



*4th IDSAsr*

## **INTERNATIONAL SEMINAR**

# ***THE WATER ENERGY AND FOOD SECURITY***

*Venue*

*Conference Hall,  
Guru Nanak Bhawan  
Guru Nanak Dev University  
Amritsar-143005*

*November 2 to 4, 2012*



# ***Guru Arjan Dev***

***Institute of Development Studies***

***14-Preet Avenue, Majitha Road, PO Naushera, Amritsar-1430008***

***(Under the aegis of Guru Arjan Dev Institute of Development Studies Society)***

***Registered under the Societies Registration Act XXI of 1860***

## ***THE WATER ENERGY AND FOOD SECURITY***

### **OVERVIEW:**

*The food price crisis of 2008 has led to the re-emergence of debates about global food security and its impact on prospects for achieving the first Millennium Development Goal (MDG): **to end poverty and hunger**. The outlook for the coming decades is that agricultural productivity needs to increase further, which will require more water to meet the demands of growing populations. Ensuring equitable access to water and its benefits now and for future generations is a major challenge as scarcity and competition increase. The amount of water allocated to agriculture and water management choices will determine, to a large extent, whether societies achieve economic and social development and environmental sustainability. Agriculture remains crucial for pro-poor economic growth in most agro based countries, as rural areas support 70 to 80 per cent of the total population. More than in any other sector, improvements in agricultural performance have the potential to increase rural incomes and purchasing power for large numbers of people to lift them out of poverty. Water, which has only very recently received attention in the Green Economy debate, is an essential input for all biomass growth and hence for all ecosystem services and associated jobs and livelihoods. Improved water resources and intact ecosystems ('Natural infrastructure') can mutually reinforce each other and generate additional benefits.*

*Biological diversity comprises countless plants that feed and heal people, many crop varieties and aquatic species with specific nutritional characteristics, livestock species adapted to harsh environments, insects that pollinate fields and micro-organisms that regenerate agricultural soils. Conserving and using biodiversity sustainably is key to feeding the around 800 million malnourished people in developing countries. Biodiversity, essential for agriculture and food production, is threatened by urbanization, deforestation, pollution and the conversion of wetlands. Due to agricultural modernization, changes in diets and population density, humankind increasingly depends on a reduced amount of agricultural biological diversity for its food supplies. A dozen species of animals provide 90% of the animal protein consumed globally and just four crop species provide half of plant-based calories in the human diet. Nearly three-quarters of the genetic diversity found in agricultural crops have been lost over the last century. Of 6 300 animal breeds, 1 350 are endangered or already extinct. This rapidly diminishing gene*

*pool is cause for concern. Reduction of biodiversity entails a reduction of options for ensuring more diverse nutrition, enhancing food production, raising incomes, coping with environmental constraints and managing ecosystems. Recognizing, safeguarding and using the potential and diversity of nature is critical for food security and sustainable agriculture. Global efforts to conserve plants and animals in gene banks are vital. But it is also important to maintain biodiversity on farms and in nature, where it can evolve and adapt to changing conditions or competition from other species.*

*We are a long way from achieving water, energy and food security for the entire world's people. It is increasingly recognized that conventional supply-side management is coming to an end in many cases. Resource limitations in all sectors require a shift towards increased resource use efficiency, demand management and more sustainable consumption patterns. Without such changes, current development trajectories threaten to drive social-ecological systems at all scales towards critical thresholds. The newly emerging sustainable development goals could provide an institutional foundation to address these boundaries as well as equity issues associated with the allocation and distribution of limited resources. Crossing critical thresholds at any scale could result in (possibly irreversible) system changes – so-called 'regime shifts' – Such changes may also cause social unrest, conflicts and migration.*

