobel Laureates and other celebrated Scientists, Academicians and Philosophers participated and delivered their thoughts. The launching of SRMSAT satellite is another milestone which other Universities across the country are yet to reach. SRM University has added another jewel to its crown that Ministry of HRD places SRM University in category A, and SRM is accredited by NAAC with 'A' Grade in the year 2013. SRM is Ranked India's No. 1 (Factual Rank) by India Today. ZEE TV, DNA 2012 survey, SRM University Ranked in Top 10 joining the league of IITs. SRM University Ranked No. 1 Private Engineering Colleges in South India by Deccan Chronicle Survey, 18 May 2012.

Foreign faculty, flexible and dynamic curriculum, exciting research and global connections are the features that set SRM apart. Every year over 150 students are sponsored to more than 35 foreign Universities such as MIT, Carnegie Mellon, UC Davis, Warwick, Western Australia etc. Fifty members from top Universities across the world including MIT, Stanford, UC Berkeley, Cambridge and NUS help set global standards. Over 60 top executives from leading corporate institutions constantly interact with faculty and students to

help in formulating academics and research activities, thus enabling SRM to be one among the world class Universities in India.

The URL for the SRM University site is <http://www.srmuniv.ac.in/index.html>



SRM University - Aerial View at Day and Night



SRM University Building



Tech Park – SRM University



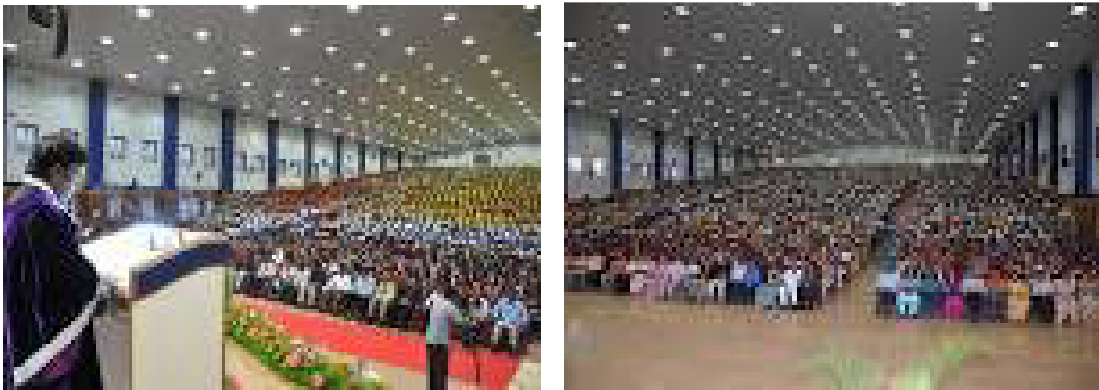
Hi-Tech Block – SRM University



SRM International Hotel



Dr. T. P. Ganesan Auditorium (External View: at Day and Night)



Dr. T. P. Ganesan Auditorium (Internal Views)

About the Department of Civil Engineering

The Department of Civil Engineering pulls out all stops to create outstanding engineers - with advanced teaching techniques and learning aids for undergraduate students and state of the art research facilities for postgraduate students and doctoral candidates. Students are not only made experts in technical aspects but also in interpersonal skills, a vital ingredient to excel in the fast-paced world.

The undergraduate program imparts students with mastery in the field of civil engineering besides fluency in mathematics, physics, instrumentation, computers, management and economics - essential requirements for any successful civil engineer. Students gain practical experience from field visits to industries, dams and irrigation structures, construction sites, etc.

The department's ranges of postgraduate programs include core courses as well as elective, independent study. Students gain training in their field of study through summer internships. Doctoral research areas that are being pursued include concrete technology, structural systems, concrete bridges, soil-structure interaction, modern construction materials, irrigation water management and wetland management.

Well qualified and experienced faculty members form the department. They specialize in structural, geotechnical, environmental, water resources, transportation, surveying, and construction engineering, as well as management, remote sensing and GIS. The faculty members contribute to academic development by publishing books, papers in reputed international and national journals and presenting papers in international and national conferences. The labs are well equipped with state of the art equipment.

