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Webinar Report

Himalaya Diwas 2021
(Himalaya Day)

Organised by:

JNU ENVIS Resource Partner on Geodiversity & Impact on Environment

School of Environmental Sciences, Jawaharlal Nehru University

New Delhi – 110 067

September 09, 2021

Himalaya Diwas 2021

The School of Environmental Sciences celebrated Himalaya Diwas on September 09, 2021. On this occasion, a webinar was organized in collaboration with the JNU ENVIS Resource Partner, SUNRAISE Project, and the Young Holistic (YoHo) group, School of Environmental Sciences, Jawaharlal Nehru University, New Delhi.

The panel included very eminent researchers such as **Prof. K.S. Rao** (Department of Botany University of Delhi), **Dr. Kala Chand Sain** (Director, Wadia Institute of Himalayan Geology, Dehradun), **Prof. U.C. Kulshrestha** (Dean SES & JNU ENVIS Coordinator), **Prof. A.P. Dimri,** (Professor, SES, JNU) and **Prof. P.K. Joshi,** (Professor, SES, JNU) The Young Holistic leader **Ms. Komal choudhary** represented the student YoHo group, while **Ms. Swati Singh,** Programme Officer, ENVIS, SES executed the programme.

Prof. Umesh Kulshrestha, moderated the panel discussion. It was attended by more than 100 participants, through Google-Meet and Facebook Live platforms. The participants included university students, researchers, faculty members and other stakeholders both nationally and internationally.

Webinar Schedule: Himalaya Diwas 2021

Date : September 09, 2021 | Time: 03:00 – 04:30 pm IST

Speakers	Time
Welcome Address by **Prof. U.C. Kulshrestha,** ENVIS Coordinator, SES (Dean), JNU, India	03:00 - 03:10 PM
Prof. K.S. Rao, Department of Botany, University of Delhi	03:10 - 03:25 PM
Dr. Kala Chand Sain, Director, Wadia Institute of Himalayan Geology, Dehradun	03:25 - 03:40 PM
Prof. A.P. Dimri, SES, JNU	03:40 - 03:55 PM
Prof. P.K. Joshi, SES, JNU	03:55 - 04:10 PM
Ms. Komal Choudhary, YoHo Lead & Student, SES, JNU	04:10 - 04:20 PM
Vote of thanks by **Ms. Swati Singh,** Programme Officer, JNU ENVIS	04:20 - 04:30 PM

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School of Environmental Sciences, Jawaharlal Nehru University, New Delhi
Ministry of Environment, Forest & Climate Change, Govt. of India, New Delhi

Fig.1: Poster and Schedule of the Webinar widely circulated on the social media platform.

Prof. U.C. Kulshrestha, **Dean SES & JNU ENVIS Coordinator –** Prof. Umesh started the webinar and explained how trans-boundary and long-range transport of acidifying pollutants impact the Western Himalaya. He specified that after various research on the air mass samples from these sites were found to be acidic and originated from the Middle East and Europe mainly.

Fig.2: Prof. Umesh Kulshrestha, Dean & ENVIS Coordinator, SES, JNU

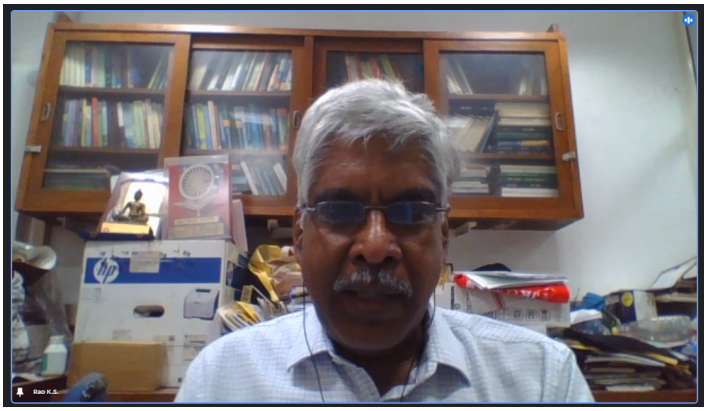
Prof. K.S. Rao, Department of Botany University of Delhi – Prof. Rao shared his vast knowledge of Himalayan ecosystem briefly. Firstly, he introduced the audience what Himalaya actually is and its significance, the different initiatives taken by Himalayan University Consortium(HUC), Kathmandu, Nepal; Indian Himalayan Central University Consortium (IHCUC), Srinagar, Uttarakhand; which is a lead agency implementing the programme where all the universities receiving funds from the Central University are participating and implementing the research activities.