*Global Trends such as population growth and rising economic prosperity are expected to increase demand for energy, food and water which will compromise the sustainable use of natural resources. Besides positive effects, this pressure on resources could finally result in shortages which may put water, energy and food security for the people at risk, hamper economic development, lead to social and geopolitical tensions and cause lasting irreparable environmental damage. Guru Arjan Dev Institute of Development Studies has recognized a clear need for new approaches which address the inter-connections within the water, energy and food security nexus. In order to develop these integrated solutions, **4<sup>th</sup> IDSAsr International seminar** is being organized under the auspices of Guru Arjan Dev Institute of Development Studies. This seminar will put a nexus lens on the three action fields while focusing on better understanding the inter-linkages between the three securities. Further, the discussions will focus on identifying enabling conditions which facilitate the transition to a greener economy. The seminar will provide a space for discussion, interaction, dissemination of information to policy-makers, water managers, academics, students and the public in general.*

**Venue of the Seminar:** Conference Hall of Guru Nanak Bhawan  
Guru Nanak Dev University, Amritsar-143005

**Duration and Dates:** Three days (November 2 to November 4, 2012)

**Language of the Seminar:** Official language of the seminar will be English

**Organizer of the Seminar:** Guru Arjan Dev Institute of Development Studies  
14-Preet Avenue, Majitha Road,  
PO Naushera, Amritsar-143008

**Accommodation:** Accommodation will be provided to all the registered delegates in various guest houses on share basis during the seminar period. Extended stay in the guest houses can be arranged against advance payment and confirmation. Hotel accommodation can be arranged against advance payment. For further detail contact 4<sup>th</sup> IDSAsr Seminar Secretariat.

**Sight Seeing:** A visit to world famous **Golden Temple** will be arranged in the early hours of 3<sup>rd</sup> November 2012 free of cost

2. A visit to **International (Indo - Pak) Wagah** Boarder will be arranged against payment if sufficient delegates opt to watch the pomp and pageantry of the **Beating Retreat** and the **Change of Guard** within handshaking distance of Indian and Pakistan forces.

#### **Registration:**

All delegates have to register with 4<sup>th</sup> IDSAsr Seminar Secretariat to enable us to serve you better. The registration fee details (excluding travel) are as follows:

Category	Early bird registration on or before 1st October, 2012		Late registration	
	Indian (Rs)	International(US\$)	Indian (Rs)	International(US\$)
Professional delegates	1000	150	1500	175
Student delegates	750	100	1000	150

\* The conference registration fee includes conference kit, lunch, dinner and coffee at the conference venue. Accompanying person will be charged as a delegate. Children below 10 yrs will be exempted from delegates' fee.

#### **Mode of Payment**

Please send by post/e-mail duly filled in registration form along with the fee (in cheque/bank demand draft / bank transfer).

**Bank transfer (mention IDSAsr-2012 in subject)**

Name of the beneficiary: The Director, GAD Institute of Development Studies

Account No. : 11832151020110

Name of the Bank: Oriental Bank of Commerce

Address of the Bank: Diamond Avenue, Majitha Road, Amritsar.

**OR**

**Local cheque/bank draft**

Cheque/demand draft in favour of The Director, GAD Institute of Development Studies payable at Amritsar(mention IDSAsr-2012 on the reverse)

**Contact**

In case of any query regarding registration, you may please contact the

4<sup>th</sup> IDSAsr Seminar Secretariat,  
Guru Arjan Dev Institute of Development Studies  
14-Preet Avenue, Majitha Road,  
PO Naushera, Amritsar-143008

e-mail:idsasrsectt@yahoo.com; [idsasr09@yahoo.com](mailto:idsasr09@yahoo.com)

