

Outcome document

Public Lecture: “Dealing with El Niño in 2026”

1. Overview

The Lakshman Kadirgamar Institute of International Relations and Strategic Studies (LKIIRSS) organised a public lecture titled “Dealing with El Niño in 2026” to raise awareness of the potential implications of El Niño for Sri Lanka and strengthen understanding of associated climate risks.

The discussion highlighted the need for heightened national preparedness in view of the potential impacts of El Niño on food security, water resources, energy security, agriculture and fisheries. It also emphasised the importance of considering interactions between oceanic and atmospheric conditions when assessing weather patterns that are unique to phenomenon like El Niño. Given Sri Lanka’s geographical position, the influence of the surrounding ocean sphere, wind circulation and relevancy of the sea-surface temperature (SST) were recognised as key parameter in deciding the climate and the weather for this island nation.

2. Understanding El Niño and Related Climate Drivers

Prof. Charita Pattiaratchi, Winthrop Professor of Coastal Oceanography at the University of Western Australia (UWA) Oceans Institute and UWA Defence and Security Institute, was the keynote speaker joining remotely, described El Niño as a natural climate phenomenon associated with unusually warm sea-surface temperatures in the eastern and central Pacific Ocean. It represents the opposite phase of La Niña, which is generally associated with increased rainfall and flooding in parts of Asia and Australia.

The discussion emphasised that El Niño is not a weather forecast but an observed climate condition in the tropical Pacific. Its occurrence does not, by itself, determine the specific atmospheric conditions experienced in Sri Lanka. Weather and climate conditions are influenced by several interacting drivers, including the Madden-Julian Oscillation , Indian Ocean Dipole, North Atlantic Oscillation and El Niño-Southern Oscillation . Consequently, El Niño forecasts need to be interpreted alongside other oceanic and atmospheric conditions.

3. Forecasting and Potential Implications

The discussion highlighted the importance of interpreting climate forecasts in conjunction with prevailing atmospheric and oceanic conditions. The discussion was based on a ‘Threat Matrix’ for next nine (9) months, and it revealed that September to November 2026, during the inter-monsoon season the conditions were considered relatively uncertain, with some areas potentially experiencing drier conditions while others receive rainfall associated with active southwest monsoon. During October and November, intense rainfall and thunderstorms may occur, while rainfall could decline in December depending on changes in ENSO conditions. The possibility of intense Cyclone period during late November to

beginning of December had also come into discussions based on changing climate cycles due to El Niño effect.

Conditions during January and February 2027 remain uncertain, as El Niño years have at times been associated with drier conditions during this period. If El Niño persists into February, the first inter-monsoon season in March and April 2027 could experience a significant decrease in rainfall. If El Niño conditions extend into the next southwest monsoon period, Sri Lanka could also face increased risks of heatwaves, coral bleaching, excessively warm ocean temperatures, water scarcity and climate-related disasters.

4. Key Issues Raised During the Q&A Session

4.1 Seasonal Forecasts and Inter-Agency Coordination

The representative from the Department of Meteorology stated that seasonal forecasts are regularly communicated to relevant government agencies, including agricultural and irrigation authorities, the Ceylon Electricity Board and agencies responsible for food and water management. Forecasts are considered through inter-agency coordination mechanisms to assess prevailing conditions and support decisions concerning water resources and agricultural production.

Professor Pattiaratchi emphasised that individual rainfall events should not automatically be attributed to El Niño, as weather patterns are influenced by a range of atmospheric and oceanic conditions. The discussion highlighted the importance of moving from reactive to proactive approaches to climate-related risks. Water conservation, for example, should be incorporated into everyday practices rather than introduced only when drought conditions emerge.

4.2 Cyclone Preparedness

November was identified as an important cyclone season in the Bay of Bengal, when sea-surface temperatures can reach levels conducive to tropical cyclone development. The Department of Meteorology stated that it works with regional and international partners and draws on international expertise to monitor atmospheric conditions, including wind patterns and sea-surface temperatures, in line with international forecasting standards. Relevant advisories are communicated to the public through the appropriate authorities.

The audience raised the question of importance of getting early warning, effective communication and community-level preparedness. Power outages, telecommunications failures and prolonged rainfall can create additional challenges during emergencies. Government agencies therefore need to identify potential operational gaps in advance and develop appropriate response strategies.

4.3 Food Security and Water Management

Government agencies highlighted the importance of continuously assessing seasonal forecasts and their potential implications for water availability and agricultural production. Such assessments can help identify vulnerable sectors and support the development of appropriate mitigation measures before climate-related emergencies occur.

5. Preparedness and Response Considerations

The discussion underscored the importance of strengthening national preparedness through improved forecasting, regular communication of seasonal forecasts, inter-agency coordination and effective early warning systems. Particular attention should be given to coordination among agricultural, irrigation, electricity, food and water management authorities, while promoting proactive water conservation and community-level preparedness.

The importance of identifying potential operational gaps before the occurrence of climate-related disasters was also emphasised, particularly in relation to power outages, telecommunications failures and prolonged rainfall. Forecasting mechanisms should continue to monitor sea-surface temperatures, wind patterns and other relevant atmospheric and oceanic conditions, while advisories should be communicated to the public in a timely and effective manner. Vulnerable sectors should be identified in advance and appropriate mitigation strategies developed accordingly. Strengthened waste management and cooperation between conservation groups and government agencies are also important for protecting marine ecosystems.

6. Concluding Observations

The lecture underscored that El Niño is an ocean-atmosphere phenomenon whose effects can extend beyond weather conditions, with implications for food security, water security, energy security, agriculture, fisheries, marine ecosystems and disaster preparedness in Sri Lanka.

The discussion emphasised that El Niño should not be considered in isolation when assessing climate risks. Its potential effects need to be understood in relation to other interacting oceanic and atmospheric conditions. This highlights the importance of continuous climate monitoring, accurate interpretation of forecasts, effective early warning systems and timely communication.

Overall, the lecture highlighted the need for Sri Lanka to strengthen anticipatory approaches to climate-related risks. Improved institutional coordination, proactive resource management, strengthened forecasting and early warning mechanisms, effective public communication and community-level preparedness will be essential to enhance the country's capacity to manage the potential socioeconomic, environmental and disaster-related impacts associated with El Niño and related climate conditions.