

## Seminar

**Theme: Global Warming & Climate Change**

**(19 September 09)**

**Seminar Coordinator: Dr Shikha Tripathi, Faculty Member, BIRD**

**Rapporteur: Shri SV Nemlekar**

### **Schedule**

<b>Time</b>	<b>Activity</b>	<b>Resource Person</b>
1000-1030	<b>Inauguration</b> Welcome & Overview Address by Guest of Honour  Inauguration	Shri S K Chatterjee, Director BIRD Dr Ram Boojh, Programme Specialist, UNESCO  Dr Leonard Sonnenchein, President, Conservation for the Ocean Foundation & Cofounder World Ocean Network, USA
<b>1030-1130</b>	Session I <b>Global Warming: Facts &amp; Fallacies</b>	<b>Shri VK Joshi</b> Eminent Geologist, Journalist & former Director-Geological Survey of India
<b>1130-1145</b>	Open Interactive Session	
<b>1145-1200</b>	<b>Tea break</b>	
<b>1200-1300</b>	<b>Session II</b> <b>Global Warming &amp; Climate Change: Alarming Bells Ahead?</b>	<b>Dr PK Srivastava</b> Senior Scientist, CDRI & Scientoonist
<b>1300-1315</b>	Open Interactive Session	
<b>1325-1330</b>	Summing Up and Vote of Thanks	Shri R K Das, Joint Director, BIRD
<b>1330</b>	<b>Lunch</b>	

## Seminar

### **Theme: Global Warming & Climate Change**

**(19 September, 09)**

#### **Background**

Sensitizing global citizens on issues of greater threat to life is inevitable for sustaining living planet- 'Earth'. The time has come to reevaluate efforts to combat climate change supposed to be consequence of 'Global- Warming'. Global-Warning' is impending since biosphere in which we live is an integrated part of earth (A Rajanikanth, eminent scientist)!

Global warming-a buzz word the world over, It's an imminent issue that has started haunting the human mind. It refers to the rise of global temperatures caused by increased amounts of greenhouse gases in the atmosphere. As the sun's energy enters the Earth's atmosphere, these greenhouse gases block heat reflected from the Earth's surface, which would normally travel back into space. The result is an increase in global temperatures. As the amount of greenhouse gases increase in the atmosphere, the Earth's surface becomes warmer. Climate change is visible in the form of dwindling fresh water supplies, shortage of electricity, increased pollution, drastic changes in seasonal temperatures and precipitation, shrinking forest cover etc contribute to environmental, social and economic threat.

One of the most pronounced effects relates to the evaporation of water. Warming by the addition of long-lived greenhouse gases such as CO<sub>2</sub> will cause more water to evaporate into the atmosphere. Apart from other effects, the additional anticipated effects include sea level rise of 180 to 590 millimeters (0.59 to 1.9 ft) in 2090-2100 relative to 1980-1999, repercussions to agriculture, possible slowing of the thermohaline circulation, reductions in the ozone layer, increased intensity (but less frequent) of hurricanes and extreme weather events, lowering of ocean pH, and the spread of diseases such as malaria and dengue fever.

As Trustees of Earth, we are concerned and therefore must join our hands to contribute to eliminate pollution, poverty and violence and foster peaceful progress As Mahatma Gandhi once said "one must care about a world one will not see". We must work to save our planet that gives us life and sustenance.

#### **Objectives of the Seminar**

1. To create awareness about the issue of global warming and climate change, that affects our existence and also of the society at large.
2. To enhance learning on the issues caused by GW and CC that influence agriculture and rural development
3. To disseminate the learning among others including our clients and stakeholders, thereby facilitating participation of larger community to contribute to saving our nature including water, energy, environment etc.

**Participants:** Local representatives of RFIs and their training establishments, NGOs, MFIs, Regional Office NABARD, Faculty Members of BIRD, NBSC and NBTC.