Tel: 91-183-2426045

## **ABOUT AMRITSAR**

*(The City of Golden Temple)*

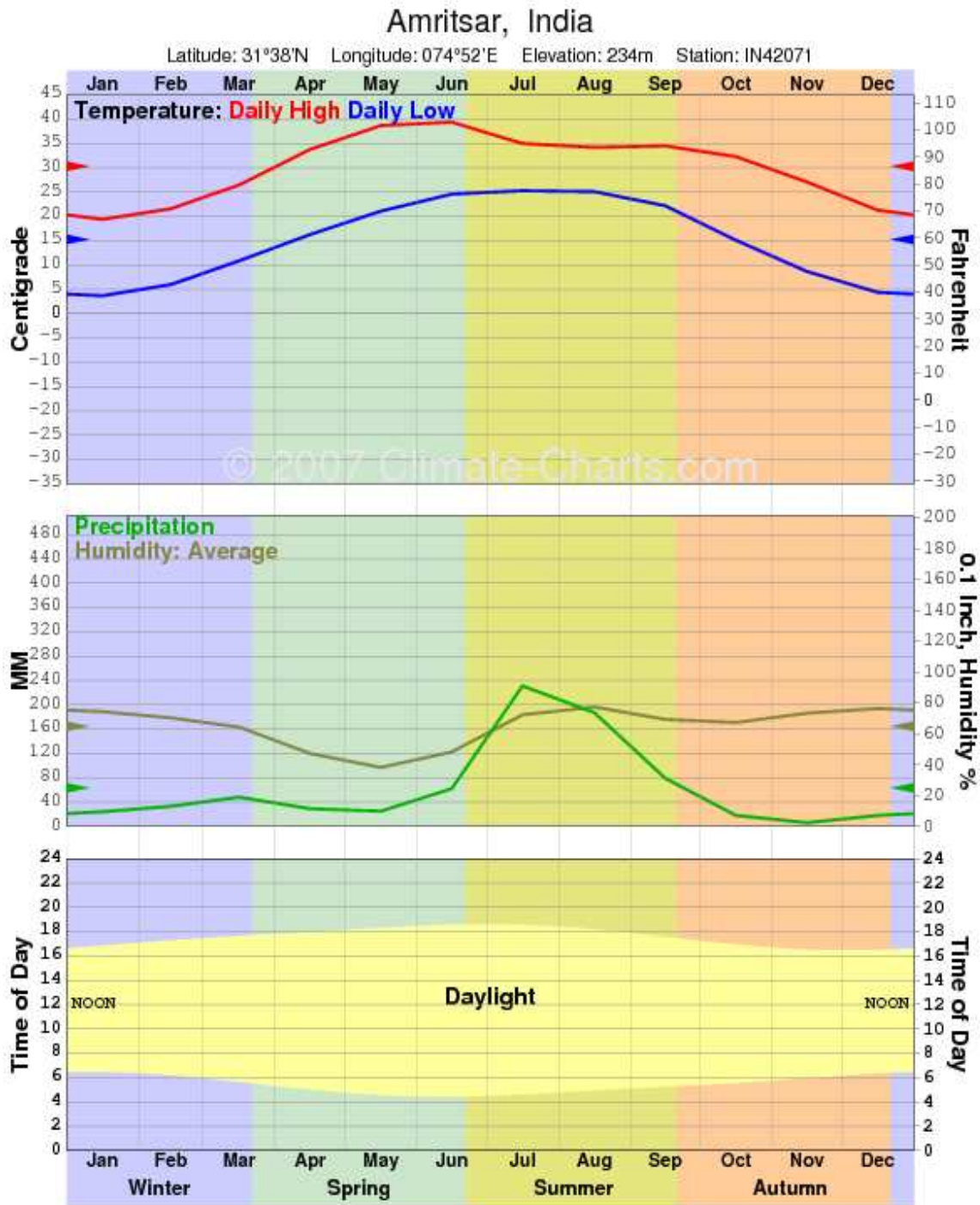


## **LOCATION**

*Amritsar city situated in northern Punjab state of northwestern India lies about 15 miles (25 km) east of the border with Pakistan. Amritsar is an important city in Punjab and is a major commercial, cultural, and transportation centre. It is also the centre of Sikhism and the site of the Sikh's principal place of worship.*

## **CLIMATE**

*Amritsar is located at 31.63°N 74.87°E with an average elevation of 234 meters (768 ft). Amritsar has a semiarid climate, typical of Northwestern India and experiences four seasons primarily: winter season (November to March) with temperature ranges from 4 °C (39 °F) to about 19 °C (66 °F), summer season (April to June) where temperatures can reach 45 °C (113 °F), monsoon season (July to September) and post-monsoon season (September to November). Annual rainfall is about 681 millimeters (26.8 in). Since 1970, the lowest temperature, -2.6 °C (27 °F), was recorded on 21 Jan 2005 and the highest temperature, 47.7 °C (117.9 °F), was recorded on 21 May 1978. There are on average 3,200 sunshine hours per year in Amritsar.*