The research work at the school includes such domains as innovative interface material, traffic-resistant pavement material, high-strength concrete, recycled aggregates, coconut shell concrete, coconut husk concrete, nano fly-ash, bio-concrete and basalt fiber concrete etc.,

Highlights of the department are: Department has received an 'A' grade from the National Board of Accreditation for B.Tech. (Civil engineering) during 1998-2001 and 2002-2007 and M.Tech.(Structural engineering) during 2001-2004. The department has membership in CIDC (Construction Industry Development Council), INSDAG (Institute of Steel Development and Growth), and CMS (Construction Management Society). University of Dundee, Scotland interacts with the department to pursue concrete research and participates in student exchange collaboration with Queen's University, Canada in a GIS application project. Department hosted an international conference entitled 'Recent Advances in Concrete and Construction Technology' in 2005. National conference on 'Theoretical and Experimental Advances in Civil Engineering' and Continuing education program conducted on 'Special Concretes' in the year 2007. Department has organized a National Conference on “**Recent Developments in Civil Engineering**” during 2012. Recently, Civil Engineering Department has added another jewel to its crown that got awarded best students chapter by ICI, TNSC jointly by Ultra Tech Cement India Ltd in September 2013.

Cordial ties with industry and government agencies result in consultancies, student projects and visits. Industrial contacts include National Highways, Livestock Research Center, Freyssinet, Stewols & Co., Hindustan Lever Limited, Simplex & Co., Saraswathi Precast Prefab, Madhucon Projects and Virgo Polymers. Experts from industry are regularly invited to present lectures and to interact with students and faculty. The department is a keen participant in various societies and institutes, such as the Construction Industry Development Council, the Institute for Steel Development and Growth and the Construction Management Society.

An institute industry collaborative project in the use of 'Reborn Concrete' is on the anvil. M/s. Metechno (India) Ltd. has signed an MOU with SRM for collaborating on staff training and student training and research on development of new products.

Industry representatives visit the campus to recruit students finishing their degrees. The campus placement centre provides additional support for securing employment with companies such as L&T, Technip, Foster-Wheeler, Bechtel & Gammon, MAYHTAS, CCCL & Ltd, Shobha Constructions, Jain Housing Ltd. as well as several MNCs.



Laboratories of department of Civil Engineering, SRM University

Facilities Available at SRM University to Organize the International event

- Fully equipped AC auditorium with **a seating capacity of 3100 to hold** inaugural and valedictory function
- Two mini AC Conference **halls with 250 seating capacity** and equipped with LCD projector to conduct technical sessions
- Departmental seminar halls for additional parallel sessions if required
- SRM **Three Star Hotel** with Swimming pool and Banquet hall

Major Events Organized by SRM University in the Past

98th Indian National Science Congress was organized by SRM University during January 2011 in a very grand manner **and appreciated by one and all.**

Possible Sponsors of the Program from India:

- Council of Scientific & Industrial Research (CSIR) under Ministry of Science & Technology, (GoI)
- Indian Council of Agricultural Research (ICAR), New Delhi
- Department of Science & Technology (DST) under Ministry of Science & Technology, New Delhi
- Ministry of Earth Sciences, Govt. of India
- Ministry of Water Resources (MoWR), Govt.of India
- University Grants Commission (UGC) under Ministry of Human Resources, (GoI)
- Rajiv Gandhi National Drinking Water Mission (RGNDWM), Ministry of Rural Development, GoI, New Delhi
- SRM Educational Trust, Chennai

Possible Co-sponsors of the program:

- CSIR-National Geophysical Research Institute (CSIR-NGRI), Hyderabad
- Indian National Science Academy (INSA), New Delhi
- TWAD Board, Chennai
- CGWB (SECR), Chennai
- Tamil Nadu Agricultural University(TNAU), Coimbatore
- NABARD, Chennai
- International Water Management Institute (IWMI), South Asia Office, Hyderabad
- NLC, Neyveli
- IGCAR
- IMD
- ISRO
- MAPS, Kalpakkam
- MSSRF, Chennai
- CLRI
- TNSCST
- UltraTech
- SPIC
- BARC
- Industries in and around Chennai, Tamil Nadu

Pre-Registration Form for IGWC-2015

**International Ground Water Conference, Chennai, Tamil
Nadu, India, December 09-11, 2015**

DELEGATE INFORMATION

Title (Prof/Dr/Mr/Mrs)	Given name (for badge)
Family Name	
Position	
Address (with PIN)	
Telephone (Off)	(Res)
FAX	
E-mail	
Name(s) of accompanying person(s), if any	
Are you (i) contributing a paper -- YES / No (ii) attending IGWC-2015 -- YES / No	

REGISTRATION FEE

Note: All Foreign participants have to pay the Registration Fee in US dollars only. Registration fee should be paid through DD drawn in favor of Conference convener, IGWC-2015, and payable at Chennai, Tamil Nadu, India and sent to Conference Secretariat, IGWC-2015, Department of Civil Engineering, SRM University, Kattankulathur, Chennai, Tamil Nadu, India on or before 1st September, 2015. Otherwise one has to pay extra Rs 500 as late fee for Indian and SAARC participants and US \$ 50 for foreign participants. All AGGS life members will get 10% discount in the registration fee.

