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Editor

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ACTIVITIES

Fifth Annual General Assembly

The fifth Annual General Assembly of SOHAM-Nepal was successfully held on Bhadra 16, 2063 (Sep 1, 2006) in Kathmandu. Dr. Janak Lal Nayava, Chairman SOHAM-Nepal, chaired the Programme.

The assembly began with the warm welcome address by Prof. Khadga Bahadur Thapa, Vice-Chairman SOHAM-Nepal. Mr. Jagat Kumar Bhusal, General Secretary SOHAM-Nepal presented the annual report 2005-2006. Dr. Laxmi Prasad Devkota, Executive Committee member presented financial report 2005-2006. Mr. Bhakta Lal Manandhar, coordinator of the election committee presented the report on the election held on August 1-4, 2006 for new Executive Committee. Dr. Janak Lal Nayava, Chairman SOHAM-Nepal handed over the responsibilities to newly elected Executive Committee Chairman Prof. Dr. Bidur Prasad Upadhayay.

Prof. Dr. Bidur Prasad Upadhayay, Chairman SOHAM-Nepal, thanked the outgoing Executive Committee for the successful completion of its responsibilities in the last two years. He also requested the cooperation of all its members. Dr. Keshav Prasad Sharma, newly elected Vice-Chairman of SOHAM-Nepal, delivered a vote of thanks and presented the proposed activities for 2006-2008. A dinner programme followed the general assembly.

Executive Committee for 2006-2008

According to the rule and regulation (BIDHAN) of SOHAM-Nepal, an election was held on August 1-4, 2006 for new Executive Committee. The newly elected third Executive Committee has already taken over the responsibilities for 2006-2008. All the members of the newly elected Executive Committee are as follows:

Prof. Dr. Bidur Prasad Upadhayay (TU)	Chairman
Dr. Keshav Prasad Sharma (DHM)	Vice-Chairman
Mr. Jagat Kumar Bhusal (DHM)	General Secretary
Mr. Suresh Marahatta (RECHAM)	Secretary
Ms. Sarojani Pradhan (TU)	Treasurer
Dr. Laxmi Prasad Devkota (NDRI)	Member
Dr. Prem Chandra Jha (TU)	Member
Mr. Saraju Kumar Vaidya (DHM)	Member
Mr. Suman Kumar Regmi (DHM)	Member

Besides, Dr. Janak Lal Nayava, former Chairman SOHAM-Nepal is Ex-Officio Member. Dr. Arun Bhakta Shrestha, former General Secretary SOHAM-Nepal has been nominated for the vacant seat of the Executive Committee member.

Editorial Board: SOHAM Journal

Dr. Madan Lall Shrestha, Director General of Department of Hydrology and Meteorology (DHM) has accepted to continue as the Chief Editor for the Journal of Hydrology and Meteorology published by SOHAM-Nepal. On recommendation of Dr. Shrestha, the Executive Committee has nominated the following in the editorial board.

Dr. Madan Lall Shrestha	Chief Editor
Mr. Rishi Ram Sharma	Co-Chief Editor
Dr. Keshav Prasad Sharma	Editor
Dr. Narendra Man Shakya	Editor
Mr. Bijaya Kumar Vaidya	Editor
Dr. Arun Bhakta Shrestha	Editor
Dr. Binod Shakya	Editor
Dr. Narendra Raj Khanal	Editor
Ms. Archana Shrestha	Editor
Mr. Raju Aryal	Editorial Assistant

The first meeting of the newly formed editorial board was held on December 11, 2006.

Advisory Committee

SOHAM-Nepal has formed an advisory committee consisting of three members: Prof. Suresh Raj Chalise, Mr. Kiran Shankar Yogacharya and Mr. Adarsha Prasad Pokhrel. All of them have wide experience in the field of Hydrology and Meteorology. Their contribution in the development of Hydrology and Meteorology in national and international context is well noted.

Organizing Committee for International Conference

SOHAM-Nepal will be organizing an international conference in November, 2008 in Kathmandu. An organizing committee under the chairmanship of Dr. Madan Lall Shrestha has been formed. Dr. Keshav Prasad Sharma, Vice-Chairman SOHAM-Nepal and Mr. Jagat Kumar Bhusal, General Secretary SOHAM-Nepal, are nominated as a Vice-Chairman and a Member Secretary of the organizing committee respectively.