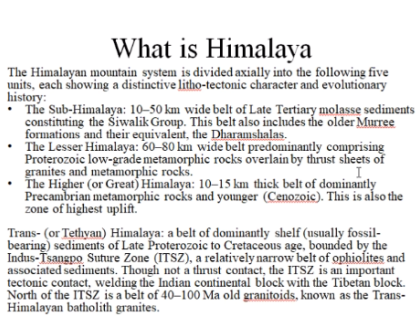
He summarized how the development plans are affecting the Himalaya and even in covid pandemic situation there is loss in biodiversity. He focused on the importance of long term studies for ecological and economic changes in time, and interactions in space for a realistic understanding of the hill ecosystems.

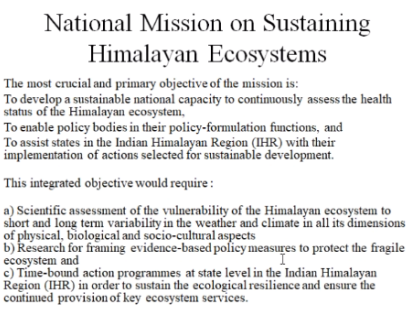
Prof. Rao then spoke about the agro-ecology in the Himalayan states and the study on five thematic areas by the IHCUC. He introduced the audience with the major issues and changing scenario of Himalayan

ecosystem. He said due to research biasedness, less-known and restricted knowledge of cultivation and uses; these traditional mountain crops are neglected and therefore the loss of biodiversity.

Prof. Rao ended his talk by suggesting some approaches for agro-biodiversity conservation and management in the Central Himalaya.







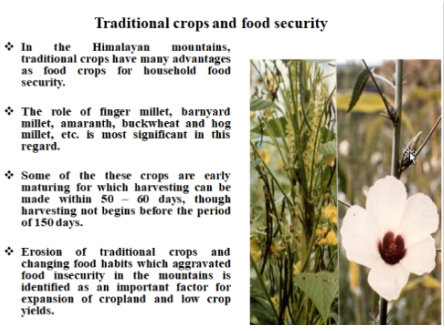


Fig.3: Prof. K.S. Rao Department of Botany University of Delhi

Dr. Kala Chand Sain, Director, Wadia Institute of Himalayan Geology, Dehradun – Dr Kala Chand sain, presented the geological, seismological and physiological views on Himalaya. He pointed out that the resources should be used in a scientific manner and continuous monitoring sensors should be used so that human induced extreme events can be evolved.

He talked about the formation of Himalaya and the subsurface shift phenomena still going on. He talked about the fragile ecosystem of Himalaya which appears a lot of tectonic and neotectonic activities which is responsible for Himalayan erosion, excursions and health has changed the landscape of the Himalaya which in turn controls the damage occurred during earthquake, landslide, cloudburst, etc.

Highlighting the cascade effect observed in Kedarnath because of the cloudburst glacial but there was some sort of ice melts and snow melts rainfall debris is a floor which impacted 5000 villages and approximately 6,000 people.