## Proceedings

### **Inaugural Session**

The dignitaries on the dais of inaugural session included Mr. Leonard Sonnenchein, President, Conservation for the Oceans Foundation and Cofounder World Ocean Network, USA as Chief Guest of the inaugural session; Dr Ram Boojh, Programme Specialist and Head, Department of Ecological and Earth Studies, UNESCO, New Delhi, as a 'Guest of Honour'; Shri VK Joshi, Former Director, Geological Survey of India, Northern Zone; Dr Pradeep Kumar Srivastava, Senior Scientist CDRI and Scientist of international fame; Shri SK Chatterjee, Director and Shri RK Das Joint Director, BIRD.

### **Welcome and Overview: Shri SK Chatterjee, Director, BIRD**

Shri SK Chatterjee, Director BIRD welcomed the dignitaries and the participants of the seminar. In his welcome address he shared an overview of the theme of the seminar and its relevance to the bankers and trainers.

He traced the adverse effects of global warming and mentioned that if temperatures continue to rise, it could affect the forests which may get converted into 'carbon sources' from its usual function as 'carbon sink'. Excess heating will also result in eroding the carbon storing capacity of forests. Further, Rise in temperatures results in droughts, insect invasion, fires and storms. Global warming also affects adversely the coastal ecosystems, availability of water resources, bio diversity and agricultural productivity. Bankers, as a community, cannot remain unaffected by the above developments. They will have to tackle the above adverse natural phenomena by encouraging dry land farming, watershed projects, opening of farmers clubs, for ensuring proper extension support as well as to encourage information sharing amongst the farmers.

Further, he pointed out that Global warming may also result in shifting of glaciers which in turn, may lead to collapse of the Himalayan Hydroelectric power generation system. This could affect the cropping systems in the plains below. Bankers will have to gear up to meet this challenge also.

Talking about the Eco Fragile zones, he remarked that destruction of forests will cause huge displacement of the population depending on it as also adversely affect their livelihood. Decline in summer rainfall, collapse of coastal ecosystems will adversely affect the community. It may result in displacement/migration of population, thereby increasing the chances of formation of slums in metros , e.g. Dharavi in Mumbai. Coastal surges and cyclones may also destroy pisciculture in these areas. Bankers will have to take adequate steps to meet these challenges.

Regarding urbanisation and industrialization, he remarked that indiscriminate urbanisation and industrialization can also contribute to global warming. Bankers play a major role in financing these activities. It is high time that they wake up to this danger signal and consider financing such projects which satisfy the 'green index' and do not contribute to excessive global warming.

**Address by 'Guest of Honour': Dr Ram Boojh, Programme Specialist, UNESCO**

Dr Ram Boojh, Programme Specialist, UNESCO, New Delhi, congratulated BIRD for organizing a seminar on Global Warming and Climate Change, a theme important for bankers and development agencies. He said that poor are the most vulnerable to the damaging effects of Global Warming. The bankers and development agencies therefore must understand the issue of global warming and play an active role to enable the vulnerable sections of the society, to cope up with it in a better manner. He further stated that as of February 2009. In total, 183 countries have signed and ratified the Kyoto Protocol to the United Nations Framework Convention on Climate Change, aimed at combating global warming. The Kyoto Protocol establishes legally binding commitment for the reduction of greenhouse gases produced by industrialized nations, as well as general commitments for all member countries. In total 183 states have ratified the protocol which was initially adopted for use on 11 December 1997 in Kyoto, Japan and which came into force on 16 February 2005. Under the Kyoto Protocol, industrialized countries agreed to reduce their collective greenhouse gas emissions by 5.2% from the level in 1990. India is ranking 8<sup>th</sup> in the emission of green house gases. India believes in self imposed regulation. It has always played a proactive role in development. One of such examples is India's Green Revolution. While concluding his speech he quoted Mahatma Gandhi's remark 'Earth can fulfill everybody's need but not the greed' and reiterated the need to be self restrained in protecting our nature.