Delegate	Rs.4000/- or US \$300/- *
Research Scholar/ Project fellows	Rs.2000/- or US \$150/- *
Student(M.Sc/B.Tech)	Rs.1200/- or US \$75/- #
Accompanying Person	Rs.1200/- or US \$ 75/- (for each person) @

* Includes registration material, working lunch, conference dinner, tea, field visit

Only registration material (proceedings), working lunch, conference dinner, tea, field visit

@ Only working lunch, conference dinner, tea, field visit

Mail to: Addressed to: Conference Secretariat, IGWC-2015, Department of Civil Engineering, SRM University, Kattankulathur-603 203, Chennai, Tamil Nadu

E-mail: annadurai.r@ktr.srmuniv.ac.in; karvimrajan@gmail.com; ceemayil@gmail.com

ACCOMMODATION

The participant(s) will be accommodated in hotels on payment basis. Delegates are requested to send their accommodation requirements well in advance. The tariff of the various hotels located at Chennai is given below.

REQUEST FOR HOTEL ACCOMMODATION

IGWC-2015, Chennai, December 09-11, 2015

1. Name (in BLOCK Letters)

2. Contact Address

Phone

Fax

E-mail

3. Passport Details (for foreign delegates)

4. Accommodation required

Single / Double

5. Category

<i>Hotel Category</i>	<i>Tariff (Rs.) per day</i>		<i>Your choice</i>	
	Single	Double	Single	Double
'A' (Luxury AC)	7000	9000		
'B' (Delux AC)	5000	6000		
'C' (AC)	2500	3500		
'D' (Delux Non AC)	1500	2000		
'E' (Non AC)	1000	1500		
'F' (for students; Non AC)	750	1200		

6. Deposit for accommodation is enclosed: YES / No

(in the form of a DD drawn in favor of Conference Convener, IGWC-2015 and payable at Chennai, Tamil Nadu, India)

Note: Hotel reservations cannot be confirmed until we have received your deposit.

Your request in the above format along with the amount through DD may be sent to:

Conference Convener (IGWC 2015), Department o Civil Engineering, SRM
University, Chennai-603203, India

E-mail: annadurai.r@ktr.srmuniv.ac.in

IGWC-2015

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IGWC-2015

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SIGHT SEEING INFORMATION

Important Tourist Places in and Around Chennai city

The following are some of the tourist famous places in and around Chennai city:

Mahabalipuram Rock Temples

Mahabalipuram otherwise called Mamallapuram is located right on the Coromandel Coast next to the Bay of Bengal. It was a well established sea port during the 7th and 10th centuries of the Pallava dynasty, and has flourished accordingly. The area is brimming with rock-cut caves and numerous temples. In fact, this region is often referred to as an open museum. Some of the temples were even carved out of one enormous rock rather than simply constructed out of rock. Beautiful white sandy beaches are plentiful, as are the casuarinas trees that are found in abundance there. Mahabalipuram is also known for providing a fantastic shopping experience. Exquisite local handmade crafts are readily available in the local shops.



Sea Shore Temple at Mahabalipuram

Kapaleeshwarar Temple

Kapaleeshwarar Temple is a temple of Shiva located in Mylapore. According to the Puranas, Shakti worshipped Shiva in the form of a peacock, which is why the vernacular name Mylai (Mayilāi) was given to the area that developed around the temple - **mayil** means Tamil name for "peacock". The temple's name is derived from the words kapalam (head) and eeshwararan alias of Shiva. According to the Hindu Puranas, during the meeting of Brahma and Shiva at the top of Mount Kailash (Himalaya) Brahma failed to show the due respect to Shiva. Due to this, Shiva plucked one of Brahma's heads (kapalams). In an act of penance, Brahma came down to the site of Mylapore and installed a Lingam to please Shiva. Lord Muruga received the spear (Sakthi vel) for Sura Samharam from goddess Parvathi here.



