



Fiji Sugarcane Rainfall Outlook For April, May & June 2024 and May to July 2024 **Experimental**

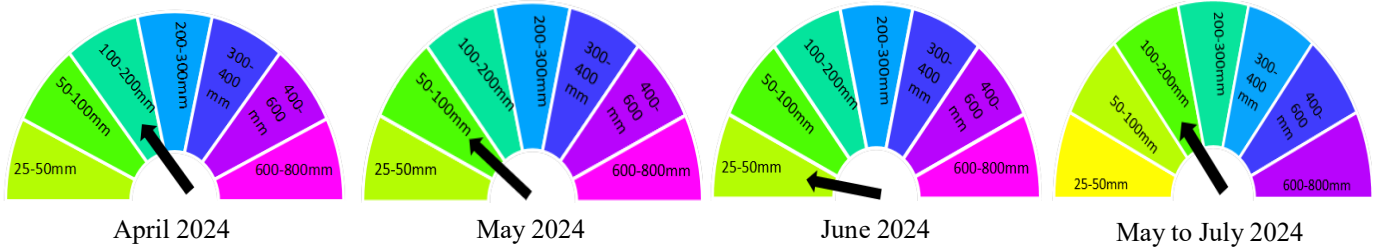
Volume 2

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Next issue: April 30, 2024

Key Messages



English

- The sugarcane belt areas received more rain than was forecasted by the Fiji Meteorological Services. A scenario such as flooding, infield ponding and seawater intrusion into agricultural farms was experienced amongst the many others.
- Farm flooding leads to waterlogging conditions.
 - ◊ Reason – drainage not maintained well, farms not levelled properly, flood retention structure not maintained well.
 - ◊ Impact – waterlogged fields suffocate sugarcane roots, preventing their proper development. This inhibits nutrient uptake, resulting in stunted growth, reduced yields and increased susceptibility to diseases.
 - ◊ Solution – consider digging trenches to remove excess water from the fields. Keep drains clean, especially with heavy rains forecasted in some areas during May.
- Avoid working in waterlogged fields, as this can lead to soil compaction, which can inhibit root growth and water infiltration. Wait for the soil to dry out sufficiently before performing any field operations.
- Wet conditions will encourage the growth of weeds, which will compete with sugarcane for nutrients, water, and sunlight. Practice integrated weed management by combining cultural, mechanical and chemical control methods.
- Heavy rain can leach nutrients from the soil, depleting them and reducing their availability to the sugarcane plants. Consider applying additional fertilizers, particularly to replenish the lost nutrients.
- When the weather is conducive for planting, procure good quality and approved seed cane varieties. Visit your nearest sector office to enquire (cost, transportation, etc.) about quality seed cane provided by SRIF.
- During cane planting, follow SRIF lime and fertilizer recommendations for optimum yields. Recommendations should be disseminated by the Farm Advisor of FSC.

- Fertilizers to be ordered and stored properly for timely application.
- Keep headlands and field bunds clean to prevent pest infestations like armyworms which can increase during the wet season.
- Consider planting vetiver grass as a perennial hedgerow. Vetiver is effective for soil conservation, slope stabilization, and erosion control.
- Growers are advised to monitor weather updates closely and be prepared to adjust farm activities like planting, fertilizer application and weed control based on actual rainfall patterns.
- For further advice, please contact SRIF on 8921839.