Similarly, a scientific committee has also been proposed under the chairmanship of Prof. Suresh Raj Chalise.

Talk Programmes

- A talk programme on the Tilicho Lake was organized on Aswin 24, 2063 (October 10, 2006) jointly by SOHAM-Nepal and Nepal Wetlands Society (NWS). The primary objective of the Symposium was to enable relevant stakeholders and partners to share knowledge and experience on the Tilicho for the benefits of interested professionals. Besides sciences, the talk programme included various social, religious and touristic aspects of the high mountain lakes.

Mr. Jagat Kumar Bhusal spoke on the morphometric and hydrological characteristics while Mr. Dilli Prasad Rizal & Lila Nath Sharma from the Central Department of Botany, Tribhuvan University (TU) highlighted on the floral diversity aspects. Similarly, Dr. Siddharth B. Bajracharya, King Mahendra Trust for Natural Conservation (KMTNC) described on the fauna of the area. The programme was chaired by Dr. Keshav Prasad Sharma, Deputy Director General, Department of Hydrology and Meteorology (DHM).

- Dr. Keshav Prasad Sharma presented a paper on "Hydrological extremes of 2006 in Nepalgunj areas". The paper highlighted flood and landslide aspects following the active monsoon rain of August 26-27, 2006.

FEATURES

Monsoon 2006

Monsoon is the main rainy season in Nepal, which accounts for about 80% of the total annual rainfall. This year 1st June was the onset date of monsoon over Nepal, which was 10 days ahead of the normal date (10th June). Similarly, the monsoon withdrew completely from Nepal on 9th October. The normal date of withdrawal of monsoon in Nepal is 23rd September. This year the total monsoon duration was 131 days.

This year most part of the country received below normal precipitation (Figure 1). Based on the available data, the areas in the vicinity of Biratnagar in the east and Pokhara in the west received the lowest amount of monsoon rainfall in 2006. The northeast part and a few pockets in the west received above normal rainfall. Rainfall events that occurred in these high rainfall areas resulted floods and landslides leading to a significant loss of lives and properties. The rainfall stations of Nepalgunj, Jumla and Taplejung recorded 123%, 108% and 125% of the normal precipitation respectively.

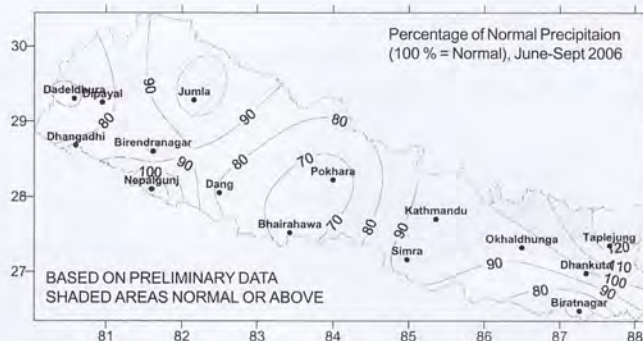


Figure 1: Monsoon rainfall (June-Sept.) 2006

● Active monsoon of August

Monsoon trough shifted northward towards Nepal and was close to the foothills of the Himalayas over western Nepal on 24th August. This situation remained till the end of August resulting heavy downpour of rainfall in Far western, Mid-western and Western Regions. Nepalgunj recorded 336.9 mm of rainfall on 27th August. This amount is the highest 24 hour rainfall ever recorded in Nepalgunj area.

● Cyclonic disturbance of September



Figure 2: Massive cloud mass on 0300 UTC of 23rd Sept., 2006
(Source: Dundee University)

Nepal received moderate to heavy rainfall especially in the central and eastern regions in the third week of September. At first, a slight disturbance was noticed in the upper level atmosphere over the Bay of Bengal in the second week of September. This disturbance strengthened and moved towards East Nepal. The system turned into depression stage and remained nearly stationary over Bihar-Jharkhand areas of India by 21st September. Subsequently, the weather

condition of Nepal was influenced by this system for five days. Based on the available data, Biratnagar in the east received 94.8 mm of rainfall while Nepalgunj in the west received 90.4 mm of rainfall on 25th Sept. Similarly, 67.6 mm, 50 mm, and 37.4 mm of rainfall was recorded in Dhankuta, Taplejung, and Kathmandu respectively on the same day.