He talked about Temperature variation as we move upward. There is a habitation dependent temperature variation in the Himalaya for less than 500m. We say 2 degree Celsius temperature has gone decay but more than 500m above 0.6 degree Celsius temperature is observed widely. This is due to isothermal change and anthropogenic activities have caused climate change. Man-made activities like mining of resources, road construction, hydroelectric power projects, Urban Development, etc. are the anthropogenic factors which are responsible for the hazards and climate change. He emphasised on two aspects of Himalaya (a) Natural Hazards and (b) the water that is in the form of Glacier is present at the higher altitude which is a lifeline to billions of people. Hence, these water availability supports irrigation drinking hydropower projects,etc., a lot of opportunities and facilities. The sediment that water carries is beneficial for Agro-economy. He has focused on the most important resource of Himalaya that is geo- resource and Himalayan role in monsoon. The main focus is on evolving a mechanism between socio-economic development in the Himalaya very sustainably. He mentioned that the policymakers should sensitise what should be our role. They cannot be stopped but can be reduced, he said scientific information for policy making is required. A complete network has to be established for the scientific information, through which data is generated to local authorities and hence as an early warning system which can help to reduce the avalanche.

Black carbon- “light absorbing component of the matter present in the atmosphere”. Whose sources are combustion of fossil fuel, biofuel, biomass,etc., responsible for absorbing radiation and warming the atmosphere. Health impacts are Asthma, cancer, lung congestion etc. hence sources have to be identified and mitigated as it may lead to climate change, health hazard, etc.

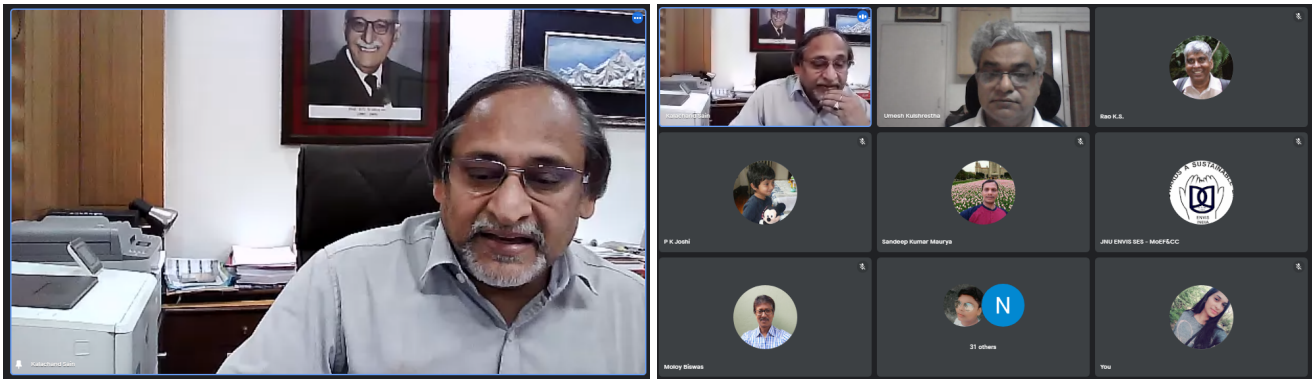


Fig.4: Dr. Kala chand Sain, Director, Wadia Institute of Himalayan Geology, Dehradun

Prof. A.P. Dimri, SES, JNU – Prof. A.P. Dimri stated Himalaya as beautiful, protruding out of earth upto 6000 to 8000m. He talked about a book written by K S Valdiya on geography, people and geodynamics of India in puranas and epics: a geologist interpretation because Himalaya as a beautiful natural habitat which lies free in the atmosphere which is 55 million years back Himalaya came and was a flat land when two plates - Eurasian and Indian tectonic plates collided and Himalayan plate went beneath and hence Himalaya came protruding out of side and that is what which brings monsoon.