Kapaleeshwarar Temple at Mylapore



Front view of the Temple

Parthasarathy Temple

The Parthasarathy Temple is an 8th century Hindu Vaishnavite temple dedicated to the God Krishna, located at Triplicane, Chennai. The name 'Parthasarathy', in Sanskrit, means the 'charioteer of Arjuna', referring to Krishna's role as a charioteer to Arjuna in the epic Mahabharatha. It was originally built by the Pallavas in the 8th century by king Narasimhavarman I. The temple has five of the incarnations or avatars of Vishnu viz.

Narasimhar, Ramar, Varadarajar, Ranganathar and Krishna. The temple is one of the oldest structures in Chennai. The gopuram (towers) and mandapas (pillars) are decorated with elaborate carvings, a standard feature of South Indian Temple Architecture. The scars in the face of Parthasarathy's festival idol (presumably made of aimpon, (an alloy of five metals)) in the temple is full of scars depicted to show the injuries caused by the arrows of Bhishma in the war. The utsavar (festival deity) also has only a stick depicting Krishna was born in a cowherd clan.



View of Parthasarathy Temple at Triplicane in Chennai

Anna Centenary Library

The Anna Centenary Library (ACL) is an established state library of the Government of Tamil Nadu. It is located at Kotturpuram, Chennai. Built at a cost of ₹ 172 crores (₹1,720 million), it is one of the largest libraries in Tamil Nadu. It is named after a former chief minister of Tamil Nadu, C. N. Annadurai. Built on 8 acres of land, the 9-floor library houses a total area of 333,140 sq. ft and has a capacity to accommodate 1.2 million books. The library is designed to accommodate a total of 1,250 persons. An auditorium of 50,000 sq. ft. with a seating capacity of 1,280, and an amphitheatre on the terrace that can accommodate more than 800 persons and two conference halls with capacities of 151 and 30 persons respectively, are some of the facilities available. A dedicated children's section, spread over 15,000 sq. ft. has a fun-filled theme-based reading area with multimedia kits and storybooks. The library also boasts a high-tech section for the visually-impaired, with talking books and Braille displays. The entrance to the building showcases a 5 ft bronze statue of C.N. Annadurai. The library employs 200 staff, including 96 permanent and 40 contract employees, and has a collection of 550,000 books. It is visited by about 2700 persons every day.



Different Views of Anna Centenary Library at Kotturpuram in Chennai

San Thome Basilica

San Thome Basilica is a Roman Catholic minor basilica in Santhome. It was built in the 16th century by Portuguese explorers, over the tomb of St Thomas, an apostle of Jesus. In 1893, it was rebuilt as a church with the status of a cathedral by the British. The British version still stands today. It was designed in Neo-Gothic style, favoured by British architects in the late 19th century. San Thome Basilica is the principal church of the Roman Catholic Archdiocese of Madras. The San Thome Basilica is a pilgrimage centre for Christians in India. The church also has an attached museum



San Thome Basilica at Santhome

Madras Crocodile Bank Trust and Centre for Herpetology

The Madras Crocodile Bank Trust and Centre for Herpetology (MCBT) is a reptile zoo and herpetology research station, located 40 kilometres south of the city of Chennai. The centre is both a registered trust and a recognized zoo under the Wildlife (Protection) Act, 1972 and is India's leading institution for herpetofaunal conservation, research and education. The bank is the first crocodile breeding centre in Asia and comes under the purview of the Central Zoo Authority, Ministry of Environment and Forests, Government of India. The CrocBank grounds are covered by coastal dune forest providing a haven for native wildlife, including large breeding colonies of water birds and a secure nesting beach for Olive Ridley sea turtles. The high aquifer on the sandy coast provides sufficient water supply and the proximity to the major tourist destination of Mahabalipuram ensures annual visitation. The centre is the biggest crocodile sanctuary in India. It covers 8.5 acres (3.4 ha) and had over 450,000 visitors in 2007. The centre has one of the world's largest collections of crocodiles and alligators and has bred 5,000 crocodiles and alligators representing 14 of the 23 existing species, including the three crocodile species, all considered endangered, that are native to India.



