First circular

# INTERNATIONAL CONFERENCE ON CLIMATE CHANGE

# (ICCC-2014)

at

Madurai, Tamil Nadu, India (MAY 28-31, 2014)

#### Organized by

#### Yadava College (Govt.Aided), Madurai, Tamil Nadu, India

In Possible collaboration with

- CGWB, Govt. of India, Chennai
- Madurai Kamaraj University, Madurai
- Gandhi Gram Rural Institute (Deemed University), Gandhigram, TN
- Water Technology Center (WTC), TNAU, Coimbatore
- Tamilnadu Chamber of Commerce, Madurai
- > Association of Global Ground Water Scientists, India.
- > UNESCO, Water division, Regional office, New Delhi
- > Tamilnadu State Council of Science and Technology, Chennai
- Science City, Chennai.
- > ASSOCIATION OF GLOBAL GROUND WATER SCIENTISTS, INDIA

#### About the Conference

The International Conference on Climate Change 2014 (ICCC 2014) to be held at Madurai is an opportunity to bring together knowledge from across the globe to share experiences and information, enable collaboration and build new partnerships, discussion of cutting edge solutions to the world's water, food and energy issues, while also addressing approaches to sustainable and effective adaptation throughout the water sector. Considering the current situation of India in the urban water, food, energy and climate aspects, ICCC 2014 will provide a unique opportunity to understand the new innovations to face the existing challenges.

The new report - *Turn Down The Heat: Climate Extremes, Regional Impacts and the Case for Resilience* – looks at the likely impact of warming on agricultural production, water resources, coastal ecosystems and cities across three regions - South Asia, Sub-Saharan Africa, and South East Asia. It assesses impacts at present day temperatures of  $0.8^{\circ}$ C above pre-industrial levels, as well as in a world that is warmer by  $2^{\circ}$ C and  $4^{\circ}$ C.

The report finds that if the world warms by 2°C - which may happen within the next 20 to 30 years - widespread food and water shortages could unfold, together with prolonged droughts, unprecedented heat-waves, more intense rainfall and flooding, and a significant threat to energy production.

These are not challenges looming at the end of the century, the report says. Rather, severe impacts can begin to appear within the next 10-20 years, within the span of the current generation. Already, a warming trend has begun to emerge over <u>South Asia</u>, and <u>India's</u> large and growing population is experiencing water stress in many parts.

Increasing temperatures, changing rainfall patterns, declining snowfall, retreating glaciers, and declining groundwater can make the situation even worse. Impacts can be aggravated by rising sea-levels and more intense tropical cyclones, precipitating a major crisis for food security and the rural economy.

Urban populations cannot escape the consequences of global warming, either. Densely populated urban areas, especially those with unplanned urbanization, would be increasingly at risk from prolonged spells of extreme heat, floods, and disease.

The case for resilience has never been stronger. Already, our world is 0.8°C above preindustrial levels of the 18<sup>th</sup> century. Irrespective of future emission paths, the warming already underway will lead to a number of climate impacts. Many of the worst impacts could still be avoided by holding warming below 2°C, but the window for action is narrowing rapidly.

The onus is clearly on today's generation to develop heat and drought resistant crops, improve ground water management, invest in water storage infrastructure, build adequate flood defences, improve energy efficiency and the performance of renewable energies, 'climate-proof' critical public infrastructure that is locked in for long periods, and make cities more resilient to climate change. To minimize damage from floods and cyclones to human life and property, strong building codes will need to be enforced.

In a very real sense development is the best adaptation – investing in skills, health, knowledge, better infrastructure and a more diversified economy will render countries more climate-resilient.

The government of India has accorded top priority to the issue of climate change. **The Prime Minister's Council on Climate Change** provides the broad framework for action at the highest level.

#### **IMPACT ON WATER RESOURCES**

Changes in key climate variables, namely temperature, precipitation, and humidity, may have significant long-term implications for the quality and quantity of water. River systems of the Brahmaputra, the Ganga, and the Indus, which benefit from melting snow in the lean season, are likely to be particularly affected by the decrease in snow cover. A decline in total run-off for all river basins, except Narmada and Tapti, is projected in India's NATCOM I. A decline in run-off by more than two-thirds is also anticipated for the Sabarmati and Luni basins. Due to sea level rise, the fresh water sources near the coastal regions will suffer salt intrusion.

