

REPORT ON

"Bilateral India-Quebec workshop on Climate Changes"

HOTEL LE MERIDIEN, NEW DELHI

February 15, 2018



On the Dias: from right to left: Dr.Prachi Kaul, Director, Shastri Indo-Canadian Institute; Dr.Akhilesh Gupta, Adviser/Scientist-G & Head Strategic Programmes, Large Initiatives and Coordinated Action Enabler (SPLICE) and Climate Change Programme , Department of Science & Technology; Mr. Jean Lemire, Envoy for the Climate Changes for Quebec Government ; Dr. Maryse Lassonde, Scientific Director, FRQNT, Government of Quebec Research Agency in Natural Sciences and Engineering

On February 15, 2018, Shastri Indo-Canadian Institute and Government of Quebec, Canada organized jointly a “**Bilateral India-Quebec workshop on Climate Changes**” at Inspire Room, Hotel Le Meridien in New Delhi.

The workshop was a closed group event with only a few Scientists from Quebec inclusive of Government of Quebec Emissary on climatic changes, CEO of Ouranos Consortium and Canada Research Chair in Regional Climate Modeling among others. A similar number of Indian Scientists participated at the event. The idea behind confining this Workshop/Roundtable with nodal people was to initiate the discussions among the group of people who are actually involved in decision making and thus would be able to define the realistic roadmap and carry out the decision made in mutual consent in most effective manner.

This workshop was intended to invoke debate and conduct deliberations in the area of climate change and environment. The workshop also aimed to bring out the actions required for fulfilling our commitment for the creation and sustenance of a sustainable global society.

The Workshop provided a platform for the Scientists from India and Quebec to present their work and discuss further academic and institutional collaborations between Indian and Quebec universities and research institutes (**For List of Participants refer Annexure 1 below**).

The Inaugural Session began with a formal welcome of all participants by **Dr. Prachi Kaul**, Director, Shastri Indo-Canadian Institute. It was followed by overview of the Workshop given by Dr. Maryse Lassonde, Scientific Director, FRQNT, Government of Quebec Research Agency in Natural Sciences and Engineering. The Inaugural address was delivered by **Mr. Jean Lemire**, Envoy for the Climate Changes for Quebec Government. **Dr. Akhilesh Gupta**, Adviser/Scientist-G & Head Strategic Programmes, Large Initiatives and Coordinated Action Enabler (SPLICE) and Climate Change Programme, Department of Science & Technology gave the Keynote Address on "***Climate Change Research in India: Progress, Status and Way Forward***". A vote of thanks was given at the end of the Inaugural session by Ms. Anju Taneja, Shastri Indo-Canadian Institute.

After the Inaugural session there were nine presentations held over this day long affair from both India and Quebec. The first session saw five presentations followed by general discussion and was held from 10:40 pm to 1:15 pm. These were:

1. India and Climate Change Adaptation & Mitigation and International Solar Alliance (ISA)
2. The OURANOS Consortium: Climate Change Science to support adaptation decision making in Quebec, Canada
3. Air Pollution and Climate Change studies over Himalayan region
4. Regional climate modelling and diagnostics in support of engineering applications in the context of a changing climate
5. Climate Change Impact Assessment on Water Resources

The **session II** had four (4) presentations from Indian and Quebec Scientists. These were:

6. Water Savings Technologies to Achieve Food Security
7. Implications of Paris Agreement and International cooperation on Climate Change Research and Readiness"
8. Climate change impacts on surface drinking water sources: adaptation in an urban environment
9. Sequestration of carbon dioxide by chemolithoautotrophic bacteria for the production of biofuel and biomaterials

In the **concluding session** from 4:30 to 5:30pm, summing up of the deliberations held during the first two sessions was done by **Dr. Maryse Lassonde** and **Dr. Prachi Kaul**. Some of the ways discussed at the workshop for the road ahead were:

1. An Expression of Interest needs to be prepared by Government of India and Government of Quebec enlisting areas where they will like to collaborate.
2. A joint workshop to be held in Quebec with support from Quebec Government and Department of Science and Technology, Government of India
3. Setting up of special programmes similar to Kalam Fulbright programme for the exchange of researchers between Indian Centres of Excellence and Quebec Centres of Excellence
4. Exchange of Scholars between Quebec and India
5. The following existing programmes can be used for focussing on Climate Change:
 - (i) Various programmes run by Shastri Indo-Canadian Institute
 - (ii) Programme of Department of Science & Technology called 'Vajra' can also be used for the same
 - (iii) GIAN Programme of Ministry of Human Resource Development, facilitated by SICI for Faculty in Canada
 - (iv) FRQNT can be another agency to bring in cooperation between Quebec and India
6. Resuming the Quebec Tuition Fee Exemption Programme for Indian Students by the Quebec Government.
7. Signing of Agreement between Quebec Government and MHRD to carry forward the activities proposed in it.
8. Devising a joint working group (JWG) representing the two governments and important stakeholders including Industry to oversee the development of Agenda