**Inaugural Address: Shri Leonard Sonnenchein, President, Conservation for the Oceans Foundation, USA**

Shri Leonard Sonnenfchein, President, Conservation for the Oceans Foundation, USA, in his inaugural address laid stress on dissemination of information about health care to the poor to enable them to fight the diseases caused by the climate change and global warming. Talking about the urgency of the issue of Global Warming he remarked that there is an urgent need to act locally otherwise Climate Change will hit many people and majority of the victims would include youth, rural and poor. Emphasizing on health care, he said that global warming causes newer diseases. People with weak immunization system are affected the most hence poor are the most vulnerable ones to these diseases. In this regard he suggested that the farmers clubs can be used to disseminate information about the health issues such as nutrition, health care etc. by way of information cards or other such innovative ways. Similarly bankers can also play a very important role by disseminating health education while doing their banking business with rural clientele. He thanked BIRD for organizing this seminar on an issue which is very crucial and need of the hour.

## Technical Sessions

### **Session I**

#### **Global Warming: Facts and Fallacies**

**Speaker: Shri VK Joshi**

Shri VK Joshi, former Director, Geological Survey of India, Northern Zone and Journalist (annexure 1) deliberated on the genesis of earth, history and causes of global warming and strategies to help combating the effects of global warming. The important points of his presentation are as follows:

- Global Warming is a natural phenomenon and our planet earth has witnessed it at the time when no living creature existed on earth. Thus, it's not been contributed by us. However, one should not sit idle or speed up the process by being insensitive to the issue.
- Tracing back the history of earth over 4,600 million years, he shared that earth has witnessed changes from hot house to ice house and subsequently to green house effect. During this period no living species existed. Green house gases were emitted by volcanoes.
- Communication is a powerful means to inform the people and take proper measures to cope with the effects of global warming and climate change by dissemination of information which was not there million years ago and thus many species such as Dinosaurs became extinct sixty five m years ago because they could not cope with the change.
- Global Warming and Climate Change manifests itself through threats of flood, rise in sea levels etc. He clarified this citing the examples of Kosi flood and floods in the townships.
- It takes hundred years to develop a tree, thousand years to rejuvenate an eroded soil and the land altered can never be brought back to the same form. Rain water harvesting, recycling of water, afforestation, alternate sources of energy, measures of energy efficiency are the ways to cope with the damages of Global Warming. Every citizen is accountable to conserve water as that is going to be one of the major crises caused by global warming in near future.
- Banks must finance those projects which are eco friendly and facilitating energy efficiency and must know those elements that lead to degradation of nature and environment so that they may play a proactive role in the protection of environment.
- BIRD can spread awareness about the use of technologies that are less power and water intensive and also can lead waste disposal scientifically.

- The crux of the matter is that we may not have control over Global Warming but we must not conflict with the nature by perusing activities that are disturbing the ecological balance!

## Session II

### Global Warming and Climate Change: Alarming Bells Ahead?

Speaker: Dr PK Srivastava

Dr Pradeep Kumar Srivastava, Senior Scientist and Scientoonist of international fame (annexure1) presented before the audience, the concepts underlying global warming, factors affecting or affected by global warming and strategies to cope with it with the help of his scientoons. The major points of his presentation are as follows:

- The gases present in the stratosphere which absorb the heat of the Sun, are called **Green House Gases** and effect thus caused, is known as **GREEN HOUSE EFFECT**. This green house effect warms the globe causing **Global Warming**
- **GLOBAL WARMING** will cause sea level to rise by approx. 1 meter by the end of this century. Many countries like Maldives, Bangladesh, Egypt, Holland, East Anglia in UK and many Caribbean countries will face a serious problem, but the worst affected will be Maldives.
- **Six million hectares** of land is converted into **desert** every year in the world. (UNEP Report 1990). Major reason for this is deforestation and climate change. This has caused 100 million people to become homeless. The deforestation rate in the world is 100 million acres every year (UNEP Report). This is causing extensive damage to our rich biodiversity as many species are lost forever.. Every minute 50 acres of rain forests are cut in the world. **Thus, loss of rain forest per day is 72,000 acres**. This is an alarming scenario which is responsible for causing Global warming.
- The huge and increasing population is putting enormous pressure on the unique natural resources of the region. Forests are being cut down for timber, plantations, agriculture, roads and urban development; its fresh water and seas are being polluted and over fished - in the sea destructive methods such as cyanide fishing and explosives are being used to catch fish.
- In addition, urbanization, industrialization, pollution, mining, tourism, introduced species, hunting, illegal trade in endangered species and the lack of proper management practices have taken their toll. In the past decade, demand on biological resources increased sharply due to rapid economic and population growth.
- India has a diversity of habitat and biological resources. Hot and cold deserts, monsoon and thorn forests, ice-clad mountains, boggy wetlands and offshore islands are all found in this vast sub-continent. It has around 45,000 species of plants, more than 5,000 of insects and 1,200 of birds. India's large and fast-growing population puts pressure on its natural resources.