Crocodile sanctuary

Arignar Anna Zoological Park

Arignar Anna Zoological Park (abbreviated **AAZP**), also known as the **Vandalur Zoo**, is a zoological garden located in Vandalur, a suburb in the southwestern part of Chennai, about 31 kilometres (19 mi) from the city centre and 15 kilometres (9.3 mi) from Chennai Airport. Founded in 1855, the park was the first public zoo in India. It is affiliated with the Central Zoo Authority of India. Spread over an area of 602 hectares (1,490 acres), including a 92.45-hectare (228.4-acre) rescue and rehabilitation centre, the park is the largest zoological garden in India. The zoo houses 2,553 species of flora and fauna across 1,265 acres (512 ha). As of 2012 the park houses around 1,500 wild species, including 46 endangered species, in its 160 enclosures. As of 2010, there were about 47 species of mammals, 63 species of birds, 31 species of reptiles, 5 species of amphibians, 25 species of fishes, and 10 species of insects in the park. The park, with an objective to be a repository of the state's fauna, is credited with being the second wildlife sanctuary in Tamil Nadu after Mudumalai National Park.



Arignar Anna Zoological Park

Elliot's Beach

Elliot's Beach (popularly known as "Besant Nagar Beach" or "Bessie") is located in Besant Nagar, Chennai. It forms the end-point of the Marina Beach shore and is named after Edward Elliot, Governor of Madras. It is located towards the south of Marina Beach and is an extremely calm and tranquil place. As the beach does not offer much activity, it is ideal for long walks and also for the ones who want to soak their feet in the splashing sea water and lose themselves completely in the arms of the nature. It has the Velankanni Church and the Ashtalakshmi Kovil nearby. A prominent landmark on this beach is the Karl Schmidt Memorial. The memorial is named after the Dutch sailor who lost his life in the process of saving a drowning swimmer. Elliot's Beach is one of the cleanest beaches in the city of Chennai. The Ashtalakshmi Temple is around 20 years old and has modern style architecture. It is dedicated to Goddess Lakshmi and appears different from the rest of the Temples in South India. On the other hand, Velanganni Church is more of a pilgrim place for the Christians. The structure is smaller than the one at Velanganni.



Elliot's beach at Besant Nagar



Ashtalakshmi Temple in Besant Nagar

Cholamandal Artists' Village

Cholamandal Artists' Village, established in 1966, is the largest artists' commune in India, whose artists are credited for the Madras Movement of Art (1950s–1980s), which brought modernism to art in the South India. Their work is widely recognized as some of the best art produced in postwar India, and is shown regularly in galleries across the country; in fact several Cholamandal artists have also shown in Europe, the United States and South America. Situated at

village Injambakkam, 9 km from Chennai, India, it has over twenty resident painters and sculptors, who live as a community and pool their skills; they also run the Artists Handicrafts Association, a cooperative which manages the village and sale of works through the permanent exhibition at the complex, which includes paintings, sketches, terra-cotta/stone/metal sculptures, batiks and handicrafts etc., made by the artists living the village, making the village a self-supporting entity. The community was founded by K. C. S. Paniker, the principal of the Madras School of Arts, along with his students and a few artists associated with the college. By 1970s, the village became self-sufficient, and grew into one of the most important meeting places for international artists in India, and today, it remains one of the few artist-driven movements that India. Four decades on, it is one of the few artists' colonies in the world to survive successfully and its foundation remains one of the "10 biggest art moments" in India.



View of Cholamandal Artists' Village

ISKCON Temple

ISKCON Temple is located in the Injambakkam region in Thyagaraya Nagar of Chennai. The temple is one of the many popular worshipping places established by the ISKCON society in the region of India. It is a blend of tradition and modernity to give the artistic style as well as the best of latest scientific technology. The ISKCON Temple at Chennai like other ISKCON centres is the axis point from where

the teachings of Lord Sri Krishna Chaitanya are spread. The deities worshipped in the temple include those of Rukmini and Krishna. The image of deity Satyabhama, one of the eight wives of Krishna, is also housed in the temple premises. ISKCON Chennai also promotes and protects traditional art and craft of South India.



ISKCON Temple in Chennai

Marina Beach

Marina Beach is a natural urban beach in the city of Chennai, India, along the Bay of Bengal, part of the Indian Ocean. The beach runs from near Fort St. George in the north to Besant Nagar in the south, a distance of 13 km (8.1 mi), making it the longest natural urban beach in the country and the world's second longest. The average width of the beach is 300 m (980 ft) and the width at the widest stretch is 437 m (1,434 ft). Bathing and swimming at the Marina Beach are legally prohibited because of the dangers, as the undercurrent is very turbulent. It is the most crowded beach in the country and attracts about 30,000 visitors a day during weekdays and 50,000 visitors a day during the weekends and on holidays.



