

# Climate Science, Communities and Media



*#Write4climate*

## Report of the State Media Workshop on Climate Change

November 28-29, 2017 | Shimla







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Jointly organized by the Ministry of Environment, Forest and Climate Change (MoEF&CC) and the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) to launch a national programme on climate change reporting in media with Centre for Media Studies, Environmental Information System (ENVIS) Center on environment & media as the knowledge partner for the programme.

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## About the organisations:

### Ministry of Environment, Forest and Climate Change (MoEF&CC)



The Ministry of Environment, Forest and Climate Change (MoEF&CC) is the nodal agency in the administrative structure of the Central Government responsible for the planning, promotion, co-ordination and overseeing the implementation of India's environmental, forestry and climate change policies and programmes. The main activities undertaken by the ministry include conservation and survey of the flora of India and fauna of India, forests and other wilderness areas; prevention and control of pollution; afforestation, and land degradation mitigation. The Ministry also serves as the nodal agency in the country for the United Nations Environment Programme (UNEP), South Asia Co-operative Environment Programme (SACEP), International Centre for Integrated Mountain Development (ICIMOD), United Nations Conference on Environment and Development (UNCED) etc.

### Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH



For over 60 years, the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH has been working jointly with partners in India for sustainable economic, ecological, and social development. Currently, GIZ has over 330 employees in India, of whom 85 per cent are national personnel. The focal areas of Indo-German cooperation currently are: Energy; Environment, Preservation, and Sustainable Use of Natural Resources; Sustainable Urban Development

The Federal Ministry for Economic Cooperation and Development (BMZ), the Federal Ministry for Environment, Nature Conservation, Building and Nuclear Safety (BMUB) as well as the Federal Ministry for Economic Affairs and Energy (BMWi) are the main commissioning parties of GIZ in India. Other clients include Indian public sector clients, the European Union and foundations. The Government of India has launched numerous important initiatives to address the country's economic, environmental and social challenges, and GIZ is contributing to some of the most significant ones. For example, it supports key initiatives such as Smart Cities, Clean India and Skill India. GIZ, in close cooperation with Indian partners, devises tailor-made, jointly-developed solutions to meet local needs and achieve sustainable and inclusive development.

### Centre for Media Studies (CMS)



CMS is a dedicated multi-disciplinary research-driven organisation that enables policy makers to take informed decisions on development and social change to improve quality of life. CMS is engaged in Research, Advocacy and Capacity building in Social Development, Environment, Communication and Governance issues at local and national policy levels. CMS has an extensive experience in organizing workshop for media personnel on various environment issues.

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## Executive Summary

Himachal Pradesh is enriched with natural resources, forests and glaciers. In the recent years, temperatures have risen, rainfall and snowfall is decreasing, forests are being chopped down to support human population. The state level media workshop of Himachal Pradesh held on November 28-29, 2017 in Shimla. It was jointly organised by GIZ, Department of Environment, Science and Technology, Government of Himachal Pradesh and Centre for Median Studies (CMS).

During the first day technical sessions, experts discussed on the various climate related issues. Prof. Dr. S.K. Bhardwaj, Head Department of Environmental Studies, YS Parmar University of Horticulture and Forestry Nauni, Solan, HP, spoke on the upward shift in apple line due to changing weather, erratic rainfall and increasing gap between the maximum and minimum temperature. “Some areas in Kinnaur and Lahaul & Spiti in the traditionally apple-growing areas are beginning to switch to other crops,” he said.

In the followed panel discussion on ‘Building bridges among media, scientists, civil society and the government’, senior journalists from the state spoke about the successful past record of local reporters from various districts in battling both the government and private corporations to preserve the environment and natural resources.

On the second day, participants were taken to the nearby Dhamoon gram panchayat for a field visit, where farmers, facing crop failure after the decline of snowfall and rainfall, took the help of the state to switch to exotic vegetables and crops under controlled conditions. By adapting to changed climatic conditions and combining traditional skills with modern technology, the community members demonstrated how the threat of climate change can be tackled successfully for a sustainable livelihood.

## Inaugural Session

The two-day workshop began at Hotel Holiday on the morning of November 28, with the inaugural session. In her welcome Address and introductory remarks, Ms PN Vasanti, Director General, Centre for Media Studies (CMS), gave an overview about the objectives of the workshop series. Himachal Pradesh is one state which is deeply connected to nature; its economy, lifestyle and culture are all intertwined with nature and natural resources, she said.