**Summing Up and Vote of Thanks: Shri RK Das, Joint Director, BIRD**

While summing up, Shri RK Das, Joint Director, BIRD remarked that the presentations made by the speakers were highly enriching, inspiring and imaginative. This seminar has brought out a number of points for the bankers and development agencies as follows:

- Banks should make efforts to finance eco friendly projects. For the viability of financing these projects, the government and the regulators should come forward to introduce an element of subvention
- Any developments effort puts strain on the natural resources. The bank managers must understand the local community and their efforts for conserving natural resources and should take them into confidence while financing the projects which is expected to exert pressure on natural resources. This, in a way would certainly be a contribution from the bankers to lessen the ill effects of global warming.

He thanked the speakers for their enlightening deliberation on the theme. He also thanked the representatives of STCs of Commercial Banks, NGOs, faculty members/staff of BIRD, NBSC and NBTC, for attending the seminar.

### **Global Warming and Climate Change: Action Points for the Bankers**

1. Bankers may design and implement credit and other suitable banking products to encourage dry land farming, watershed development, etc.
2. Global Warming and Climate Change affect the cropping pattern and systems in the planes. Bankers may have to address to the credit needs according to the change in the cropping pattern and systems.
3. Climate Change is resulting into rise in sea levels and cyclones. This affects adversely the pisciculture. Bankers therefore may take adequate steps to meet the challenges.
4. Bankers may finance eco friendly projects to facilitate conservation of natural resources. Bankers must restrain financing those activities or projects that contribute to ecological degradation.
5. Climate change adversely affects the community residing in eco fragile zones leading to displacement and migration. Bankers are required to formulate Innovative projects for the promotion of alternate livelihood approaches for these communities.
6. Bankers may provide impetus to suitable banking products to facilitate Joint Forestry Management through Self Help Group, Income Generation Activities, Infrastructure development and other economic activities.
7. Formation and capacity building of community based organizations such as Farmers Clubs, SHGs on the effects of Global Warming on various aspects of life to enable them to avoid any activity that may induce ecological imbalance such as deforestation, exploitation of natural resources, inefficient use/wastage of energy. Bankers may also finance projects for Natural Resource Management, Watershed Development, and alternate use of Energy etc.

## Annexure 1

### **Brief Profile of the Speakers**

#### **MR V K Joshi**

Born in Uttaranchal in September 1941, Vijay Kumar Joshi worked as a geologist with the Geological Survey of India for 36 years. During this period he covered the length and breadth of the country searching for ground water, mapping the Himalayas for mineral wealth, studied the environments of the pre-historic eras and finally retired as Director, Northern Region, GSI at Lucknow and settled there. Post retirement in September 2001 Vijay Joshi has taken up free lance journalism and using his experience he normally writes about environment and nature related topics. However, sometimes he does pen down satires too. He writes both in English and Hindi and has published more than 800 articles in all the leading newspapers of India and some leading environmental magazines like *Down To Earth* and *Journal of United Nations Environmental Program*.