Hindi

- Ganna bonne wale kshetron mein Fiji mausami daftar dvaara diye gaye poorvaanumaan se adhik baarish huee hai. Baadh, kheton mein paanee ka jamaav aur kheton mein samudree jal ka pravesh anubhav kiya gaya hai.
- Kheton mein paanee bharane se jalabharaav kee sthiti paida ho jaatee hai.
 - ◊ Kaaran - jal nikaasee ka achhee tarah se prabandh nahin kiya jaana, kheton ko theek se samantal nahin kiya jaana, baadh pratidhaaran sanrachana ka achchhee tarah se prabandh nahin kiya jaana.
 - ◊ Prabhaav - kheton mein paanee bhar jaane se ganne ke jaden dab jaatee hain, jis se unka samuchit vikaas nahin ho paata. Yah poshak tatvon ke grahan ko rokata hai, jiske parinaamasvaroop vikaas ruk jaata hai, utpaadan kam ho jaatee hai aur beemaariyon ke prati sanvedanasheelata badh jaatee hai.
 - ◊ Samaadhaan - kheton se atirikt paanee nikaalane ke liye khaee khodane par vichaar karen. Naaliyon ko saaph rakhen, khaasakar May ke dauraan, jabki kuchh kshetron mein bhaaree baarish kee bhavishyavaanee kee gayi hai.
- Jaljamaav vaale kheton mein kaam karane se bachhen, kyonki iss se mittee sankuchit ho sakatee hai, jo jad vrddhi aur paanee ke pravesh ko rok sakatee hai. Kisee bhee field operation ko karne se pahale mittee ke paryaapt roop se sookhane kee prateeksha karen.
- Geelee sthitiyaan ghaas kee vrddhi ko badhaava dengee, jo poshak tatvon, paanee aur sooraj ke roshanee ke liye ganne ke saath baraabaree karenge. Saanskrtik, yaantrik aur raasaayanik niyantran vidhiyon ko milaakar ekeekrt ghaas prabandhan ka abhyaas karen.
- Bhaaree baarish se mittee se poshak tatv nikal sakte hain, jis se unkee kamee ho saktee hai aur ganne ke paudhon ke liye unkee upalabdihata kam ho saktee hai. Vishesh roop se khoe hue poshak tatvon kee poorti ke liye atirikt fertilizers lagaane par vichaar karen.
- Jab mausam ganna bonne ke liye anukool ho, toh achchhee uttamata aur anumodit ganna ke beej khareeden. SRIF dvaara pradaan kiye gae ganne ke beej ke baare mein poochhataachh (keemat, ganne dhone ka saadhan, aadi) ke liye apane pass ke sektar kaaryaalay par jaen.
- Ganna bonne ke dauraan, adhikatam upaj ke liye SRIF ke diye gaye choona aur fertilizer kee siphaarishon ka paalan karen. FSC ke Farm Advisor dvaara siphaarishen phailaayai jana chaahiye.
- Samay par upayog ke live fertilizer ka ordar diya jaana chaahiey aur uchit tareeke se sambhaal kar

rakhna chaahiye.

- Armyworms jaise keetanon ke sankraman ko rokane ke liye medh aur khet ke bhaari ilaakon ko saaph rakhen, jo geele mausam ke dauraan badh sakate hain.
- Gadra bonne par vichaar karen. Gadra mittee ko bhaene se rokta hai.
- Kisaanon ko salaah dee jaatee hai ki ve mausam ke anumaan kee baareeke se nigaraanee karen aur vaastavik varsha ke aadhaar par ganna boye, fertilizer daale aur ghaas niyantran jaisee gatividhiyon ko samaayojit karane ke liye taiyaar rahen.
- Aur salaah ke liye 8921839 par SRIF ko sampark karen.