Ms Vasanti said that Himachal has always been at the forefront of concern for the environment and now the issue of climate change. "The purpose of this workshop is to get people talking about the serious issue of climate change, to learn how local communities are using both traditional and modern knowledge to tackle these issues and to discuss further solutions to the problem through the role of the media," she said.



Speaking about CMS, she said that for more than 25 years, the organisation has been engaged in issues connected with public policies, civil society, research on various public and environmental issues, and has been engaging people everywhere to raise their concern about environment protection. It has also been proactively working to study and raise the role of the media in combating these issues as "media connects everyone".

"This much is clear," she added, "that we cannot rely solely on governments. We are all responsible for leading a change and tackling the problems caused by climate change and environmental degradation. I am positive that the media, by highlighting inspiring and successful stories, and by investigating deeper, is pivotal in bringing about this change."

Mr Kirtiman Awasthi, Senior Policy Advisor, Climate Change, GIZ, New Delhi, gave a brief overview of GIZ and its activities. He said that climate change is a serious global concern, and the conference of parties (CoP) 23 which took place recently explored various ways on how climate based actions should be shaped.



Ms Archana Sharma, Director, Department of Environment, Science and Technology, Government of Himachal Pradesh, said “climate change is a global problem but we must find out how it affects our daily lives. It is disappointing to note that in the local media, there is inadequate coverage of environment and related issues. For our state, the media must focus on local challenges posed by climate change and how to resolve them.” It is apparent that human activities are causing climate change. This phenomenon is not always unhealthy, she added, giving the example of higher reaches of Kinnaur and Lahaul & Spiti where, due to the shifting of apple line, people have started growing apples in areas which were earlier barren.

She said that our (Himachal's) dependence on natural resources is high as 66 percent of the state's area is classified as forests 15 percent of which is protected area. Tourism, horticulture, agriculture and grazing land used by shepherd tribes are all dependent on nature, she said.

Highlighting the role of media, she recalled an incident in 2002-03 when a series of articles by The Indian Express forced the government to ban advertisement by MNCs on natural rocks along the national highway in Kullu. “We must also not let our memories fade away and always keep these threats alive by reporting on past catastrophes and reviewing the situation periodically,” she said, referring to the Parchu lake burst more than ten years ago.

She said that when it comes to environment and climate change, the media must change its stance from complicated and “gloom and doom type” of reporting and somehow connect the coverage to the everyday lives of people. She gave the examples of introduction of fans in Shimla in recent times, the shift towards cash crops like pomegranate -- changes which are triggered by climate change.

Ms Sharma also lamented that traditional solutions and practices are meeting a slow death. “Lal Chawal (red rice) is a traditional crop which requires less water but farmers in many areas have stopped growing it, although gram panchayat Dhamoon has now shown the way. In areas with water scarcity, handpumps have fallen into disrepair. The commercialisation of medicinal plants, using the policy of extracting them ‘somehow, anyhow and before others’ has also affected their growth,” she said. Sharma ended by saying that the media must lead the way in reviving the traditional skills and success stories in order to help people to adapt to climate change.

In his presentation titled, “Beyond Melting Glaciers and Receding Apple Lines”, Mr Dinesh C Sharma, Managing Editor, India Science Wire, described climate change as a “process and not an event”. He said that it is a multifaceted and complex subject to cover, as it “doesn't respect boundaries” and overlaps various beats such as science, energy, water, agriculture, development, health, migration, economics, politics etc. This is a global problem faced by journalists as they are traditionally confined to their respective beats and fail to see the larger picture.

“It's a story beyond environment as it affects everyone. For instance, it's greatly affected the production of apples and apple lines are receding due to erratic snowfall and changing temperatures, he said. Mr Sharma presented a case study of a report on apple production being affected, and pointed out that the reporter is confused whether during a particular season it's seasonal variability or climate change. This process has also affected all cropping patterns and mosquitoes are adapting themselves to higher and higher altitudes. He added that even one degree change in temperature matters a lot in agriculture and horticulture and all other traditional livelihood practices. “The change in climate has forced the shifting of muga silk production from various areas in Assam to Mizoram in recent years,” he added.

Sharma said impacts of extreme weather events like cloudbursts and hailstorms were affecting farmers. Fodder scarcity and drying up of streams are especially affecting women in rural communities, as they are the backbone of traditional livelihood practices.

He gave example of another news report which pointed out shifting patterns of erratic snowfall and showed how most snowfall now takes place in the second half of the season instead of the peak time due to which there is much more soil erosion and a significant drop in yield of crops. "2015-16 was a particularly bad year for Spiti where even the highest villages have been affected by irregular snowfall," he said.