August 26-27 floods in west Nepal

Floods and landslides triggered by the heavy rainfall in the month of August created havoc in west Nepal. Incessant



Figure 3: A man at Rampur Khadauna village in Nawalparasi wades through floodwater carrying his belongings
(Source: The Kathmandu Post)

widespread rain starting in the evening of 26th August 2006 was responsible for extensive flooding in the Nepalgunj area. Heavy rainfall continued throughout the night until the morning of 27th August 2006. Daily precipitation exceeded 300 mm at several rain gauge

stations operated by DHM. The active monsoon rain of 26-27 August following the flood covered the major portion of the western Nepal causing several fatalities and widespread damages in the West Rapti, Karnali, and the Mahakali River basins. Banke and Bardia, the district of south west Nepal suffered the most. More than fifty lives were reported lost while more than 50 thousand people were homeless. Some of the fatalities were associated with landslides in several parts of western Nepal. The Laxmanpur and Kalkalwa barrages in India blocking the Sotia and Gandhaiya streams were also blamed for the extensive flooding in the Nepalgunj area in the southwest plain of Nepal.

Following days of the event, several people suffered from the communicable diseases, such as gastroenteritis, eye infection, pneumonia etc. The Government of Nepal and Nepal Red Cross Society provided assistances of Rs 4.89 million

and Rs 6.2 million respectively for immediate post disaster relief activities, such as foods, clothing, and shelters. In addition, the Government of Nepal also pledged the international communities for an assistance of US \$120 million for the post disaster activities.

Millennium Ecosystem Assessment

Millennium Ecosystem Assessment (MA) was called by Kofi Annan, Secretary General of the United Nations in 2000 in his report to the UN General Assembly. The Millennium Ecosystem Assessment was initiated in 2002 with the objective to assess the consequences of ecosystem changes for human well-being. The objective included the assessment of scientific basis for actions needed to enhance the conservation, sustainable use of the systems and their contributions to human well-being.

Millennium Ecosystem Assessment was guided by a Board that included representatives of five international conventions, five U.N. agencies, international scientific organizations, and leaders from the private sectors, nongovernmental organizations, and indigenous groups. A 13-member Assessment Panel of leading social and natural scientists oversaw the technical work of the assessment, supported by a secretariat with offices in Europe, North America, South America, Asia, and Africa. The programme was coordinated by the United Nations Environment Programme. The scientific work was conducted mainly between 2002-2005 and the final report was given to the Secretary-General in March 2005. For five intensive years, the MA had involved the work of more than 1,360 experts worldwide. As such it was one of the largest volunteer coordinated efforts in the history of international and interdisciplinary science and this in itself was an achievement.

NEWS

Meteorological Exhibition

Student's Organization of Meteorology (SOM) and the Department of Meteorology, Tri-Chandra Campus jointly organized their First Meteorological Exhibition on Bhadra 22-23, 2063 (Sept.7-8, 2006).

The program began with the inauguration of the Meteorological Exhibition by Prof. Suresh Raj Chalise. Various distinguished persons expressed their views on importance of meteorological exhibition. On the occasion, Prof. Chalise was also honoured for his life long contribution in the field of hydro-meteorology. The exhibition included multimedia presentations on different aspects of hydro-meteorology following a talk programme

DHM on High-level Committee

Nepal has its own aviation history of nearly 50 years. In this period, the aviation sector could not remain isolated from air accidents. The post-disaster investigations of such event show that the percentage of human error is high in the Nepalese sky. Most of the accidents occurred during bad weather conditions. Thus, meteorology plays significant role for safety operation of the aircraft.

Airbus accidents of Thai Airways in July and Pakistan International Airlines in September, 1992 were the two severest air disasters in the history of aviation in Nepal, which also occurred in adverse weather conditions. Despite such incidents, none of the post-disaster committees neither included a meteorologist in the investigation team nor cared about the meteorological aspects. The investigation committee of Necon air accidents in 1999, for the first time, involved the Department of Hydrology and Meteorology but only for very preliminary information.