'Geo-diversity is the cradle of bio-diversity' and he attempts to convey this motto

#### **Dr Pradeep Srivastava**

- Scientoonist & winner of highly prestigious national and international awards including
- **THE OUTSTANDING YOUNG PERSON OF THE WORLD**" award given by **JUNIOR CHAMBER INTERNATIONAL (USA)** to 10 selected persons of the world, annually.
- Got **SPECIAL HONOUR**. Singapore based magazine "**Young Scientist**" which is read by more than 100,000 children in Japan, Hong Kong, Philippines, Thailand, Singapore and Malaysia and also India has selected Pradeep K. Srivastava as the "**International Brand Ambassador**".(2007)
- **INKLINK**" award to his website [www.scientoon.com](http://www.scientoon.com) by **PLANET CARTOONIST.COM**, the biggest website of cartoons in the world
- **SILVER MEDAL**" for the best lecture on the topic "Development of Drugs and Pharmaceutical Industry in Developing Countries" in the "First Asian Conference on Pharmaceutical Education, Research and Drug Industry" held at **National University of Singapore, SINGAPORE. (1988)**.
- **"THE OUTSTANDING YOUNG PERSON OF INDIA"** award given by Indian Junior Chamber
- **ISWA NATIONAL AWARD 2003**" for Science writing, given by Indian Science Writers' Association, New Delhi.
- **AWARD OF HONOUR**" by Chandigarh City Junior Chamber, Chandigarh (1993).
- **AWARD OF HONOUR**" by Indian Planetary Society, Mumbai (2003)
- **THE OUTSTANDING YOUNG PERSON AWARD**" by Indian Junior Chamber, U.P. (1990).
- **PARYAVARAN MITRA**" award by Minister for Forests, Govt. Of U.P. (1999)
- **ACHIEVERS AWARD 2003**" by Indian Junior Chamber (North Zone)
- **YOUTH HOSTEL RATNA AWARD**", given by Youth Hostels Association of India, Lucknow
- Total Lectures Delivered So Far are-577 in India, Thailand, Singapore, USA & Caribbean Countries

- Dr Srivastava was moved by the latest concern of the United Nations Environment Programme (UNEP) on the world environment day on June 5 last when it raised the slogan "Water: two billion people are dying for it."
- Currently working as senior scientist, CDRI, Lucknow

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#### *Some Glimpses....*



Inaugural Session (from left to right)

Seminar Audience

Shri SK Chatterjee, Dr R Boojh,

Shri L Sonnenfchein & Dr PK Srivastava



From Right to Left: Speakers Shri VK Joshi,  
Dr PK Srivastava, Mr L Sonnenfchein

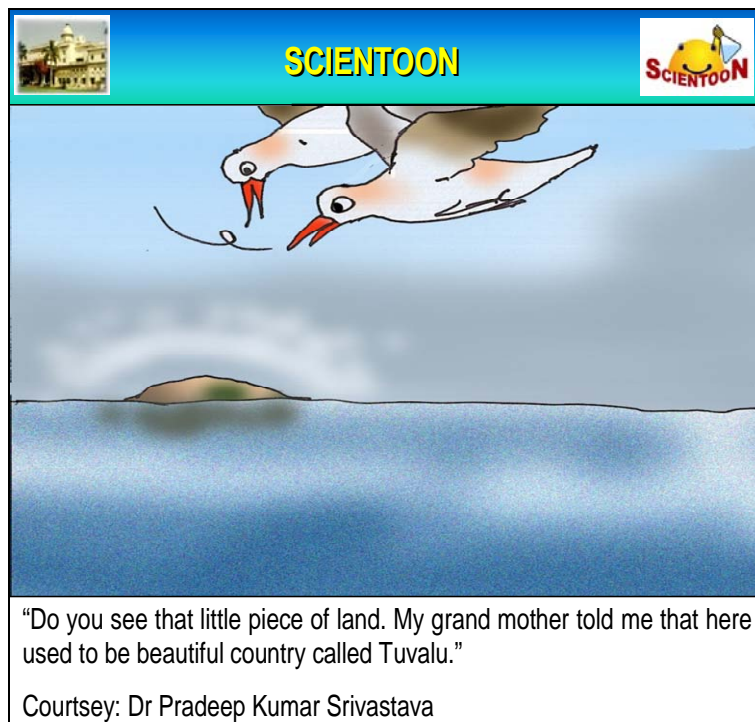
Open Session: Interaction with the participants

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**Seminar Coordinator**  
**Dr Shikha Tripathi, Faculty Member, BIRD**

**Bankers Institute of Rural Development**  
**Lucknow**