For a journalist, Sharma emphasised the importance of building a "composite picture" by getting relevant information both from the community and the experts concerned. He also advised experts to avoid jargon while communicating with the media as the information has ultimately to reach the common man. He further recommended media-persons to make use of digital technology - such as putting half a minute of clip interviewing a farmer - to ensure building a composite picture of the story.

## **How Himachal Pradesh is responding to Climate Change:**

Following a brief tea break was the first technical session on different aspects of climate change and its impacts.

Dr. Suresh C. Attri, Principal Scientific Officer, Department of Environment, Science and Technology, made a detailed presentation on State Strategy and Action Plan on Climate Change and Key Initiatives by the state government. In 2012, the Himachal Pradesh government came up with a 200-page document outlining the state climate action plan which outlines the state government's strategy to help rural communities adapt to climate change. The document charts the issues of concern directly associated with climate change. "90 percent of rural economy of our state is directly dependent on nature and agriculture. Any change in forests, fuelwood, glaciers renders this population vulnerable. Increasing energy demand and stress on natural resources is another issue. In order to sustain a climate resilient development, the action plan envisions an inclusive economic growth policy, sustainable energy development, sustainable land use pattern, poverty eradication and creation of livelihood opportunities," stated Dr Attri.

Discussing sectoral review challenges of the document, he said that there has been a more than three-fold increase in the apple production area and the sub-temperate economy is entirely dependent on apples. He added that 43 percent of villages are without road connectivity and there has been a 70 percent increase in fertiliser consumption since 1994. The objectives of the action plan include identification and synthesis of climate change, development of criteria for prioritising identified adaptation strategies and building cross-cutting supportive strategies. Adaptation, mitigation and capacity building are the three major thrust areas, he said. He said that the low-lying and mid-mountain level areas are more vulnerable to climate change as compared to the high mountain areas.

Recounting the initiatives taken by the state under the action plan, Dr Attri said multi-disciplinary teams from various government departments, together with local communities, have drawn up micro watershed plans for one micro-watershed in each of the state's 77 development blocks. "HP's green growth and sustainable development programme is also being assisted by the World Bank. There has been a 15 percent improvement in water pondage, and under another programme, we have helped more than 30 thousand farmers in capacity building and adapting to changed climatic conditions. For example in Dhamoon gram panchayat near Shimla, we have helped the farmers with a high-tech greenhouse and crop diversification. Among other things,





we are also regularly monitoring the snow cover and melting of glaciers in the higher reaches of the state and coming up with ways to build climate resilient livelihood practices,” he said.

Dr Manmohan Singh, Director, India Meteorological Department, HP, said the earth has seen a rise of 0.74 degree celsius in its average global temperature in the past 100 years. He said that polar ice caps are melting at an alarming rate and the problem is more severe at north pole as compared to the south pole. “The enhanced emission of greenhouse gases, particularly carbon dioxide, due to human activities has resulted in the excess concentration of these gases in the atmosphere. The earth is now witnessing more intense and longer drought periods in tropical and subtropical areas; and mountain glaciers and snow cover in both the hemispheres have declined,” he said.

Dr Singh said that the annual average temperature in India rose by 0.50 degree celsius and the average maximum temperature rose by 0.94 degree celsius although there has not been much change in the mean minimum temperature (0.06 degree celsius). Talking about India, Dr Singh mentioned that extreme weather events have seen a rise with an increasing trend of storms over the Bay of Bengal area. Extreme rainfall events, too, have shown a significant increase along the west coast while in the hill states of north-western India, there has been a decreasing trend of extreme rainfall events. The year 2010 was the warmest year on record since 1901, he said.

In Himachal Pradesh, the monsoon season is expanding but precipitation is decreasing, he revealed, adding that the snowfall season is shrinking with decreasing seasonal snowfall and snowfall days. “The decrease of snowfall in Shimla is so apparent that the old people here often wonder whether the coming generations will get to see snowfall at all,” he remarked.

In his talk on “Glacier Melting due to Climate Change”, Dr S S Randhawa, Senior Scientific Officer, Himachal Pradesh Council for Science, Technology and Environment (HIMCOSTE), pointed out that there is an upward shift of treeline in Himachal and pine is intruding into spaces originally occupied by deodar and oak, which has an unhealthy effect on the ecosystem. Glacier melting is a direct indicator of climate change and in Himachal alone, there has been close to seven percent loss in glacier area since 1962, he said, adding that in Spiti basin, about 10 percent deglaciation has been observed between 2001 and 2007. All prominent glaciers are melting at an alarming rate, including Bara Sigri, Himachal’s largest glacier, which melted at the rate of nearly 30 metres per year between 1906 and 1957.

