Weekly SAHF Forecasters' Forum (FF)#164

Date: 3rd April 2025

Discussion Notes

Realized Weather-Country Reports (28th Mar. – 3rd Apr. 25)	▪ Bhutan observed mostly clear weather with light rainfall over the northwestern regions. Whereas highest temperature recorded over the southern region and lowest was over the northern region. ▪ Bangladesh experienced light rainfall with thunderstorm in the first half of the week and mild heatwave over the western and southwestern regions of the country during the 2nd half of the week. ▪ Nepal experienced light rainfall with thunderstorm and lightning in many places of western regions of the country. Moreover, above normal maximum and minimum temperatures were observed over the country. ▪ Sri Lanka experienced isolated light to moderate rainfall and thundershowers over northern, western and southwestern regions of the country. ▪ Maldives experienced mainly hot and humid weather with isolated thundershowers and windy condition all over the country. ▪ Myanmar observed mostly dry with isolated light to scattered rainfall with thunderstorms over the north eastern regions of the country. Whereas above normal/ average temperature was observed in the southern regions of the country.
Significant Weather Features in the region for the coming week (4th Apr. – 10th Apr. 25)	▪ An intense thunderstorm is expected over Afghanistan, Pakistan, India, eastern part of Nepal, Bhutan, north-east India, northern part of Myanmar and peninsular India, Maldives and Sri Lanka in the 1st half of the week and from the 2nd half most part of northern regions of South Asia specifically, Hindu Kush Himalayan regions, Nepal, Bhutan, North Eastern regions of India and Northern Western part of Pakistan are going to experience dry condition. Temperature may rise over the peninsular regions, and most part of the South Asia. ▪ IOD currently is positive and supportive over Indian Ocean whereas MJO is negative but influencing eastern equatorial ocean and maritime continents. ▪ A low-pressure system may form over the Southeast BoB around 9th April leading to rainfall over Sri Lanka and Southeast India and Adjoining BoB.
Weather Outlook (4th Apr.– 10 Apr. 25)	▪ Much of Bhutan is likely to experience partly to mostly cloudy with isolated light to moderate thundershowers over a few places of northern regions whereas temperature is likely to increase gradually over the country. ▪ Much of Nepal may experience cloudy weather with light to moderate thundershowers over the mountainous and hilly region of northeastern regions. Both maximum and minimum temperature are also expected to be in the rising trend. ▪ Maldives is likely to experience fine weather over northern and southern parts of the country. Temperature may also remain same with hot and humid condition. ▪ Much of Myanmar may experience scattered to widespread rainfall with thunderstorms all over the country. Temperature and gusty wind may rise gradually over the country. ▪ Whereas Sri Lanka is likely to experience, isolated light to moderate evening thundershowers over most part of the country specifically southwestern regions as the westerly wind may dominate. ▪ While Bangladesh is likely to experience partly cloudy weather with isolated thunderstorm and lightning over the southwestern, central eastern and southern regions of the country. Mild to moderate heatwave may swipe over the southwestern and western part of the country.

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<tr><td>Extended Range Outlook (4th Apr. - 30th Apr. 2025)</td><td>Extended Temperature outlook
Below normal minimum temperature anomalies may prevail over the Sri Lanka, Maldives, Southeastern part of India, Myanmar and most parts of Bangladesh in the 1st and 2nd week of the month. While temperature may rise from week 3 and onward.</td><td>Extended Rainfall Outlook
Most of the South Asia, including Nepal, Bhutan, Maldives, Sri Lanka, Myanmar, Bangladesh and Southeastern regions of Indian are expected to receive above normal rainfall in 1st three weeks of the month and rainfall may decrease from the 4th week.</td></tr>
<tr><td>Ocean Watch</td><td colspan="2">Observed Ocean Surface Conditions (28th Apr. – 3rd Apr. 25)
A significant swell height 17 to 18 seconds has been observed over India and swell alert has been issued for Andaman and Nicobar Islands. Maximum significant wave observed up to 2.4 meters and maximum swell height observed 18 seconds in the Bay of Bengal and coastal current at some coasts of India were up to 1.1 meters. Sea surface temperatures were 36 to 39 degrees centigrade
Forecast for the coming week (4th – 10th Apr. 25)
A normal swell height is expected in the Bay of Bengal specifically in the east coast of India, central region and some coastal regions of Maldives. Wave heights are expecting around 1.2 to 1.3 seconds per minutes. Also, sea surface temperature is expected to be 34-36 degree centigrade in west coast of Bay of Bengal. A low pressure may form over the Southwest BoB.</td></tr>
<tr><td>Lecture Series: Review of the Southwest Monsoon 2024</td><td colspan="2">A special lecture series titled “Review of Monsoon 2024” was held in conjunction with the Forum. The session was led by Professor Dr. Vimal Mishra, a renowned expert in hydroclimatic extremes and the Vikram Sarabhai Chair Professor at IIT Gandhinagar. The lecture focused on the performance of the Southwest Monsoon 2024 and the ongoing challenges in predicting and monitoring extreme weather events. Key highlights from the discussion included:
Except for June, the South Asian region experienced above-normal rainfall in July, August, and September. The increasing frequency of extreme rainfall events has led to flash floods in Nepal, particularly affecting Northeast India, northern regions, and Bangladesh—posing major forecasting challenges.
The active El Niño phase contributed to above-normal temperatures and significant heatwave events during the monsoon season.
The session explored the key atmospheric drivers of flooding, such as precipitation intensity and moisture sources. It also addressed the limitations of current flood early warning systems and highlighted the potential of integrating hydrological models with machine learning techniques to enhance flood prediction capabilities.</td></tr>
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