I-Taukei

- E levu sara na uca e tau e na noda yalava ni tei dovu, me vakatauvatani kei na kena ka ratou vakaraitaka tiko na Tabana Ni Draki ni na rawa ni namaki, ka mani vakilai kina na waluvu ni teitei.
- Na waluvu ni teitei, e basika kina e vica na leqa;
 - ◊ Vuna– sega ni samaki vinaka na I vakata lalai, sega ni tautauvata na vanua ni teitei, sega ni vinaka na I walewale ni tarovi ni waluvu ka vakayagataki tiko e na I teitei
 - ◊ Leqa- Ni waluvu na I teitei, e vakagogotaka na tubu ni dovu, ka rawa ni vakalailaitaka na levu ni suka e rawa e na dovu ka vakalevutaka tale ga na kena rawarawa ni tauva na dovu na veimataqali mate.
 - ◊ Kena I wali– dikevi na kena rawa ni keli na I vakata lalai, em na rawa ni vukea na kena drodro na wai. Me samaki tale ga na I vaka ta lalai, vakabibi e na kena namaki me na tau na uca e na vula ko Me.
- Ko ni sa vakasalataki, me vakarauta na kena vakayagataki na vanua lolobo, me vaka ni na rawa ni vakavuna na kabikabi vata ni qele, ka rawa ni dredre na tubu ni dovu. E daumaka me waraki me mamaca vinaka na qele, me qai vakayacori e so na cakacaka e na loga ni dovu.
- Na rawarawa na tubu ni co ca e na gauna ni draki ucauca eda donumaka tiko oqo. Ko ni sa vakasalataki mo ni taurivaka so na I walewale ni kena vakalailaitaki na tubu ni co ca, ka ni na rawa ni vakagogotaka tale ga na tubu ni dovu.
- E na rawa tale ga ni savata laivi na kakana bulabula ni dovu e na qele, na tau bi ni uca e da vakila tiko e na gauna oqo. Ko ni sa vakasalataki me sa tekivu vakayagataki na vakabulabula ni qele, me na rawa ni sosomitaka na kakana bulabul ni qele ka sa savata na uca mai na qele.
- Ko ni savakasalataki mo ni taurivaka e so na I tei ni dovu vinaka, e na gauna sa daumaka kina na draki me rawa na teitei. Ni taro I vakasala vei iratou na nomuni vale ni volavola (Sector offices) ka voleka vei kemuni e na I vakasala me baleta na I tei ni dovu.
- Ni sa vakasalataki mo ni vakamuraia na nodratou I vakasala na SRIF, e na gauna ni tei dovu, me baleta na vakayagataki ni 'lime' kei na vakabulabula ni qele. E dodonu me ratou na vakadewataka yani vei kemuni na 'Field Advisors' mai vei iratou na FSC, na I vakasala oqo.
- Ko ni sa vakasalataki me ra voli rawa na I vakabulabula ni qele, ka maroroi vinaka tu me na rawa ni vakayagataki e na kena gauna tau donu.
- Ni sa kerei me na samaki vinaka tale ga na dovu me na rawa ni vakalailaitaka na kena takavi ira na

mate, vakabibi e na gauna ni draki ucauca eda donumaka tiko.