He said that the formation of moraine dammed lakes is another phenomenon associated with the global warming trend observed in the Himalayas and the number of such lakes has shot up in recent decades. Small glaciers are increasing due to fragmentation of larger ones, and these phenomena are inducing disasters, such as the Kedarnath tragedy and the Parechhu

Lake burst, he said. Dr Randhawa said that the state government has taken several initiatives to combat these processes, including formation of institutions such as the State Council for Climate Change, State Centre on Climate Change and State Action Plan for Climate Change. These institutions, along with other departments, have been working relentlessly to preserve the environment, carry out further research to develop climate resilient models and to build capacity of communities to adapt to these changes, he added.

The technical session continued after the lunch. Prof Dr SK Bhardwaj, Head, Department of Environmental Studies, YS Parmar University of Horticulture and Forestry, Nauni, Solan, spoke about impact of climate change on apple production. The quality and yield of apples in Himachal has been severely affected due to climatic variations, as winters have become warmer and snow and rain events are becoming more erratic. This was highlighted by Dr Bhardwaj who said that the fragile ecosystem of the hill state has been disturbed due to increasing gap between the minimum and maximum temperature, more frost events, and other climate change disturbances.

He said that apple crop accounts for about 2.8 percent of the total fruit production of the country and Himachal Pradesh is the second largest producer of apples in India, contributing more than 21 percent of the total apple produced in the country in 2012-13. "The area under apple cultivation has increased substantially from a mere 400 hectares in 1950s to more than 1.11 lakh hectares in 2016-17. The consequences of climate change on apple production include insufficient chilling hours, upward shift of apple growing regions, and erratic flowering patterns. Abnormal climatic factors during winters, flowering and fruit development stage have significantly lowered the apple productivity of the state," he revealed.

Dr Bhardwaj said that due to shifting of apple line, some areas in the cold desert in Kinnaur and Lahaul & Spiti are now witnessing production of apples, while people in Kullu and other districts traditionally growing apples are now shifting to other crops such as kiwi, pomegranate, cauliflower, cabbage etc.

He concluded by saying that there is an urgent need to focus attention on studying the impacts of climate change on growth development, yield and quality of horticultural crops and the focus should also be on development of adaptation technologies and quantifying the mitigation potential of horticultural crops and their dissemination among the stakeholders.

Mr Barendra Sahoo, Associated Vice President, CTRAN, Odisha, talked about effects of climate change on rural communities in the state. Reiterating that 70 percent of Himachal's population is directly dependent on agriculture and horticulture, Mr Sahoo said that involving the younger generation in these traditional occupations is becoming a challenge as youngsters are keener on pursuing other vocations. He said that climate change and weather variability is affecting the livelihood practices especially in Hamirpur, Bilaspur, Kangra, Una and Sirmour. Although Himachal has a vast reservoir of natural resources, main crops like wheat and rice are rain dependent and therefore, crop diversification is required to tackle the challenges posed by erratic climatic conditions, said Sahoo.

He further said that increase in temperature has not just resulted in more drought events but also led to increased instances of diseases, especially in the low lying areas -- for instance, the onslaught of mosquitoes in recent years. Sahoo added that the dates of onset and withdrawal of monsoon are changing and the use of fertilisers is ever increasing. Therefore, solutions like shifting from less profitable to more adaptive systems will work for communities in the long run, along with capacity building and better awareness. He also said that under the 73rd and 74th amendments to the Constitution, local bodies and gram panchayats have been given more powers which can be used constructively.





## Building Bridges among Media, Scientists, Civil Society and Government

The session was moderated by Mr Dinesh C Sharma. Participants in this session were Dr S C Attri, Mr P C Lohumi (Bureau Chief, PTI), Archana Phull (Bureau Chief, The Statesman), Dr Ajay Srivastava (Head, Mass Communication/Journalism, HPU), besides Ms Archana Sharma.

Mr Lohumi started the discussion by pointing out that most journalists do not have a scientific background and find it difficult to “comprehend voluminous research papers”. “If we ourselves are better informed, we can relay the information in a simpler way. Most people, including journalists, were not even aware of the state government’s document on climate change action plan,” he said.