List of Participants

1. Dr.Maryse Lassonde, Scientific Director, FRQNT, Government of Quebec Research Agency in Natural Sciences and Engineering
2. Mr. Jean Lemire, Government of Quebec Emissary on climatic changes,
3. Dr.Akhilesh Gupta, Adviser/Scientist-G & Head Strategic Programmes, Large Initiatives and Coordinated Action Enabler (SPLICE) and Climate Change Programme , Department of Science & Technology
4. Mr. Alain Bourque, CEO, Ouranos Consortium
5. Dr. Laxmi Sushama, Trottier Chair in Sustainability in Engineering and Design, McGill University
6. Dr. D. Nagesh Kumar, Chairman of the Centre for Earth Sciences, Divecha Centre for Climate Change
7. Dr.Chandra Madramootoo, McGill University, James McGill Professor
8. Dr.Sahdev Singh, Director (knowledge Management), International Commission on Irrigation and Drainage (ICID)
9. Dr. Anindya Chatterjee, Regional Director, Asia, International Development Research Centre of Canada (IDRC)
10. Dr.D V Phani Kumar, Scientist, Aryabhata Research Institute of Observational Sciences
11. Dr. Sarah Dorner, École Polytechnique, Montreal, Canada Research Chair in Microbial Contaminant Dynamics in Source Waters,
12. Dr. Indu Shekhar Thakur , School of Environmental Sciences Jawaharlal Nehru University
13. Dr. N H Ravindranath, Centre for Sustainable Technologies , Indian Institute of Science Bangalore
14. Dr. Srikanta Panigrahi , Director General, Indian Institute Of Sustainable Development
15. Dr.Prachi Kaul, Director, Shastri Indo-Canadian Institute
16. Ms.Anju Taneja, Shastri Indo-Canadian Institute
17. Mr.Sangeet Sharma, Office of Quebec Government , New Delhi



Bilateral India-Quebec workshop on Climate Changes
Inspire Room, Hotel Le Meridien
February 15, 2018

PROGRAMME

Time

9:00 -9:30 AM **Registration over Tea**

INAUGURAL SESSION – 9:30 – 10:40 AM

- 9:30–9:35 am** Welcome by **Dr.Prachi Kaul**
 Director, Shastri Indo-Canadian Institute
- 9:35- 9:50 am** Overview of the Workshop by **Dr. Maryse Lassonde**, Scientific Director,
 FRQNT, Government of Quebec Research Agency in Natural Sciences and
 Engineering
- 9:50-10:05 am** Inaugural address by **Mr. Jean Lemire**, Envoy for the Climate Changes for Quebec
 Government
- 10:05-10:35 am** Keynote Address on “*Climate Change Research in India: Progress, Status and
 Way Forward*” by **Dr.Akhilesh Gupta**, Adviser/Scientist-G & Head Strategic
 Programmes, Large Initiatives and Coordinated Action Enabler (SPLICE) and
 Climate Change Programme , Department of Science & Technology
- 10:35 -10:40 am** Vote of Thanks by **Ms.Anju Taneja**
 Finance Officer, Shastri Indo-Canadian Institute

Session I 10:40 AM–1:15 PM

Tile of Presentation	Speakers
Moderator : Dr. Maryse Lassonde , Scientific Director, FRQNT, Government of Quebec Research Agency in Natural Sciences and Engineering	
1. Alain Bourque, CEO , OURANOS Consortium	The OURANOS Consortium : Climate Change Science to support adaptation decision making in Quebec, Canada

2. Dr.Srikanta Panigrahi, Director General, Indian Institute Of Sustainable Development (IISD), New Delhi	India and Climate Change Adaptation & Mitigation and International Solar Alliance (ISA)
3. Dr.D V Phani Kumar, Aryabhata Research Institute of Observational Sciences Collaborator of: Taha Ouarda, Head, Hydro-climate modeling lab, INRS-ETE	Air Pollution and Climate Change studies over Himalayan region
4. Dr.Laxmi Sushama, Trottier Chair in Sustainability in Engineering and Design, McGill University Her Collaborator: Dr. Nagesh Kumar, Chairman of the Centre for Earth Sciences, Divecha Centre for Climate Change	Regional climate modelling and diagnostics in support of engineering applications in the context of a changing climate Climate Change Impact Assessment on Water Resources
Discussion	

1:15-2.00 PM

LUNCH BREAK

SESSION II 2:00 -4:15 PM

Title of Presentation	Speakers
Moderator :Dr Maryse Lassonde, Scientific Director, FRQNT, Government of Quebec Research Agency in Natural Sciences and Engineering	
5. Dr.Chandra Madramootoo, Mc Gill University	Water Savings Technologies to Achieve Food Security
6. Dr.N H Ravindranath, Centre for Sustainable Technologies, Indian Institute of Science, Bangalore	Implications of Paris Agreement and International cooperation on Climate Change Research and Readiness"
7. Dr.Sarah Dorner, Research Chair in Microbial Contaminant Dynamics in Source Water, École Polytechnique de Montréal	Climate change impacts on surface drinking water sources: adaptation in an urban environment
8. Dr.Indu Shekhar Thakur, School of Environmental Sciences, Jawaharlal Nehru University	Sequestration of carbon dioxide by chemolithoautotrophic bacteria for the production of biofuel and biomaterials
Discussion	

4:15-4:30 PM

TEA BREAK

SESSION III 4:30-5:30 PM

CONCLUDING SESSION

Summing up and road ahead by **Dr. Maryse Lassonde,** Scientific Director, FRQNT, Government of Quebec Research Agency in Natural Sciences and Engineering and by **Dr.Prachi Kaul,** Director, Shastri Indo-Canadian Institute

Vote of Thanks