Recently, Shree Airlines helicopter crashed on 23rd September, 2006 in east Nepal carrying twenty-four national and international distinguished personalities. The government of Nepal formed a seven-member high-level investigation committee for truth finding.

Mr. Bijaya Kumar Vaidya, Deputy Director General, Department of Hydrology and Meteorology (DHM) and life member of SOHAM-Nepal, was nominated as a member of the committee. This is an important and the first involvement of meteorological expert in aviation disaster investigation. The report has recommended for the collection of sufficient weather information from the Meteorological Forecasting Division of the Department of Hydrology and Meteorology (DHM) prior to flights in bad weather conditions.

Familiarization tour on INSAT Program

Under bilateral cooperation between Nepal and India, Indian national satellite (INSAT) receiving station is going to be established in Kathmandu in the near future. Three participants from Department of Hydrology and Meteorology (DHM) and one participant from Ministry of Environment, Science and Technology (MOEST) attended the familiarization tour.

Zayed International Prize

The Zayed International Prize in the category of "Scientific achievements in the Environment" was received by the Millennium Ecosystem Assessment (MA), Malaysia. The Prize for the Environment was established in 1999 to recognize and encourage environmental achievements supporting and promoting the implementation of Agenda 21 in line with the vision and philosophy of His Highness Sheikh Zayed Bin Sultan Al Nahyan, Chairman of the United Arab Emirates (UAE). The prize consists of US\$ one million cash prize and a formal award certificate for the persons with core contribution. The group of core persons included Dr. Keshav Prasad Sharma, the Vice-Chairman of SOHAM-Nepal.

Highest CO₂ levels ever recorded

In 2005, globally averaged concentrations of carbon dioxide (CO₂) in the atmosphere reached its highest ever recorded level. According to the Greenhouse Gas Bulletin, 2005 published by World Meteorological Organization (WMO), quantity of CO₂ measured was 379.1 ppm, up by 0.53 per cent from 377.1 ppm recorded in 2004. Concentrations of N₂O also reached record highs in 2005 from 318.6 ppb to 319.2 ppb, while methane remained stable at 1783 ppb. Water vapour, carbon dioxide (CO₂), methane (CH₄) and nitrous

oxide (N₂O) are the three most prevalent greenhouse gases in the Earth's atmosphere.

Antarctic ozone hole in 2006

This year's hole in the Antarctic ozone layer exceeds the record of 2000. Not only was it the largest in surface area (matching 2000) but also suffered the most mass deficit, meaning that there was less ozone over the Antarctic than previously measured.

Measurements were taken from instrument on both National Aeronautics and Space Administration (NASA) and European Space Agency (ESA) satellites. These data are validated by surface based observations of the WMO Global Atmosphere Watch (GAW) ozone network.

NASA reported that on 25th September 2006, the area of the hole reached 29.5 million km² (29.4 million km² in September 2000). According to ESA, the ozone hole area reached 28.0 million km² on 25th September 2006 (28.4 million km² in 2000). The ozone mass deficit in 2006 was measured at 39.8 megatonnes on 1st October (39.6 megatonnes on 29th September, 2000).

Nairobi Conference on Climate Change

The United Nations Climate Change Conference was successfully concluded in Nairobi, Kenya (November 6-17, 2006). This was the second meeting of the Parties to the Kyoto Protocol (to reduce greenhouse gas emissions), in conjunction with the twelfth session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC). The Conference was attended by six thousand participants from one hundred eighty countries. The participation includes 100 ministers from different countries, the Secretary-General of the United Nations and two heads of state. The Conference was concluded with the adoption of a wide range of decisions designed to mitigate climate change and help countries adapt to the effects of global warming. The Nepalese team was led by Mr. Balkrishna Prasai, secretary of the Ministry of Environment, Science and Technology (MOEST).

CONGRATULATION



SOHAM Nepal congratulates **Dr. Keshav Prasad Sharma**, Vice-Chairman of SOHAM-Nepal for receiving formal award certificate of the Zayed International Prize. He was one of the core personnel involved with the Millennium Ecosystem Assessment (MA) described above.

ANNOUNCEMENT

- "International Conference on Hydrology and Climate Change in the Mountainous Areas" to be held in November, 2008 in Kathmandu, Nepal

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SOHAM-Nepal kindly request for your active contribution of relevant news/information for the newsletter