He raised the question that he seeks to answer for this “that right from the small-scale system such as disaster which happens in a couple of minutes to large-scale system impacting monsoon, warming, snow over it (a kind of water storage Methane trapped in the form of permafrost). There are various interconnecting land function phenomena happening with the Himalayan surface.Climate interaction, according to IPCC 2021 report data on Himalayan states and number of dried days rise, decrease in lower alleviation and rise in upper alleviation. We will have more warmer and other consequences in recent times by virtue of temperature increases in the southern Himalaya. There is an increase in the number of potential disasters like cloudburst, landslide, floods etc.

He shared some interesting facts like all these events are by virtue of distribution of energy but in recent years all these events are happening together that is one leads to another. Earlier understanding was that cloudburst and Habitat wash-off were linked. Recently due to Urban planning the reverts fill due to the cloud burst. He took an important question raised by K S Valdiya, that in our time the Himalayan region villages

are not found on the banks of rivers. He said on those times he remembers his mother fetching water from rivers walking a longer distance from the village and showing how a village should be established. Urbanisation of population along small riverlets the important reason could be due to increase in temperature in lower valley or upper Valley.

We have seasonal Himalayan Glacier having many outlets we found particularly in Central Himalaya doubled the flow of rivers higher up in the Himalaya has increased this indicates river flow will be increasing in 15 years and this in due course of time the river flow will be decreasing because higher up in the Himalaya we will not get a lot of snow mass or water mass available. Permafrost is an important finding which he highlighted is that permafrost is a kind of debris that is worried about a certain amount of water at last.

He concluded that Himalaya is a natural extravagant, labelled with multiple processes with multiple kinds of interaction happening within the Himalaya; a kind of process that changes with time. Hence, he focused from climate, hydrology to permafrost aspects of Himalaya.

Fig.5 Prof. A.P. Dimri, SES, JNU

Prof. P.K. Joshi, SES, JNU - Prof. P.K. Joshi focused on Himalayan day theme i.e. Himalaya: science and knowledge. He linked Himalaya to religion. He gave a brief introduction about the Himalaya Day which is an initiative started in 2010 by a group of noted environmentalist and civil society members to spread the message that a solution for sustainable development and ecological stability of the Himalaya is a must.

He said as it is a unique ecosystem in itself, many national reputed institutions started off by celebrating this day. The Uttarakhand Government in 2014 officially declared September 9th as the Himalayan Divas to

spread the message of conservation of Himalayan ecosystem, then the central government took this as a major concern.

He thanked all the present speakers for their views. He pointed out that 2022-2030 is considered the ecological restoration decade of the UN, wherein Ecosystem approach for a variety of initiatives by conservation of biodiversity, disaster risk reduction at the behest of ecosystem approach and Sendai Framework. Also Nature Based Solutions (NBSs) have been adopted in most of the countries and our's eternal in all decision making. He beautifully expresses his views on a payment for ecosystem services and the Himalayan landscape ranked topmost in providing such services.

He focused on the “socio-ecological aspects” of Himalaya that Himalaya has a unique contribution in terms of social ecological setup is said walking through these mountains from Shivalik to trans Himalaya we can easily observed social system which were conceptually there and also in practice and are very much aligned with what is called sustainable development, understanding linkage between society and ecosystems. One is able to see unique settings over there strategically. He talked about Himalaya having borders from different countries not only in terms of Defence but also in terms of cold waves.

Anthropogenic activities: In 2017, High Court of Uttarakhand Order mentioned that the Ganga and its main tributary Yamuna should be treated and given the status of living entity; why not Himalaya should be dealt with reverence and sensitivity?

He raised an important question that the development can't be possible and the solution lies in the lens of the sustainable development pathways. Importance of Himalaya is underestimated for its unique integral support in overall development of the nation. The Himalaya system is due to inadequate attention basically affecting the life supporting system there if you look at the status of forest, water, air, soil have become alarmingly. These need to be considered for national interest to the contribution of the remaining subcontinent and cooperation is much needed.