## **HOW TO REACH**

### **BY AIR**

*Sri Guru Ram Dass International, Amritsar (**Rajasansi**) airport, about 11 km. from town, is connected by domestic flights from Delhi, Srinagar and Chandigarh. You can get to town by a pre-booked rented car, taxis or auto-rickshaws.*

### **BY TRAIN**

*Amritsar is connected by direct trains from major Indian cities like Delhi, Jammu, Mumbai, Nagpur, Jaipur, Madras Calcutta and Puri and so on. For more details visit: <http://www.indianrail.gov.in>*

### **BY ROAD**

*You can drive to Amritsar from neighboring states. Bus services also connect Amritsar with most north Indian towns, including Chandigarh (235 Kms), Delhi (450 Kms), Shimla, Kulu, Manali, Dharamshala and Dalhousie in Himachal Pradesh, Dehradun and Rishikesh in Uttar Pradesh and Jamm; Jaipur Sri Ganganagar in Rajasthan and Sirsa, Hissar in Harayana. There is also a bus service to Lahore, 35 km away, which is the only land route connection between India and Pakistan.*

## **Hotels in Amritsar**

[Ista Amritsar](#) ★★★★★

Hotel Ista is situated very close to the Golden Temple in Amritsar and is a hotel exuding warmth and class thanks to its staff and modern design and facilities. Hotel

[more](#)



[Best Western Merrion](#) ★★★★★

Best Western Merrion is located in the up-market region of Ranjit Avenue in Amritsar. The contemporary style and high-quality fixtures and fittings make for a premium experience at one of



[more](#)



[Aay Kay Hotel](#) ★★★★★

Aay Kay Hotel is located on Albert Road, close to the Circuit House in Amritsar. The hotel is in the radius of 2 minutes from Railway Station and Inter State

[more](#)



[Hotel Airlines](#) ★★★★★

Amritsar forms one part of the Golden Triangle and is a city that has many wonders you can explore, and Airlines Hotel offers the best launching base from which you



#### ★★★Hotel Heritage Inn Amritsar

The Hotel interiors, right from the reception to your room, spin a mystery of its own. All rooms are air-conditioned with 24 hrs. power back up. All the rooms are exceptionally furnished....

[View Detail »](#)



#### ★★★Hotel Shiraz Regency Amritsar

Hotel is less than five minutes away from all major Shopping Complexes and corporate towers & is just 8 kilometers from Amritsar Airport and few meters from Railway Station...

[View Detail »](#)



★★Hotel Majha Continental

The hotel is ideally located from major tourists attractions and is well known for its warm & friendly service and exceptional Food and Beverage standards...

[View Detail »](#)



★★★★Hotel Ritz Plaza

Hotel Ritz Plaza is 1.5 kilometers from Amritsar Railway Station and 11 Kilometers from International Airport. The pride of Punjab and the most holy Sikh shrine is just 10 minutes drive from Hotel Ritz Plaza...

[View Detail »](#)



★★★★Hotel Mohan International

Hotel Mohan International is one of the most prominent icon in the historic city of Amritsar. Be it the grandeur accomodation in the posh & stylish rooms or the exquisite multicuisine delicacies, at Mohan International Amritsar you savour it all in luxury and comfort...

[View Detail »](#)



[Hotel Astoria Amritsar](#)

*1 Queen's Road, Amritsar*

Rating: ★★

## CONCEPT NOTE

### ***THE WATER ENERGY AND FOOD SECURITY***

*The food price crisis of 2008 has led to the re-emergence of debates about global food security and its impact on prospects for achieving the first Millennium Development Goal (MDG): to end poverty and hunger. On top of a number of shorter-term triggers leading to volatile food*



*prices, the longer-term negative impacts of climate change need to be taken very seriously. United Nations Development Programme (UNDP) warns that the progress in human development achieved over the last decade may be slowed down or even reversed by climate change, as new threats emerge to water and food security, agri-*