#### IMPACTS ON AGRICULTURE AND FOOD PRODUCTION

Food production in India is sensitive to climate changes such as variability in monsoon rainfall and temperature changes within a season. Studies by Indian Agricultural Research Institute (IARI) and others indicate greater expected loss in the Rabi crop. Every 1 °C rise in temperature reduces wheat production by 4-5 Million Tonnes. Small changes in temperature and rainfall have significant effects on the quality of fruits, vegetables, tea, coffee, aromatic and medicinal plants, and basmati rice. Pathogens and insect populations are strongly dependent upon temperature and humidity, and changes in these parameters may change their population dynamics. Other impacts on agricultural and related sectors include lower yields from dairy cattle and decline in fish breeding, migration, and harvests. Global reports indicate a loss of 10-40% in crop production by 2100.

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Feeding 9 billion people in 2050 is one of the biggest challenges of our era. Global food production must rise by at least 70 percent in 2050. Without strong adaptation and mitigation

measures climate change will reduce food crop yields 16 percent worldwide and by 32 percent in India over the next fifty years. It is likely that price and yield volatility will continue to rise as extreme weather continues, further impacting livelihoods and putting food security at risk.

We can no longer look at food security, poverty, climate change and environmental sustainability separately. Climate-Smart Agriculture is a driver of green growth. The world needs a form of growth that is socially and environmentally sustainable and that takes natural resource limits and climate change into account. Green and inclusive growth policies in the agricultural sector need to be fully integrated into countries' overall development strategies. But these issues are not the exclusive concerns of government. Now, more than ever, the effort to shift growth paths requires the engagement and participation of all parts of society. For this to happen better and more comprehensive empirical evidence is needed on the economics of different farming systems in countries.

The role of the private sector in driving the green, inclusive growth agenda needs to be emphasized. Sound public policies and investments in the agricultural sector are central but are not enough. The private sector is the engine of innovative solutions and the main channel and, therefore, will be specifically targeted as a contributor to this conference. Resource mobilization for agriculture should be stepped up in view of the sector's fundamental role in a more sustainable economy. The conference therefore will in particular seek participation of the private sector at all levels.

Climate-smart agriculture includes proven practical techniques such as mulching, intercropping, zero tillage, agro forestry, improved grazing and water management, as well as innovative practices such as better weather forecasting, more resilient food crops and risk insurance and incorporating broad landscape management into production systems.

Green and inclusive growth is climate-resilient, water-smart, land-saving, energyefficient and reliant on diverse renewable energy sources. It also generates decent jobs and improves livelihoods across a diverse set of productive and service sectors.

It is underpinned by properly valued natural capital, the value of which is fully integrated into countries' systems of national accounts. Green and inclusive growth paths factor environmental considerations into government policies and business decisions, placing sustainable natural resource management – with its benefits flowing to people – at the heart of future development and growth.

#### Food security

Food insecurity (malnutrition, undernourishment, famine, etc.) has many causes; the available food supply is only one contributing factor. Economists have pointed out that famine is as much a political and social issue as it is a production and supply issue. Case in point, the world population recently passed the 7 billion mark, and while we produce enough food to feed everyone, market failures (i.e. poor transportation infrastructure, trade barriers) prevent the adequate distribution of essential food-stuffs to millions of people. In fact, more than 21% of children under 5 are malnourished worldwide, with almost 14% of the 7 billion people suffering from undernourishment. There are many factors that contribute to food insecurity worldwide, such as poverty, climatic shocks, and political instability. The following examples illustrate how these factors have influenced food insecurity in the past.