Ecological challenges why unique personal wealth of the Himalaya is undergoing both functional and compositional change reason is due to high induced fragmentation of forest land holding the climate change

to the increment of rate of change is incremental but this increase in temperature is shifting of Agricultural production which is there affecting the timber line.

Professor Joshi highlighted some of its own research is own research finding yourself during his research he came to know that early flowering and fruiting in some parts of Himalaya was observed and with the specific facilities and flowering forces which added is which added so livelihood.

He pointed out that both because of human activities and climate change, invisible speech specific length and petroleum to higher reaches ecological modelling exercises and work has reported such kind of variation.

As a scientist reported that I see it as a wonderful laboratory having multiple lines each identity and it helps in fact serve as a wonderful beams of local and global phenomenon like climate change human livelihood ecological having reference to these attributes one need to be in front of any kind of any anthropocentric intervention in the Himalaya.

He Concluded by saying let us treat Himalaya as Himalaya not try to make it as any other landscape means the surface which is coming in the language of development changes being done, and he stated. so it is a projectile cascading landscape which is having a much wider range of species which is beyond human beings imagination so we should look at various aspects of addressing challenges as a scientist for policy makers and politicians, he said.

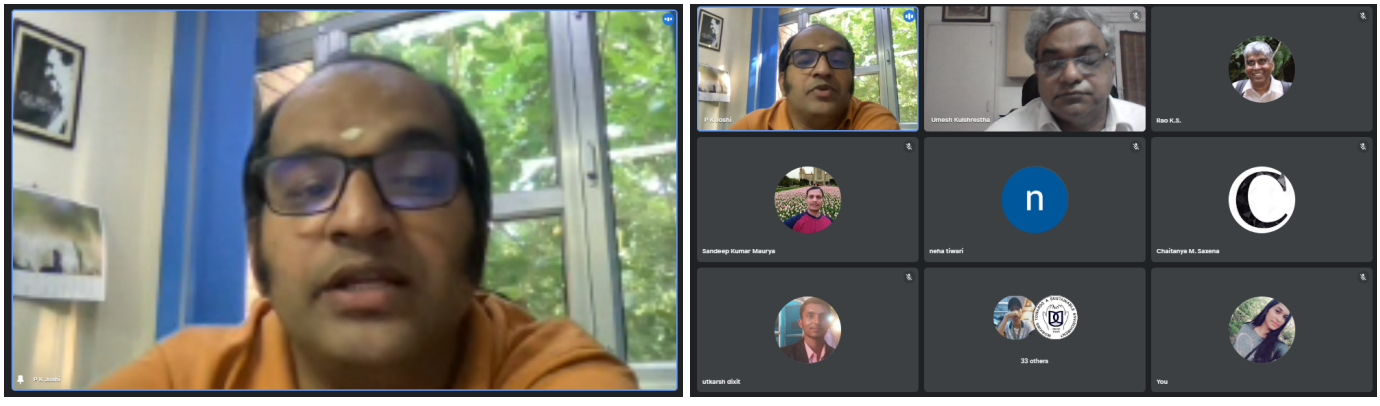


Fig.6: Prof. P.K. Joshi, SES, JNU

Ms. Komal Choudhary, YoHo Gyan Lead & Student, SES, JNU – as a young holistic leader, Komal talked about YoHo activities. She highlighted that Young Holistic (YoHo) like platforms are needed for the all-round development of the students.