Lohumi further said that the media is responsible for informing people about the factors and impact of climate change and give them ways of prevention and mitigation of these problems. “There is no uniform pattern in stories of climate change as even in bad seasons, there are areas with bumper crops. Regular workshops such as these must be held for better understanding of these topics,” he added.

Ms Phull said that the media in Himachal has always played a proactive role in the field of environment. “The local media especially has been vocal in raising concerns about ecological disturbances. In Kinnaur, when there was a large scale impact due to a number of hydroelectric projects lined up ten years ago, the media vehemently opposed these and forced the government to address these issues. In fact, it’s not always easy to convince the government. When construction companies started dumping debris in Satluj river, the media opposed it but the government remained in denial mode,” said Phull.

She pointed out that media workshops such as this one have been rare. “Sometimes even journalists are confused how to report an issue. For instance, is monkey menace in Shimla a fallout of ecological imbalance or not? Reporters are confused whether to support the culling of monkeys or not,” she said.

Dr Srivastava also pointed out that the capacity building and scientific knowledge building of reporters is important. “I myself have never attended an environment workshop before. This is an important step towards combating the problem of climate change,” he said. He also advised the government departments to have a better Public Relations (PR) mechanism for better dissemination of information to reporters. “How many reporters even knew about this action plan by the government?” he asked, and none answered in the affirmative.



Mr Sharma suggested that such workshops could be held individually in districts too.

A lively interactive session followed. Mr Somi Bhunta, a journalist from Chamba, took the opportunity to highlight government's alleged neglect of the far-flung Chamba district. "Within the last 20 years, the traditional water sources and ponds in our villages have dried up or vanished. The Ravi river is no more the mighty river it used to be as more than 150 hydroelectric projects have come up in Chamba. Yet development in the area continues to be a neglected sector. Even in today's action plan discussion by the department of environment, no initiative in Chamba was mentioned," he lamented.

Another reporter from Mandi suggested that better awareness among the masses is critical to solving the climate change menace. "More street plays, documentaries etc. should come out," he opined. To this, Mr Sharma from India Science Wire replied that the media can only highlight or criticise government policy or the lack of it. Mr Shishu Sharm from Kullu complained that most politicians in the state own stone crushers and are themselves involved in the land and forest mafia.

Ms Archana Sharma said that the relationship between the government and the media in the state has traditionally been uneasy. "In 1990, during my first posting, I was specifically directed by my superior to ensure that nothing is reported in the newspapers regarding our department. However, times have changed. In those days, there were a lot of 'blackmailer-type' of reporters, too. These days, however, it's heartening to see a lot of good journalists working for the development of the state. Regarding climate change, the reporters are divided into two categories -- alarmists and skeptics. We must follow the middle path," she said.

She gave the example of P Sainath, the well-known development and rural affairs journalist, to suggest that both sides of the story should always be presented in a news report. She also recommended using positive and success stories from the community to raise awareness, for instance, the recent story about a 10th class boy from Sirmaur who got an award from her department for planting trees in his village. "These days, politicians are becoming keener to represent themselves as green heroes. The media must actively exploit their eagerness to force them into actually becoming 'green' and working for the environment," she suggested.





## Field Visit: Field Visit to Dhamoon gram panchayat in Mashobra Tehsil of Shimla District

On the second day of the workshop, the participants were taken to Dhamoon village near Shimla to witness first-hand how a community had not just tackled climate change head-on but used traditional skills combined with modern technology to reap huge profits from crop diversification and switching to alternate crops in line with changed climatic patterns in the region.

Ram Gopal Thakur, President of Mahakali Flowers and Vegetable Growers Marketing Co-operative Society Ltd, Jubbarhatti, told the delegation that a few decades ago, the villages in the area received at least one foot of snowfall every year and grew traditional crops like maize and wheat. However, snowfall eventually declined due to climate change and the last snowfall was witnessed in 1991.

“Weather variations, lack of snowfall and erratic rainfall led to massive crop failure in the area after that. In 2008, we switched to floriculture and growing exotic vegetables under control conditions with the help of agriculture department and the department of environment, science and technology. It has been a different story ever since,” said Thakur.