# THEMES FOR ICCC-2014

# Urban water – energy neutrality through efficient utilities, industries and cities

- Sustainable technologies and processes for urban and industrial water energy conservation and alternative energy production
- Information and communication technology to optimize energy and carbon efficiency and energy production in industry and cities
- Water, energy and raw materials recovery from urban and industrial waste water challenges and opportunities
- Energy demands for water" and "water demands for energy"
- Benchmarking, monitoring and measuring water energy interactions in cities and industries
- •

# Policy and finance for energy and carbon neutrality

- Optimizing urban water and energy cooperation between water and energy utilities and between urban water/energy and industrial water-energy
- Business opportunities in improving water efficiency and water-energy efficiency in industries and cities
- Policy and regulation which supports innovation for energy and carbon neutrality in utilities and industries
- Institutional change/structures needed to support the transition to cutting edge water/energy solutions
- Financing mechanisms for the urban and industrial water-energy nexus

# Planning and infrastructure for a resilient water sector

- Asset management to secure resilient and efficient urban water systems
- Improving performance of urban water infrastructure to changes in the hydrologic cycle
- Investing in natural and engineered infrastructure to optimize the water, energy and food nexus
- Strategies for creating a new adaptation landscape across cities, industries and farmers
- Governance and institutional arrangements for urban and watershed drainage
- Planning and decision support systems to improve responses to climate impact including floods and droughts
- Exploring trends in hydro-climatic variables and responses to extreme climatic events

# Optimising water cycle management for securing urban and industrial water supplies

- Securing alternative water sources, including rainwater, reclaimed and treated water through urban and basin management
- Optimizing stormwater opportunities usage for urban development
- Urban and industrial water demand modelling
- Information and communication technology to optimize urban and industrial water management
- Economic approaches to optimizing collection, storage, treatment and distribution of various water sources.
- Climate-Smart Agriculture: A Driver for Green Growth

# **Climate change on Energy security**

- Generating power from fossil fuels with lower carbon emissions,
- Reducing carbon emissions in the transportation sector through vehicle and fuel technologies,
- Addressing land use and the current unsustainable rate of deforestation,
- Accelerating and expanding markets for currently available efficiency technology and the use of nuclear, solar, and wind energy.
- challenges and opportunities for the development, financing, and commercialization of clean energy technologies.
- measuring actions to reduce greenhouse gases and improve energy security

Climate Change and Health.

- ✓ Improved climatic sensitive disease surveillance
- $\checkmark$  Tools to control the diseases.
- ✓ Health hazards Management.

Abstracts pertaining to the above themes are accepted. All abstracts not exceeding 250 words (in duplicate) should reach the Dr. P.S.Navaraj, Organizing Secretary, IGWC-2011, Conference Secretariat, Department of Zoology, Yadava College of Arts & Science (Madurai-Kamaraj University), Madurai, India on or before **Jan 15, 2014**. Abstracts will be reviewed by the Scientific Review Committee on the basis of Scope / Theme of ICCC-2014 and will be classified as ORAL or POSTER presentation. *Acceptance will be communicated by FEB, 2014*.

Authors will have to submit full manuscript of the paper(s) (with original figures, if any) to the Conference Secretariat by **MARCH 30, 2014**. 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 either Dr. P.S. Navaraj, Organizing Secretary E-mail: navaraj2k1@yahoo.co.uk

# About the Venue - Madurai: "The Temple City" of India

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. The city is flooded with number of higher learning Institutions and tourists from all over the world. Madurai Airport has been updated very recently (inaugurated on 12<sup>th</sup> September 2010) with ultra modern facility and upgraded as an International Airport. Apart from Meenakshi Temple, the following are very attractive tourist centers in around Madurai:

Thirumalai Naicker Mahal in the close vicinity of the Meenakahi Amman Temple Rameswaram is world famous tourist centre in south India and is about 120 km Kodaikanal situated at 4000 m (amsl) has a beautiful scenaric view and attractive freshwater natural lake and is about 120 km

Thekkadi is a famous wild life sanctuary situated in Kerala border and is about 140 km away. 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

Palani Subramanya temple is about 120 km away from Madurai

SriRanganatha Swamy Temple at SriRangam (Trichy) is about 160 km

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.