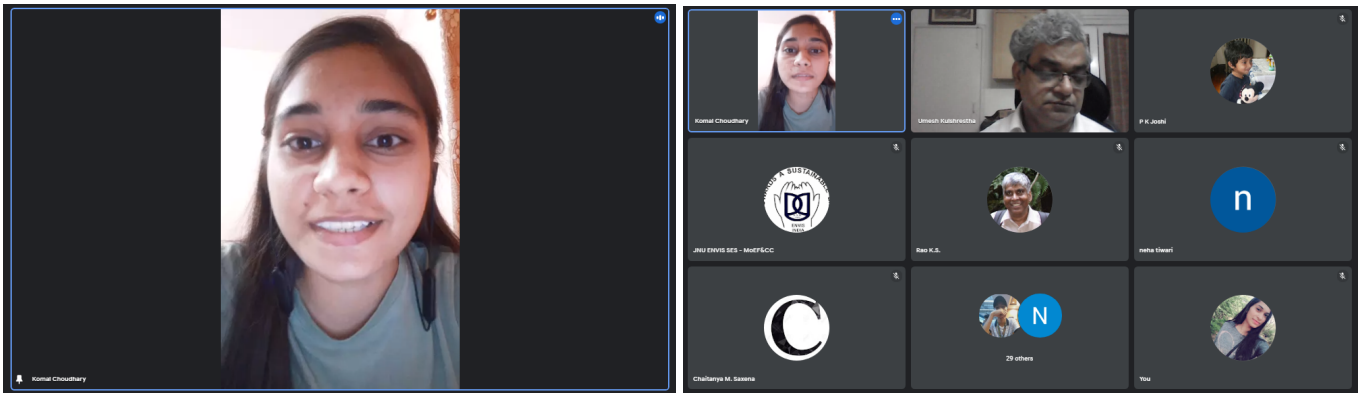


Fig.8: Ms. Komal Choudhary, YoHo Lead & Student, SES, JNU

Vote of Thanks was extended by **Ms. Swati Singh, Programme Officer, JNU ENVIS -** She thanked all the speakers, participants, students and the faculty for making the event successful.