He said that organic farming and controlled cultivation of vegetables like seedless cucumber, red and yellow capsicum, iceberg, celery, soya, cauliflower, cabbage etc. led to bumper crops. Carnation flowers are also being cultivated, he said. “Last year, the department gave us a subsidy of around Rs 50 lakh to set up this hi-tech greenhouse for vegetable nursery production. With precision irrigation and controlled conditions inside the greenhouse, there is no danger from wild animals and the crops are disease free. The annual turnover of the society is now two crore rupees,” he explained. Thakur said that they sell the vegetables either locally or mostly in apni mandis in Chandigarh.

Thakur, along with Dr Attri, also took some participants inside the greenhouses to explain how seedlings are cultivated. Attri said that women form the backbone of agriculture in the area as men are sometimes away for other occupations or jobs and it's the women who are responsible



for the farms. Thakur said that around 50 bighas of land is under protected cultivation now and farmers in the area are doing well financially and have successfully adapted to climate change. He said that other villages in the cooperative include Baghi, Majdhari, Rampur, Keonthal and Chanog.

The delegation was then taken to Mr Thakur's house where certificates to the participants and community members were distributed. Then the group visited the nearby Shilli village where women farmers have switched to organic farming of tomatoes, cauliflower, cabbage, haldi etc. successfully.

Ms Kamlesh Thakur, a farmer, explained how she has revived the cultivation of red rice in the area. "The crop requires little water and is very nutritious. I got its seeds from Karsog and planted them this season. The revival of the traditional crop has begun. We have also grown white butter kidney beans, tangnu and koda which had become uncommon in the area," she said.

Ms Guldavri Thakur, another resident, said that a group of more than 30 women were taken to Chandigarh and Dehradun for training in capacity building and climate resilient agriculture. "We have now diversified the crops and know how to protect them from diseases and wild animals. We are grateful to the government and hope that this revolution spreads throughout the state," she said.

The visit marked the end of the second day of the workshop.

After the interaction and field visit, it was time for lunch with the representatives of department and media persons. Before the lunch started we distributed the certificates to all the participants and thanks to all of them for their great participation, enthusiasm, time and their consideration to end this Media Workshop successfully. After the lunch, the bus started moving towards the city.





## Feedback by Participants:

Media participants from different districts had shown a significant level of enthusiasm throughout the two-day workshop at Jalandhar, Punjab. As per the individual feedbacks, structure of the workshop was able to impress the participants as it helped them get a holistic picture of the impact of climate change and the various initiatives being taken in the region. Sessions were lined up in a way that it was interconnecting and a proper flow was maintained.

The field visit on the second day turns out to be the most important and much liked session for some participants. It helped them understand that how valuable resources, like water, is being efficiently used with the support of the government and they are improvising methods of agriculture to save water and other resources.

Overall the participants found the workshop content to be enriching. There was a general suggestion made by the media persons that such media workshops on climate change and environment should happen more often to ensure effective and efficient reporting in the region.

The use of layman language while reporting or discussing the impact of climate change for better mass understanding is important, which was also appreciated by the participants during the panel discussion.





# Annexure - 1: Agenda

## State Media Workshop on Climate Change

Date: November 28-29, 2017

Venue: Hotel Holiday Home, Shimla

### Agenda for the Workshop

#### Day 1: November 28, 2017

##### 10:00 Registration

##### 10:30 Inaugural Session

Welcome Address & Introductory Remark: Ms. PN Vasanti, Director General, Centre for Media Studies (CMS)

Overview of GIZ: Mr. Kirtiman Awasthi, Senior Policy Advisor, Climate Change, GIZ, New Delhi

Media and climate change: Mr. Dinesh C Sharma, Managing Editor, India Science Wire

**Screening of short film on Climate Change- Global Warning - Kashmir Chapter by Jalal Ud Din Baba**

Special Address: Ms. Archana Sharma, Director, Department of Environment, Science & Technology, Govt. of HP

Vote of Thanks: Ms. PN Vasanti, Director General, Centre for Media Studies (CMS)

##### 11:30 Tea Break

##### 12:00 Session 2: How is Himachal Pradesh responding to Climate Change (Moderated by:

**Mr. Kirtiman Awasthi, Senior Policy Advisor, GIZ)**

State Action Plan on Climate Change and key Government initiatives: Dr. Suresh C. Attri, Principal Scientific Officer (Env.), Department of Environment, Science & Technology, Govt. of HP

Trends of changing climate in Himachal Pradesh: Dr. Manmohan Singh, Director, IMD, HP

Impact of Climate Change on Apple Production in India: Prof. Dr. S.K. Bhardwaj, Head Department of Environmental Studies, YS Parmar University of Horticulture and Forestry Nauni, Solan, HP