Aerial View (part only) of Meenakshi Amman Temple, Madurai

### About the Venue- YADAVA COLLEGE, MADURAI



The Yadava Kalvi Nidhi was established by a few leading service minded Yadava Community people in the year 1962. The aim of the fund was to award scholarship and supply books to the deserving Yadava students. Soon the importance of higher education for the socially and educationally backward Yadava Community people was felt which led to the establishment of the Yadava College in the year 1969. The management constituted by the elected members of the general body since 1971 administers the college.

The college was *started as Government Aided one*, with two pre-university courses in a temporary building. The Tamilnadu Government generously allotted 40 acres of land under Tiruppalai Panchayat limits in the year 1969. In the same year a hostel building was constructed. The college started functioning in the new premises from 1970-71 academic year.

There are 2912 students who are pursuing Under Graduate and Post Graduate courses. Three Departments- Tamil, Zoology and Commerce- have been elevated as Centre of Higher Research. The National Assessment and Accreditation Council has accredited the college and has given 'A' Grade. Madurai Kamaraj University has adjudicated the college as the Best College for three consecutive years. The college has been given autonomous status by the University Grants Commission. The college wishes the young and energetic youth to use this campus for their upliftment.

#### **Possible Sponsors of the Program:**

- Department of Science & Technology (DST), New Delhi
- NCSTC, DST, New Delhi.
- DRDO, New Delhi
- DAE, Mumbai
- Ministry of Environment, Govt. of India
- Ministry of Water resources, Govt. of India
- Ministry of Chemical & Fertilizers, Govt. of India
- Council of Scientific & Industrial Research (CSIR) under Ministry of Science & Technology, (GOI)
- Ministry of Telecommunication, 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
- CGWB, New Delhi.
- Educational Trust, Yadava Arts & Science College (Govt. Aided), Madurai

# Pre-Registration Form for ICCC-2014

# INTERNATIONAL CONFERENCE ON CLIMATE CHANGE

# (ICCC-2014)

#### 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-2011                  | 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 ICCC-2011, Yadava College payable at Madurai and sent to Dr.P.S.Navaraj, Conference Secretariat, ICCC-2014, Yadava College of Arts & Science, Madurai-625014, Tamil Nadu, India.

| Delegate            | Rs.4000/- or US \$300/- *                    |
|---------------------|--|
| Research Schol      | ar Rs.2000/- or US \$150/- *                 |
| Student             | Rs.1000/- or US \$100/- #                    |
| Accompanying Person | Rs.1000/- or US \$ 100/- (for each person) @ |

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

# Only registration material (proceedings), working lunch, conf. dinner, tea, field visit@ Only working lunch, conf. dinner, tea, field visit

Mail to: Conference Secretariat, ICCC-2014, Yadava College of Arts & Science, Madurai-625014, Tamil Nadu, India. Ph: +91-9442648168

E-mail : navaraj2k1@yahoo.co.uk

#### 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 in Madurai is given below.

## **REQUEST FOR HOTEL ACCOMMODATION**

# ICCC-2014, Madurai MAY 28-31,2014

#### 1. Name (in BLOCK Letters)

2. Contact Address

Phone

Fax

e-mail

#### 3. Passport Details (for foreign delegates)

3. Accommodation required

Single / Double

4. Category

| Hotel Category             | Tariff ( | Rs.) per day | Your choice |        |
|----------------------------|----------|--------------|-------------|--------|
|                            | Single   | Double       | Single      | Double |
| 'A' (Luxury AC)            | 5000     | 7500         |             |        |
| 'B' (Delux AC)             | 3000     | 4000         |             |        |
| 'C' (AC)                   | 2500     | 3000         |             |        |
| 'D' (Non AC)               | 2000     | 2500         |             |        |
| 'E' (Non AC)               | 1000     | 1500         |             |        |
| 'F' (for students; Non AC) | 750      | 1200         |             |        |

5. Deposit for accommodation enclosed : YES / No in the form of a DD drawn in favor of **IGWC-2011** Yadava College, Madurai and payable at Madurai.