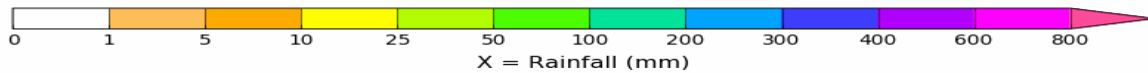
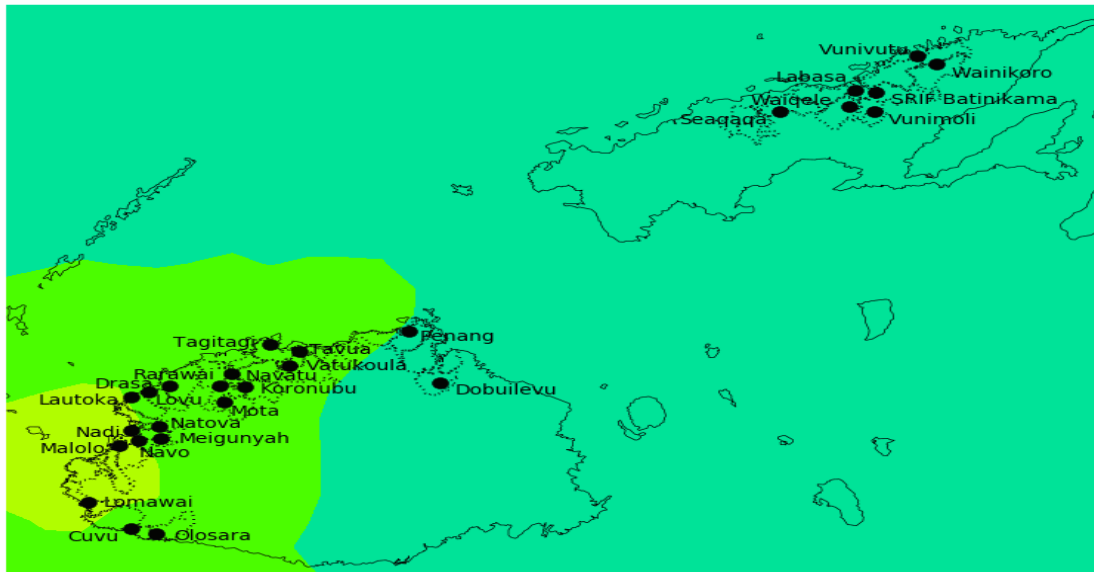
- Ni sa vakasalataki na dau teitei, mo ni teivaka tale ga na ‘vetiver grass’ e na saula se I bili ni teitei, me vaka ni na rawa ni veivuke e na tarovi ni sisi ni qele
- Ko ni sa vakasalataki na dauteitei, mo ni vakarogoca na I vakasala ni tukutuku ni draki, ni bera ni ko ni tuvalaka na nomuni gauna ni teitei, ka salavata kei na gauna ni vakayagataki ni vakabulabula ni qele ka vaka tale ga kina na wai ni mate ni co ca.
- Ke tu tale e so na nomuni vakatataro, ko ni rawa ni veitaratara vei iratou na tabana ni ‘SRIF’, ena naba ni talevoni na 8921839.

Climate Outlook

- El Niño Southern Oscillation (ENSO) is currently in an El Niño state.
- For April 2024, there is a high (75%) chance of receiving at least **50-100mm** of rainfall from Sigatoka to Tavua, while there is high chance of receiving at least **100-200mm** of rainfall in Rakiraki and across sugarcane belt areas in Vanua Levu.
- During May 2024, there is a high (75%) chance of receiving at least **5-10mm** of rainfall in Malolo, Nadi and Lautoka, **10-25mm** of rainfall in Sigatoka, Ba and Tavua, while there is high chance of receiving at least **25-50mm** of rainfall in Penang and **50-100mm** of rainfall in Dobuilevu and across sugarcane belt areas in Vanua Levu.
- For June 2024, there is a high (75%) chance of receiving at least **5-10mm** of rainfall in Nadi and Lautoka, **10-25mm** of rainfall for Sigatoka, Ba and Tavua, a high chance of receiving at least **25-50mm** of rainfall in Penang and across sugarcane belt areas in Vanua Levu, and a high chance of receiving at least **50-100mm** in Dobuilevu.
- During May to July 2024 period, there is a high (75%) chance of receiving at least **50-100mm** of rainfall from Sigatoka to Tagitagi, while there is high chance of receiving at least **100-200mm** of rainfall in Penang, Seaqaqa, Waiqele, Labasa and Vunivutu, and there is a high chance of receiving **200-300mm** of rainfall in Dobuilevu, Vunimoli, Batinikama and Wainikoro.
- The current El Niño event have passed its peak, with likely chances for it to continue through the March to May 2024 period. A transition to an ENSO-neutral state is likely during April to June 2024.
- Fiji is currently in its wet/ tropical cyclone season, therefore, even though forecasts suggest likely chances of suppressed rainfall, any development closer to our region is likely to result in increased rainfall.