Effects of climate change in Rural Himachal and how to manage them: Mr. Barendra Krushna Sahoo, Associate Vice President, CTRAN, Odisha

Glacier melting due to climate change: Dr. S.S. Randhawa, Sr. Scientific Officer, HIMCOST, HP

##### Question and Answer

##### 14:00 Lunch

##### 14:30 Session 3: Engaging media on climate change (Moderated by: Mr. Dinesh C. Sharma)

Ms. Archana Sharma, Director (DEST)

Mr. P.C. Lohumi, Bureau Chief, PTI

Ms. Archana Phull, Bureau Chief, The Statesman

Mr. Ajay Srivastava, Head, Mass Communication/ Journalism, Himachal University, Shimla

Dr. Suresh C. Attri, DEST

##### Discussion on media stories on climate change

##### 15:30 Workshop closing followed by high tea

#### Day 2: November 29, 2017- Field Visit

Assembly Point: Hotel Holiday Home, Shimla

**9:00** Gram Panchayat Dhamoon, Shimla (Challenges faced by farmers due to climatic variations & adaptive measures to secure their livelihood currently and in their future are subjected to face less climate induced vulnerability)

**13:00** Lunch

**13:30** Distribution of certificates to the participants

**14:00** Vote of Thanks

## Annexure - 2: List of Participants

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## Himachal needs to be sensitive to climate change, say experts

STATESMAN NEWS SERVICE  
SHIMLA, 25 NOVEMBER

The impact of climate change in Himachal and the critical need for understanding vulnerability, so as to initiate measures to combat climate change and help mitigate its impact, was underlined by the experts at a two-day state level Media Workshop on climate change that concluded here on Wednesday.

The media workshop was organized by Centre for Media Studies (CMS), Delhi in collaboration with German

Policy Advisor Kirti-mann Awasthi maintained that the need for organizing such event is to encourage capacity building of media persons and for their better understanding so that they are able to cover climate change with the much needed sensitivity.

The workshop emphasised the need for media coverage so as to help in percolating the right message at the ground level, amongst the masses, so that besides, the efforts of the government and the policy makers, the local



Editor Dinesh C Sharma highlighted the need for enriching the change science collect that the forum The forum sent a Plan to Govern

ment, Science and Technol-

Metrolological Department, Himachal Pradesh Director

## क्लाइमेट चेंज एक्शन प्लान को मिले सिर्फ 100 करोड़

### ■ शिमला में आयोजित दो दिवसीय मौसम परिवर्तन कार्यशाला

✓ क्लाइमेट चेंज से तैयारी में बढ़ती फल पाए कुछ कार्य  
✓ मौसम परिवर्तन पर विशेषज्ञों ने



### एनजीटी को भेजी थी रिपोर्ट

कार्यशाला में बताया गया कि एनजीटी से क्लाइमेट में बदलाव हिमालय को सुचारु रूप से चलाने के लिए पर्यावरण विभाग पर औद्योगिकी विभाग ने भी कई रिपोर्ट भेजी है।

### कम हो रही बारिश

मौसम विभाग के निदेशक डॉ. मनमोहन सिंह ने कहा कि हिमालय के कई हिस्सों में बारिश कम हो रही है। विशेषकर हिमालय के उत्तरी हिस्से में बारिश कम हो रही है।

### बढ़ ग्लेशियर सिकुड़ रहे

ग्लेशियर डॉ. एक्सपर्ट्स ने बताया कि हिमालय के कई हिस्सों में ग्लेशियर सिकुड़ रहे हैं। विशेषकर हिमालय के उत्तरी हिस्से में ग्लेशियर सिकुड़ रहे हैं।

## नकदी फसलों के साथ पारंपरिक खेती करें किसान

राज्य ब्यूरो, शिमला : सेंटर फॉर मीडिया स्टडी (सीएमएस) व पर्यावरण द्वारा आयोजित कार्यशाला के दूसरे दिन शिमला के साथ लगते गांव परिवर्तन से फसलों पर पड़ रहा असर बताया गया।

सीएमएस के महानिदेशक पीएन वसंती, पर्यावरण एवं विज्ञान प्रोफेसर शर्मा व प्रिंसिपल साइंटिफिक अधिकारी सुरेश अत्री ने किसानों को फसलों की खेती करने के प्रति जागरूक किया। कार्यशाला में हिंस प्रमाणपत्र भी दिए गए। सुरेश अत्री ने बताया कि धूमन गांव में किसान प्रांतीय फसलों की खेती कर रहे हैं।



