



Special Issue Bulletin — February 15, 2007

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Many of the islands of Micronesia have recently seen the onset of dry conditions likely related to El Niño. During January 2007, some islands in the central and northern portion of Chuuk State, atolls of the RMI, Guam and the CNMI had rainfall totals of 4 inches or less. Several locations on Chuuk, Pohnpei, Kwajalein and Majuro recorded less than 40% normal rainfall for the month, with Kwajalein WSO receiving only 15% of its normal January precipitation! **While the El Niño event does appear to be weakening and dying, dry atmospheric conditions related to El Niño are often delayed and are thus expected to impact much of Micronesia over the next three months.**

CURRENT CONDITIONS

We are now entering a critical period for El Niño-related drought. Most locations are expected to receive at least 60-70% of the normal rainfall during the first half of 2007. **However, month-to-month variations in rainfall (which are unpredictable) may cause some locations (especially in portions of Chuuk State, the RMI, Guam and in the CNMI) to receive rainfall totals below 50% of normal during any one or more of the next three months. Additionally, some locations in the RMI (particularly in the northern RMI) may be exceptionally dry, receiving 50-60% of normal rainfall during the next three months, with any one or more months experiencing less than 30%.** Total rainfall through June at these locations may also fall below 60% of normal, especially in the northern RMI. For Guam, this means it is possible that in one or more of the months of February, March or April (and even possibly in May and June) there could be less than 2 inches of rainfall per month, for a 3-month (FMA) total of approximately 6 inches. This magnitude of dryness is also possible in some of the atolls of Chuuk State, the RMI, and the CNMI, as well as some locations in Yap State. Most locations in Pohnpei, Kosrae and Palau are expected to stay above 4 or 5 inches for their driest month in the next few months, for a 3-month (FMA) total of at least 20 inches. On high islands such as Guam, four inches of rain in one month is an approximate threshold below which the effects of dry weather become very noticeable, including:

- (1) Increase in the number of wildfires;
- (2) Sharp reduction of stream flow;
- (3) Stagnation of streams with congestion of algae growth;
- (4) Wilting of roadside weeds, browning of grasslands and defoliation of some trees, notably the widely distributed tangantangan (also known as Haole Koa in Hawaii), which covers a large area on many islands.

Despite the mature stage of El Niño conditions, the sea level this year has not yet recorded any considerable fall within the vicinity of the USAPI. Most of the tide gauge stations in USAPI displayed moderate to weak positive deviations in the second half of 2006, with only Majuro, RMI and Pohnpei, FSM recording some marginal negative deviations during this time. It was initially expected that due to the late onset of this El Niño event (September 2006), considerable sea level drop would likely be visible later. However, now that the El Niño is weakening or dying, no remarkable sea level fall may be seen in the months to come. In most other El Niño years, the sea-level fall has been quite substantial, further aggravating the dry conditions on those islands.

While drought conditions are not expected to be as bad as those experienced during the strong El Niño of 1997-1998, all island residents are strongly urged to participate in voluntary water conservation measures, and to maintain and make all reasonable repairs to rain catchments and other drinking water infrastructure. Do not discard any water in order to make repairs.

More detailed information on rainfall outlooks, tropical cyclone threat, and sea level forecasts will be included in the April issue of the Pacific ENSO Update.

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LOCAL VARIABILITY SUMMARIES



AMERICAN SAMOA: American Samoa is now fully into its rainy season and is expected to remain wet with average or above average precipitation through April. The threat of a damaging cyclone in any of the islands of American Samoa remains high throughout the remainder of the Hurricane Season (February - April 2007), thus it is prudent for residents to stay prepared for any developing low pressure systems. In addition, there is an increased threat of flooding and/or mudslides from above normal rainfalls. Gale-force winds related to the close passage of a tropical cyclone or the penetration of a very active northwest monsoon into the region should occur at least once, and possibly up to 2 or 3 times, from now through early May.



GUAM/CNMI: Below normal rainfall is expected throughout all of Guam and the CNMI for the first half of 2007. The risk of wildfires remains high through June, and residents are urged to clear away brush and loose combustible materials located near their homes. Residents are also encouraged to implement necessary water conservation practices, especially those residents of Saipan.



FEDERATED STATES of MICRONESIA (FSM):

Chuuk: The large north-to-south rainfall gradient (where it is wet south of 6° N and drier north of 6° N) will remain in place across Chuuk State for the next few months, causing the southern islands to receive abundant precipitation while the northern islands remain much drier. A recent tropical disturbance provided some beneficial rains to much of Chuuk State. From now through May 2007, however, locations within (and especially north of) Chuuk Lagoon are likely to experience one or two more month-long dry spells similar to January 2007.

Pohnpei: Following a wet December, January rainfall across Pohnpei remained near normal to slightly below normal for most locations. So far the dryness has actually had a positive impact on Pohnpei's plant life, causing avocados, mangoes, and papayas to bear fruit abundantly. As with Chuuk, a north-to-south rainfall gradient will remain in place across Pohnpei State for the next few months, with southern islands receiving greater amounts of precipitation than their northern counterparts. February river levels on Pohnpei Island are running slightly below average, but have not yet seen a significant decrease or stagnation.

Kosrae: Kosrae experienced abundant rainfall in January and much of February. Because the island is located south of 6° N, Kosrae State should remain relatively wet, and impacts associated with El Niño-related dryness are expected to be minimal.

Yap: Yap State has received near-normal rainfall for January and most of February, with small amounts of rain falling nearly every day during this period. The need for water rationing has not yet begun, as the three water systems in Yap are adequately full, with the one in town overflowing. Trees and vegetation have not shown any signs of withering yet, and betelnuts remain plentiful.



MARSHALL ISLANDS (RMI): Both Kwajalein and Majuro atolls experienced a very dry January, with Majuro receiving 25% and Kwajalein receiving only 15% of normal rainfall. Majuro's fresh water catchment system never fully recovered after millions of gallons were contaminated by sea-water inundation in October. Since January, Majuro has begun rationing fresh water by limiting water consumption to 6 hours per day, Monday - Friday. By early February, the tops of large breadfruit trees on Majuro were starting to turn brown from wind-driven sea spray, and fruits were withering, evidently from lack of rain/fresh water. Wotje and Utirik may even be drier than Kwajalein. Such dry conditions could mean that water may have to be transported to the some of the northern RMI sometime during the next few months. Further south in the RMI, Mili and Ebon have had adequate rain, which should continue.



REPUBLIC OF PALAU: January rainfall for Koror was near average, and dry conditions related to El Niño are not expected to effect Palau too harshly in the first half of 2007. However, any island within the Republic of Palau may experience a month or two of abnormally dry weather at any time through May, after which rainfall amounts should return to normal. As a precaution, residents of Palau are urged to participate in voluntary water conservation measures, and should make all reasonable repairs and routine maintenance to rain catchments and other drinking water infrastructure at this time.