Rainfall Outlook: April 2024

75% chance of rainfall exceeding X mm:
April 2024

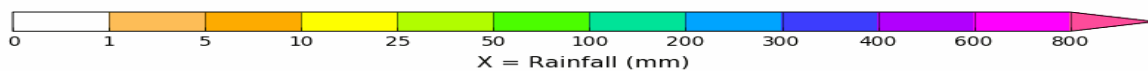
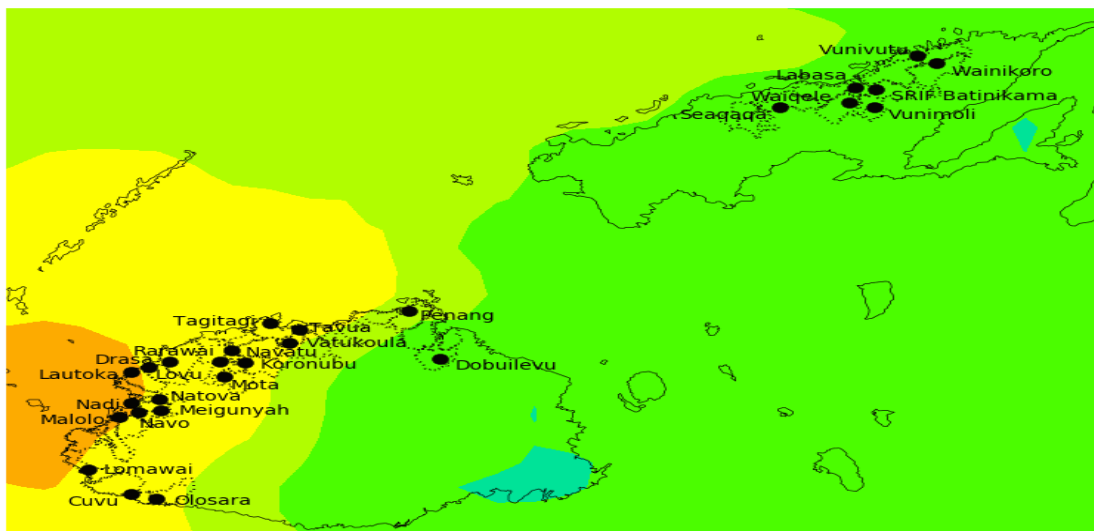


Data source: ACCESS-S2
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 Base period: 1981–2018
 Observations: MSWEP
 Run: 16/03/2024
 Shapefile data extracted from Flanders Marine Institute (2019), Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 11. Available online at <http://www.marinerregions.org/>.

Figure 1: High (75%) chance of receiving at least 50-100mm of rainfall from Sigatoka to Tavua, while there is high chance of receiving at least 100-200mm of rainfall in Rakiraki and across sugarcane belt areas in Vanua Levu. The confidence in the outlook is low to moderate.

Rainfall Outlook: May 2024

75% chance of rainfall exceeding X mm:
May 2024

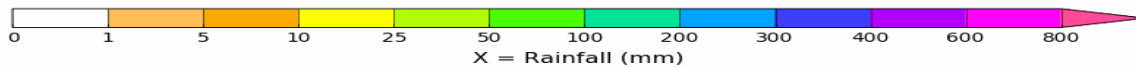
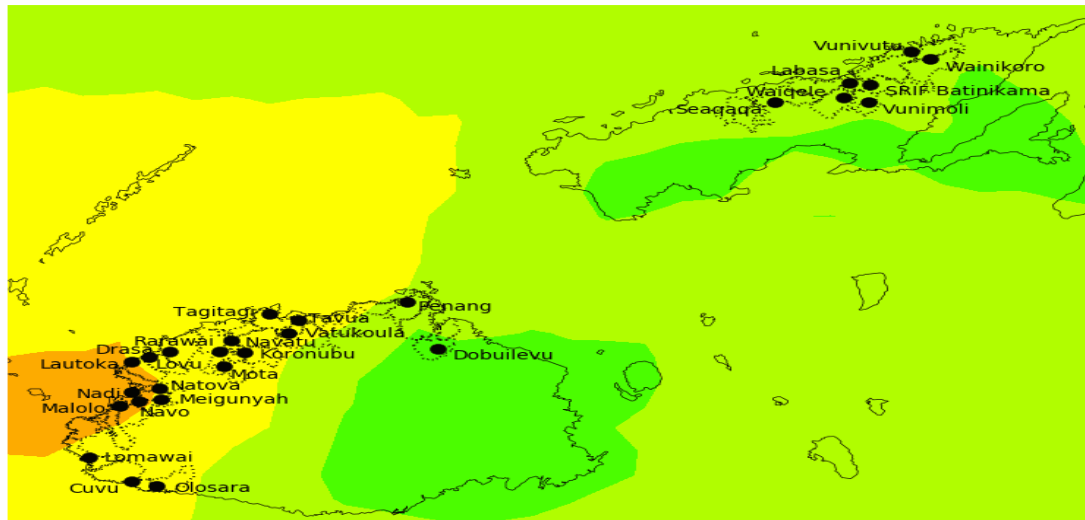