Marina Beach

THOLKAPPIA POONGA

Tholkappia Poonga or **Adyar Eco Park** (also known as **Adyar Poonga**) is an ecological park set up by the Government of Tamil Nadu in the Adyar estuary area of Chennai, India. According to the government, the project, conceived based on the master plan for the

restoration of the vegetation of the freshwater eco-systems of the Coromandel Coast, especially the fragile eco-system of the Adyar estuary and creek, was expected to cost around ₹ 1,000 million which will include the beautification of 358 acres (1.45 km²) of land. The park's ecosystem consists of tropical dense evergreen forest, predominantly comprising trees and shrubs that have thick dark green foliage throughout the year, with over 160 woody species, and comprises six vegetative elements such as trees, shrubs, lianas, epiphytes, herbs and tuberous species. The park was opened to public on 22 January 2011 and named after the renowned Tamil scholar Tholkappiar. About 65 percent of the poonga is covered by water and artefacts and signages. In the first 2 months of its inauguration, nearly 4,000 children from several schools in the city and the nearby Kancheepuram and Tiruvallur districts have visited the park to learn about wetland conservation, eco-restoration and water management.^[4] While the first phase of the eco-park covered about 4.16 acres of CRZ-III area, the entire area covered under the second phase falls under this category.



Adyar Estuary Park

MUTTUKADU BOAT HOUSE

Muttukadu boat house is a water sport facility on the East Coast Road at Muttukadu, Chennai, India, offering rowing, wind surfing, water skiing, and speedboat riding. It is a backwater area of the Bay of Bengal located 36 km from the city centre and 23 km from Adyar on the way to Mamallapuram. The boat house was inaugurated in 1984 and has 15 row boats, 27 speedboats and 9 pedal boats. The water depth varies between 3 ft and 6 ft. It is owned and operated by the Tamil Nadu Tourism Development Corporation (TTDC). The boating spot receives more than 4,000 visitors every weekend. In July 2009, TTDC inaugurated a new bamboo boathouse and a floating boat jetty at the Muttukadu boating facility. The boathouse, with a special roof made of bamboo, has a lounge, from where visitors can watch the boats, and a restaurant. The building has been constructed at a cost of ₹ 8.7 million and the floating jetty at a cost of ₹ 1.2 million. A couple of high-speed aqua scooters with a seating capacity of three were also introduced at a cost of ₹ 1.35 million, which has received good patronage. The scooters can sail at an average speed of 120 km/hour.



Muttukadu Boat House

Other Most Important Tourist Places in Tamil Nadu:

- Tanjore Big Temple at Tanjavour (Single stone Nandi (bull))---300 Km from Chennai
- Madurai city is known as the Temple city of India and it is the second biggest city next to Chennai in Tamil Nadu. It was also the capital of earlier Pandyan Kingdom and the seat of earlier Tamil Sangam. Meenakshi Amman Temple is situated at the centre of the city and it is considered to be one of the oldest and biggest Temple in India. The city is well connected by air, rail and road.



Aerial View of Meenakshi Amman Temple at Madurai

- Rameswaram Temple at Rameswaram (biggest Corridor)---550 Km from Chennai
- Thekkadi is a famous wild life sanctuary situated in Kerala border and is about 140 km away from Madurai city and 550 Km from Chennai. One can have a look of wild animals (Elephant, Deer and Tiger) while sailing in the boat at Mullai Periar dam.
- Munnar Green Valley a beautiful scenaric place situated in Kerala is about 200 Km from Madurai and 650 Km from Chennai city
- Palani Subramanya swami temple is about 120 km away from Madurai and about 450 Km from Chennai
- Kanyakumari is the land end of peninsular India and one can see the sun rise and sun set as if it is rising from Indian Ocean and setting in to the sea. Vivekananda Rock memorial and Saint Thiruvalluvar Statue (133 feet height) are situated inside the sea and it is about 240 km away from Madurai and 750 Km from Chennai

Tamil Nadu Government Tourism department will arrange on request special packages tour for delegates (AC deluxe bus service and three star hotel accommodation) from 11th night to 14th night of December, 2015 depending on the number of places to be covered.