## हर साल कम हो रही सेब को मिलने वाली ठंड

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## जलवायु परिवर्तन के दुष्प्रभाव से बचने को धमून की महिलाएं तैयार

जैविक विधि से उगाने लगी पारंपरिक फसलें, पौधोद्धारकों से संरक्षित खेती करके आत्मनिर्भर बन रही महिलाएं; जलवायु परिवर्तन पर 2 दिवसीय मीडिया वर्कशॉप संपन्न, बुधवार को प्रतिभागियों ने की धमन प्रभाव की विडिट

के लिए प्रोत्साहित कर रही हैं। इसे लेकर पर्यावरण परियोजना महिलाओं को तकनीकी व वित्तीय मदद कर रही हैं। क्षेत्र की महिलाएं अब कई औषधीय पौधों से खेती कर रही हैं। विशेषकर हिमालय के उत्तरी हिस्से में महिलाएं खेती कर रही हैं।

## जलवायु परिवर्तन से हिमाचल के 6 जिलों को खतरा

साल-2020 तक 14 फीसदी बढ़ेगी पानी की जरूरत, देश व प्रदेश में कम हो रही बारिश

■ कुश्निक बाजार क्लाइमेट पर एडवर्टाइजिंग

जलवायु परिवर्तन के कारण पानी की जरूरत बढ़ेगी। विशेषकर हिमालय के उत्तरी हिस्से में पानी की जरूरत बढ़ेगी।

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## जलवायु परिवर्तन से हिमालय को हो रहा नुकसान

► शिमला में जलवायु परिवर्तन पर स्टेट मीडिया वर्कशॉप का आयोजन

## छह जिले जलवायु परिवर्तन को लेकर संवेदनशील

2020 तक बढ़ेगी पानी की मांग

जलवायु परिवर्तन की वजह से छह जिलों में पानी की मांग बढ़ेगी। विशेषकर हिमालय के उत्तरी हिस्से में पानी की मांग बढ़ेगी।

अधिकतम व न्यूनतम तापमान में वृद्धि दर्ज

जलवायु परिवर्तन के कारण तापमान में वृद्धि दर्ज होगी। विशेषकर हिमालय के उत्तरी हिस्से में तापमान में वृद्धि दर्ज होगी।

## हिमाचल में हर साल 6 घंटे घट रहे सेब चिलिंग ऑवर्स

### जलवायु परिवर्तन से धीरे-धीरे ऊंचाई वाले इलाकों की ओर शि

अमर उजाला ब्यूरो

शिमला

देशभर के कुल सेब उत्पादन की 21.53 फीसदी पैदावार करने वाले हिमाचल में सेब बागवानी संकट के दौर से गुजर रही है। जलवायु परिवर्तन की वजह से हर साल सेब के चिलिंग ऑवर्स में छह घंटे की कमी हो रही है। सेब के उत्पादन पर ये असर पड़ा तो है आकार भी छोटा हो गया है। बीस सालों में सेब का उत्पादन 5,40 टन प्रति हेक्टेयर पर कम हो गया है।

सेब चिलींग के संकट से खेतीकर अब शिमला, कुल्लू, चंबा, किन्नौर व स्पीति के इलाकों वाले इलाकों तक सीमित हो गया है। मौनी विपरीतविधायन सोलन के पर्यावरण



### जलवायु परिवर्तन पर रा

कार्यशाला में विशेषज्ञों

जलवायु परिवर्तन के कारण सेब की पैदावार में गिरावट आ रही है। विशेषकर हिमालय के उत्तरी हिस्से में सेब की पैदावार में गिरावट आ रही है।

## हर साल कम हो रही सेब को मिलने वाली ठंड

चिंतनीय : हिमाचल में सेब की पैदावार पर दिखने लगा जलवायु परिवर्तन का असर



Himachal farmers start growing pomegranate and cabbage, as apple lines recede due to climate change

The apple growing belt is shifting to higher altitudes and intercropping in apple orchards with vegetable crops as it experiences warmer winters and erratic snowfall



## Climate change harming farming, livelihood: Experts

Tribune News Service Shimla, November 28

The need to bridge the communication gap between climate experts and the stressed at the state-level media workshop on climate change which also highlights issues like rising temperature, melting glaciers, erratic and receding rain and affecting agriculture, horticulture and livelihood in Himachal Pradesh.

The adaption measures under the State Climate Action Plan and initiatives in these issues were also discussed during the workshop. A state action plan b