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Figure 2: High (75%) chance of receiving at least 5-10mm of rainfall in Malolo, Nadi and Lautoka, 10-25mm of rainfall in Sigatoka, Ba and Tavua, while there is high chance of receiving at least 25-50mm of rainfall in Penang and 50-100mm of rainfall in Doboilevu and across sugarcane belt areas in Vanua Levu. The confidence in the outlook is low to good.

Rainfall Outlook: June 2024

75% chance of rainfall exceeding X mm:
June 2024



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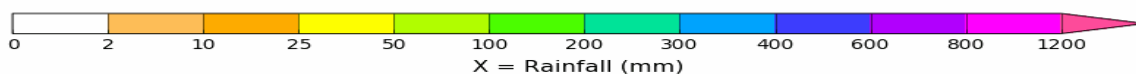
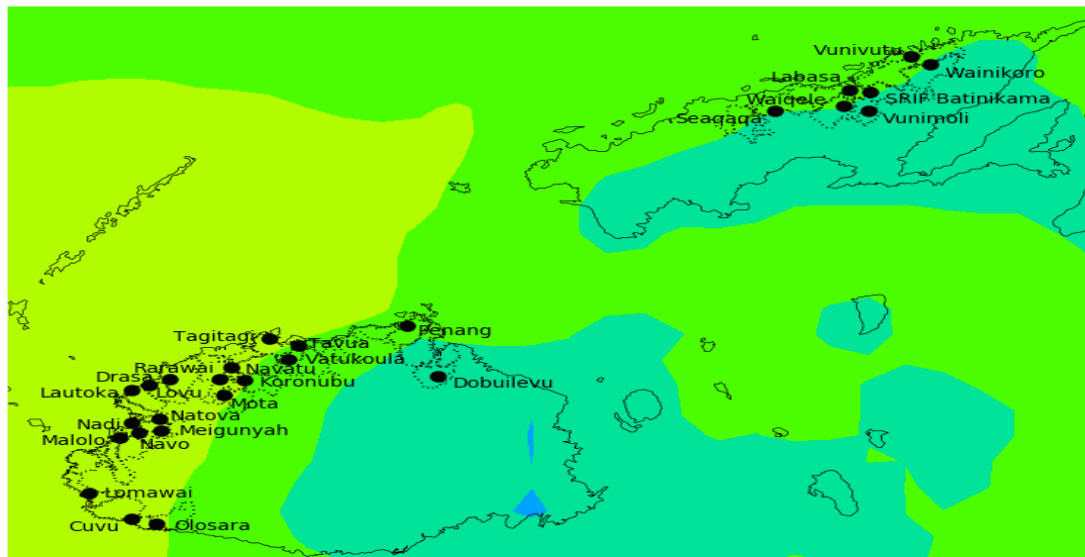
Base period: 1981–2018
 Observations: MSWEP

Run: 16/03/2024

Figure 3: There is a high (75%) chance of receiving at least 5-10mm of rainfall in Nadi and Lautoka, 10-25mm of rainfall for Sigatoka, Ba and Tavua, a high chance of receiving at least 25-50mm of rainfall in Penang and across sugarcane belt areas in Vanua Levu, and a high chance of receiving at least 50-100mm in Doboilevu. The confidence in the outlook is very low to moderate.