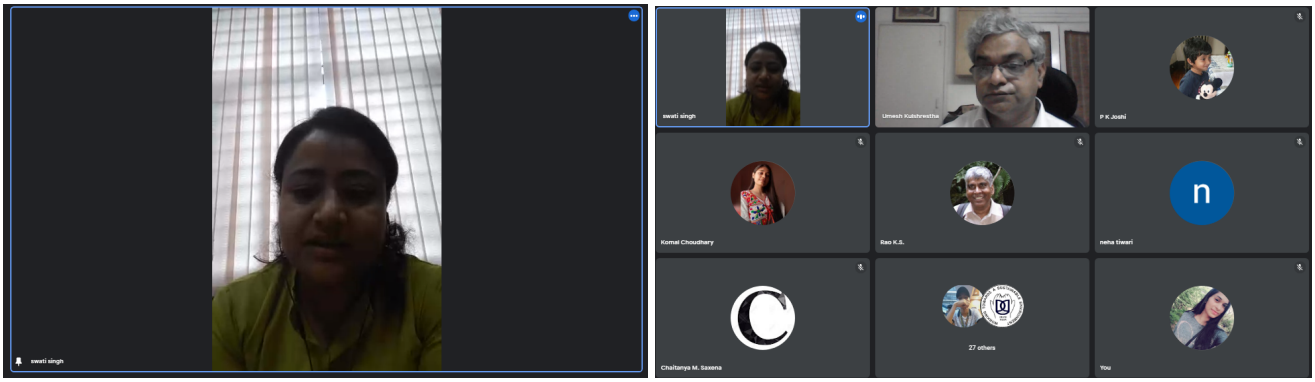


Fig.9: Ms. Swati Singh, Programme Officer, JNU ENVIS RP

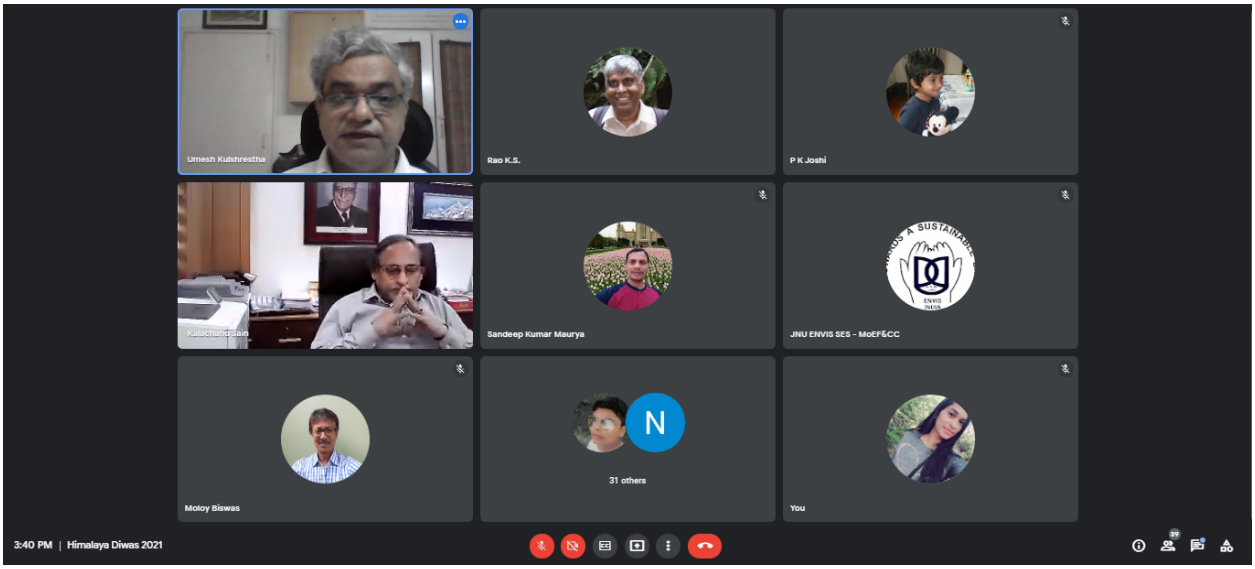


Fig.10: Panelists & Participants of the Panel Discussion

The session came to an end with the distribution of e-certificate to all the participants. This is to mention that a very positive feedback has been received from the participants about the event.

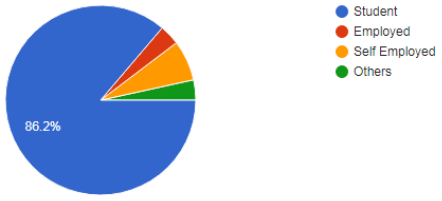
Recommendations:

1. Focus on long term studies for ecological and economic changes in time and space.
2. Traditional mountain crops should be documented and promoted, to stop further biodiversity loss.
3. Urgent need for evolving a mechanism for sustainable socio - economic development in the Himalaya.
4. Himalaya is such a fragile ecosystem, it should be treated like it only and should not be tried to be made like any other landscape.
5. Any anthropogenic interventions in the Himalaya need careful environmental analysis as small errors can lead to many cascading detrimental effects.

Feedback:

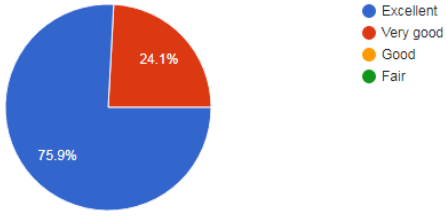
Your Present Status

29 responses



How do you rate this Webinar?

29 responses



Your Short Line Feedback.

21 responses

good
Good
It was very informative webinar.
Very nice
very informative and great .
Looking forward for more webinars on environment protection
We need to take a strong step to protect our environment, especially our beloved Great Himalaya. Thank you
Very good talk and very informative
Very nice, relevant and informative webinar
Amazing webinar
It was very informative session and gained lot of awareness
Informative
Very informative session.
It has been an inspirational session and we got a lot of knowledge.
Excellent Presentations.
thank you
Awesome.

Webinar Live Session on the official FB page:https://www.facebook.com/jnuenvis/videos/675891040037353

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