*cultural production and access, and nutrition and public health. The impacts of climate change – sea level rise, droughts, heat waves, floods and rainfall variation – could, by 2030, push another 600 million people into malnutrition and increase the number of people facing water scarcity by 1.8 billion (UNDP 2008).*

*Climate change, however, is considered as posing the greatest threat to agriculture and food security in the 21st century, particularly in many of the poor, agriculture-based countries of sub-Saharan Africa (SSA) with their low capacity to effectively cope (Shah et al., 2008; Nellemann et al., 2009). African agriculture is already under stress as a result of population increase, industrialization and urbanization, competition over resource use, degradation of resources, and insufficient public spending for rural infrastructure and services. The impact of climate change is likely to exacerbate these stresses even further.*

*The outlook for the coming decades is that agricultural productivity needs to continue to increase and will require more water to meet the demands of growing populations. Ensuring equitable access to water and its benefits now and for future generations is a major challenge as scarcity and competition increase. The amount of water allocated to agriculture and water management choices will determine, to a large extent, whether societies achieve economic and*

social development and environmental sustainability. Agriculture remains crucial for pro-poor economic growth in most agro based countries, as rural areas support 70-80 per cent of the total population. More than in any other sector, improvements in agricultural performance have the potential to increase rural incomes and purchasing power for large numbers of people to lift them out of poverty.

Productivity and the availability of water, energy and land vary enormously between regions



and production systems. There is a large potential to increase overall resource use efficiency and benefits in production and consumption, e.g. by addressing intensive agriculture (which often has higher water productivity but lower energy productivity than other forms of agriculture) or water- and energy-intensive meat products. The nexus approach can boost this

potential by addressing externalities across sectors. For example, nexus thinking would address the energy intensity of desalination (also termed 'bottled electricity'), or water demands in renewable energy production (e.g. biofuels and some hydropower schemes) or water demands of afforestation for carbon storage. Also, action to avoid or land degradation saves water and energy, for example by increasing soil water storage and groundwater recharge, as well as reducing the use of energy intensive fertilizer.

Water, which has only very recently received attention in the Green Economy debate, is an essential input for all biomass growth and hence for all ecosystem services and associated jobs and livelihoods. Improved water resources and intact ecosystems ('Natural infrastructure') can mutually reinforce each other and generate additional benefits.

#### **Opportunities to Improve Water, Energy and Food Security**

A nexus approach can support a transition to sustainability, by reducing trade-offs and generating additional benefits that outweigh the transaction costs associated with stronger integration across sectors. Such gains should appeal to national interest and encourage governments, the private sector and civil society to engage. These include:



### ***Increased Productivity of Resources***

*Sustainable and inclusive intensification and decoupling of economic development from resource use – both fundamental to a Green Economy – can be achieved through technological innovation, recycling (e.g. productive sanitation) and reducing wastage. The nexus focus is on system efficiency, rather than on the productivity of isolated sectors.*

### ***Waste as a Resource in Multi-Use Systems***

*Cross-sectoral management can boost overall resource use efficiency. In multi-use systems in particular, waste and by-products can be turned into a resource for other products and services, e.g. in green agriculture, wastewater-energy integration or multi-use reservoirs.*

### ***Stimulating Development through Economic Incentives***

*Innovation to improve resource use efficiency requires investment and reductions in economic distortions. Economic instruments for stimulating investment include, e.g., pricing of resources and ecosystem services, water markets and tradable rights, and payments for ecosystem services. A nexus approach can also help to avoid ‘sunk costs’, i.e. investments that lock development into non-sustainable pathways.*

### ***Governance, Institutions and Policy Coherence***

*Regulation and collective action can help to guide investments and innovation to minimize negative externalities and share benefits equitably. Enabling conditions for horizontal and vertical policy coherence include institutional capacity building, political will, change agents and awareness-raising. Additional opportunities can be realized if the nexus is addressed coherently across all scales through multi-level governance.*