Rainfall Outlook: May to July 2024

75% chance of rainfall exceeding X mm:
May to July 2024



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Base period: 1981–2018
 Observations: MSWEP

Run: 16/03/2024

Figure 4: High (75%) chance of receiving at least 50-100mm of rainfall from Sigatoka to Tagitagi, while there is high chance of receiving at least 100-200mm of rainfall in Penang, Seaqqa, Waiqe, Labasa and Vunivutu, and there is a high chance of receiving 200-300mm of rainfall in Doboilevu, Vunimoli, Batinikama and Wainikoro. The confidence in the outlook is moderate to high.

Explanatory Notes

Fiji Sugarcane Rainfall Outlook

The Fiji Sugarcane Climate Outlook is a collaborative product of the Fiji Meteorological Service (FMS) and the Sugar Research Institute of Fiji (SRIF). It is produced to provide advisories to the farmers and other key sugar industry stakeholders. It aims to provide advanced warning on climate abnormalities for informed decision making. The product is issued on a monthly basis.

El Niño Southern Oscillation (ENSO)

ENSO is the principal driver of the year-to-year variability of Fiji's climate. There are two extreme phases of this phenomena, *El Niño* and *La Niña*.

El Niño or La Niña events usually recur after every 2 to 7 years. It normally develops during the period April to June, attains peak intensity between December to February and decays between the period April to June the following year. While most events last for a year, some have persisted for up to 2 years. It should be also noted that no two El Niño or La Niña events are exactly the same. Different events have different impacts, but most exhibit some common climate characteristics.

Usually there is a lag effect on Fiji's climate with ENSO events, that is, once an El Niño or La Niña event is established in the tropical Pacific, it may take 2-6 months before its impact is seen on Fiji. Similarly, once an event finish, it can take 2-6 months for climate to normalise.

El Niño events are associated with warming of the central and eastern tropical Pacific. El Niño events usually result in reduction of Fiji's rainfall. Often the whole of Fiji is affected in varying degrees and it is quite unusual for one part of the country to experience a prolonged dry spell, while the other is in a wet spell. The relationship and level of rainfall suppression is greater in the Dry Zone (sugarcane growing areas) than in the Wet Zone. It is the suppression of rainfall during the Cool/Dry Season (May to October) that is normally of most concern. Dry Season mean monthly rainfall in the Dry Zone ranges between 40mm and 90mm. A reduction in Cool/Dry Season rainfall in the Dry Zone results in little or no rainfall until the next Wet Season. While usually the strength of an ENSO event is proportional to its impact on Fiji, at times weak event can also have a significant impact.

La Niña events are associated with cooling of the central and eastern tropical Pacific. Usually La Niña results in wetter than normal conditions for Fiji, occasionally leading to flooding during the Warm/Wet Season (November to April).

When ENSO is neutral, that is, neither El Niño nor La Niña, it has little effect on global climate, meaning other climate influences are more likely to dominate.

Lag effects – means that there is a delay in the impacts of some aspect of climate due to influence of other factors that is acting slowly.

Disclaimer: The seasonal climate outlook provided in this document is presented for the sugar sector and should be used as a guide only. While FMS and SRIF takes all measures to provide accurate information and data, it does not guarantee 100% accuracy of the forecast presented in this outlook. Please enquire with FMS and SRIF for expert advice, clarifications and additional information as and when necessary. The user assumes all risk resulting directly or indirectly from the use of the climate prediction information.