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

Your request in the above format along with the amount through DD in favour of IGWC -2011, Yadava College, Madurai and the letter may be sent to:

Dr. P.S. Navaraj Organizing Secretary (ICCC 2014), Yadava College of Arts & Science, Madurai-625014, India Email : <u>navaraj2k1@yahoo.co.uk</u>

# PROPOSED ORGANIZING COMMITTEE

(Concurrence of members will be obtained soon)

| Patrons:            | DRKALYANI MATHIVANAN<br>Vice Chancellor, Madurai Kamaraj University<br>JOINT DIRECTOR OF COLLEGIATE EDUCATION<br>Secretary and Correspondent<br>Yadava College, Madurai   |
|---------------------|---|
| Chair Persons:      | Mr.Sushil GUPTA, Chairman, CGWB, New Delhi<br>Dr.T.Retnakumar,<br>Principal in charge<br>Yadava College of Arts & Science, Madurai-625014   |
| Co-chair            | Dr.M.Thangarajan<br>Retd.Scientist<br>NGRI, Hyderabad.<br>Shrikant Daji LIMAYE<br>Director, Ground Water Institute (NGO), Pune, INDIA   |
| Vice Chair Persons: | Mr.S.Retinavelu, Senior President,<br>Tamilnadu Chamber of Commerce& Industry , Madurai<br>Mr.Vinodh Mishra<br>National Co-ordinator, WSSCC, INDIA.   |
| Secretary:          | Dr.P.S. Navaraj, Dean (Academic Affairs), Yadava College of Arts&Science, Madurai-625014  |
| Joint Secretaries:  | <ul> <li>Dr. E. Sampath Kumar, Superintending hydrologist, SECR,<br/>CGWB, CGO Complex, Besant Nagar, Chennai-600 075</li> <li>Dr.S.Vinobha, Deputy Hydrologist, TWAD Board, Chepauk,<br/>Chennai-600 005</li> <li>Dr.S.Dhanasekharan, Associate Professor and Head, Dept.of Zoology<br/>Yadava College, Madurai</li> <li>Prof. AL. Ramanathan, School of Earth Sciences, JNU,</li> </ul> |

New Delhi-110067

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#### PROPOSED SCIENTIFIC ADVISORY COMMITTEE (Concurrence of members is yet to be obtained)

#### **Patrons:**

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Kevin Chrétien, Project Officer, World water council, France

Dr.Akilesh Gupta ,HEAD, SCIENTIST G,DST, NEW DELHI.

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Dr.S.Z.Qasim, Former Planning Commission member New Delhi.

#### **Vice Chair Persons:**

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|---|---------------|-----------------------|--------------|-----------|--|--|--|--|
| Dr. Nisha MendirattaScientist Fnisha67 at nic dot in011-26590497Hall C/22Dr. Sanjay Bajpai<br>Director/ Scientist 'F'Technology Mission Cell Water & Solar Energy<br>Department of Science & Technology<br>Technology Bhavan, New Mehrauli Road<br>New Delhi- 110016Tel : +91-11-26590283 / 26565337<br>Fax : +91-11-26510686<br>Alternate Email : sbajpai.dst@gmail.comDr. Manoj patairiya, Director, Scientist F, NCSTC, DST, New Delhi<br>Dr.G.Srinivasan, Joint Secretary, UGC, Hyderabad.<br>Dr.R.Gaur, Scientist, DST, NEW DELHI.Dr.G.Gopakumar,Director -Scientist ,CMFRI, Mandapam,Ramnad District. |               |                       |              |           |  |  |  |  |
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| Marwan Haddad Professor and Director of water and<br>environmental studies institute, An-Najah National University<br>Nablus  |               |                       |              |           |  |  |  |  |
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#### **Associate Secretaries:**

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Dr.Ghosh Bobba, Senior Research Scientist, Environmental Canada.Burlington, Canada,

Shri. J.Daniel Chellappa, Senior Scientist, Bhaba Atomic Research Centre, Chennai.

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Dr. M.Lakshmanan, Emeritus Professor, Dept. of Physics, Bharathithasan University, Trichy.

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# S Majumdar

Principal Counsellor -

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Confederation of Indian Industry New Delhi.

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Krishnan Srinivasan Urban Reconstruction Ecologist & Natural Resource Manager Chennai Area, India

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Arun Kumar Bansal Former Addl. Director General Forest, MoEF, Govt. of India, New Delhi

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