*We are a long way from achieving water, energy and food security for the entire world’s people. In hotspot regions such as South Asia (where lack of land is also becoming an issue), and sub-Saharan Africa, large fractions of the population remain marginalized and deprived of their human rights and development opportunities.*

*While water, energy and food security have so far been mainly constrained by unequal access, humanity is now also approaching limits in global resource availability and sink strength, such as phosphorus supply or atmospheric CO<sub>2</sub> concentration. It is increasingly recognized that conventional supply-side management is coming to an end in many cases. Resource limitations in all sectors require a shift towards increased resource use efficiency, demand management and more sustainable consumption patterns. Without such changes, current development*

trajectories threaten to drive social-ecological systems at all scales towards critical thresholds. Crossing such thresholds could result in, for example, food crises such as currently experienced in the Horn of Africa; basin closure; or crossing of ‘planetary boundaries’, which define a safe operating space for humanity. The newly emerging sustainable development goals could provide an institutional foundation to address these boundaries as well as equity issues associated with the allocation and distribution of limited resources. Crossing critical thresholds at any scale could result in (possibly irreversible) system changes – so-called ‘regime shifts’ – bringing negative impacts for ecosystems, socio-economic development and poverty alleviation. Such changes may also cause social unrest, conflicts and migration.

Global Trends such as population growth and rising economic prosperity are expected to increase demand for energy, food and water which will compromise the sustainable use of natural resources. Besides positive effects, this pressure on resources could finally result in shortages which may put water, energy and food security for the people at risk, hamper economic development, lead to social and geopolitical tensions and cause lasting irreparable environmental damage.

Guru Arjan Dev Institute of Development Studies has recognized a clear need for new approaches which address the interconnections within the water, energy and food security nexus. In order to develop these integrated solutions, **4<sup>th</sup> IDSAsr annual seminar** organized under the auspices of Guru Arjan Dev Institute of Development Studies pursues three objectives:

- To develop policy recommendations based on multi-stakeholder consultations and taking a nexus perspective,
- To position the water, energy and food security nexus perspective as an important dimension within the Green Economy and Green Growth concepts, and
- To launch concrete initiatives to address the water, energy, food security nexus in a coherent and sustainable way.

**4<sup>th</sup> IDSAsr Seminar** will focus on the three action fields of sustainable development:

- The social dimension: Accelerating Access, integrating the bottom of the pyramid
- The economic dimension: Creating more with less
- The ecologic dimension: Investing to sustain ecosystem services

The conference will put a nexus lens on the three action fields while focusing on better understanding the inter-linkages between the three securities. Further, the discussions will focus on identifying enabling conditions which facilitate the transition to a greener economy.

## Registration Form

1. Name:

2. Date of Birth:

3. Passport No:

4. Official Address:

Residence Address:

5. Contact No:

Office

Residence

Mobile

Fax:

E mails:

6. Food habits

Veg/Non Veg

7. Whether presenting paper or not

Title of the paper

8. Accommodation required

Yes/no

If yes:

From Organizers/ Golden Temple Complex/ Your own (Against payment)

9. Audio Visual Aid Required:

10. Detail of registration fee\*

Amount in INR

DD No

Date

Bank

11. Mode of Travel

Air/Road/Rail

Arrival Information

Date

Time

Mode

Departure Information

Date

Time

Mode

12. Will you join Dinner with us on:

November 1, 2012 Yes/no

November 4, 2012 Yes/No

Date

Signature

\*DD may be drawn in favour of Director, GAD Institute of Development Studies payable at Amritsar

**Research Advisory Council**  
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Jaipur*

**Dr Gursharan Singh Kainth**  
*Director-cum-Member Secretary  
Guru Arjan Dev Institute of Development Studies  
Amritsar*

***PREVIOUS SEMINARS:***

*IDSAsr has organized since its inception (since July 2009) following three national/ international seminars.*

- 1. 1<sup>st</sup> National Seminar on Food Security and Sustainability in India* in November 2009
- 2. 2<sup>nd</sup> National Seminar on Management of Natural Resources and Environment in India* in October 2010
- 3. 3<sup>rd</sup> International seminar on Water Security and Climate Change: Challenges and Strategies* in November 2011