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INDONESIA

Impact Monitoring of Hydrometeorological Hazards

July – September (Q3) 2022

November 2022

A Joint Bulletin by:



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Key Messages

Climate Situation – Q3 2022: From July to September 2022, rainfall across Indonesia was higher than the thirty-year long-term average. This was the result of the early start of the rainy season in combination with the persisting La Niña phenomenon. Most areas in Jawa, Sulawesi, Kalimantan, Maluku, Papua and the southern part of Sumatera experienced rainfall above normal condition, while the northern parts of Sumatera, Kalimantan and Papua experienced rainfall below normal resulting in drier conditions compared to the long-term average.

Impact of Climate and Hydrometeorological Disasters on Agriculture: The Ministry of Agriculture reported that floods and droughts were the primary causes of paddy crop disturbances in August 2022. Both floods and droughts affected a total of 1,500 hectares of paddy cultivation. Around 80% of paddy cultivation disturbances were caused by floods; 20% of flood disturbances resulted in crop failures.

Status of Food Security and Nutrition: The National Food Agency has reported that most provinces were food secure in August 2022. Thirty-one provinces were found to be stable, while three provinces were under watch for possible deterioration of food security and nutrition. These include Nusa Tenggara Timur, Kalimantan Barat and Sulawesi Barat.

Impact of Disasters – Q3 2022: The National Disaster Management Agency reported that at least 634 disasters occurred between July and September 2022, which represents a 35% increase compared to the same period in 2021. Most disasters were caused by hydrometeorological hazards including floods, droughts, landslides, extreme weather (e.g., storms and cyclones). Forty percent of all disasters took place in Jawa Barat, Aceh, and Jawa Timur.

Rice Production – Jan to Sep 2022: Statistics Indonesia (BPS) reported that between January and September rice production reached 26.1 million tonnes. Compared to the same period in the previous year, the harvested areas and rice production only slightly decreased by 0.86% and 0.22% respectively. Overall, BPS estimates that national rice production will be 32 million tonnes by the end of the year representing an increase of 2.3% compared to 2021.

Climate Forecast on Agriculture: The National Research and Innovation Agency (BRIN) predicted that 5.4 million hectares of paddy cultivation will receive more rainfall between October and December 2022 than the thirty-year long-term average. More than 80% of the paddy cultivation areas in Jawa are predicted to experience rainfall above normal condition. This poses a risk of floods and pest disturbances, which can lead to crop failures.

Climate Outlook – Nov 2022 to Jan 2023: The La Niña phenomenon is still ongoing and forecasted to continue, despite with a weaker effect until the end of the year. The current La Niña phenomenon has continued to prevail for three consecutive years since 2020 (Triple-dip La Niña). Latest trends show that ENSO anomalies are now occurring once every 2-3 years. Before 1980, these events only happened once every 5 years. Increased rainfall is expected in Jawa, Nusa Tenggara, Sulawesi, Maluku and Papua. Rainfall in Sumatera and Kalimantan is expected to be normal, while below normal rainfall is predicted in Sumatera Barat, Riau, Kalimantan Barat and Kalimantan Tengah.

Media Reports

Bulog Papua: In Merauke, replenishment of rice stocks has proven to be challenging due to crop failures



(20/07/2022) ANTARANEWS.COM - The Head of Bulog in the Regional Office of Papua and West Papua, Raden Guna Dharma said that due to crop failures in Merauke Regency, replenishment of rice stocks in the first and second quarters only reached 50 percent of the target of 32,000 tonnes,

Bulog had to import 2,000 tonnes of rice from South Sulawesi to ensure available stocks. "Thankfully, for now, we have a stock of 28,000 tonnes of rice to ensure food security for the next 3.5 months based on per capita consumption in both regions," he said. [1].

Lanny Jaya Regency Government & the Ministry of Social Affairs distribute food assistance due to the frost disaster



(07/08/2022) ANTARANEWS.COM - The Ministry of Social Affairs and the Lanny Jaya Regency Government distributed food assistance to 548 people in the remote district of Kuyawage (Lanny Jaya, Papua) due to the frost disaster which affected their crops.

In addition, the Lanny Jaya Regency Government also sent health workers to provide medical treatment for residents who were starting to get sick. [2].

Food prices rise. The National Food Agency will issue reference prices for consumers and producers



(10/08/2022) KOMPAS.COM - The National Food Agency (NFA) is currently in the process of determining reference prices for both producers and consumers. "Hopefully, we can publish these soon, so that they can become a reference for producers, consumers and traders," said Risfaheri, Acting Deputy for Food Availability and Stabilization (NFA).

The concern of the NFA is that farmers must continue to make profit. If farmers are not making profit, then the availability of production will be threatened. Meanwhile, the NFA must contain inflation as to not affect people's purchasing power. "This is a concern for us at the NFA. How do we set prices taking into consideration both the producer and consumer sides," said Risfaheri [4].

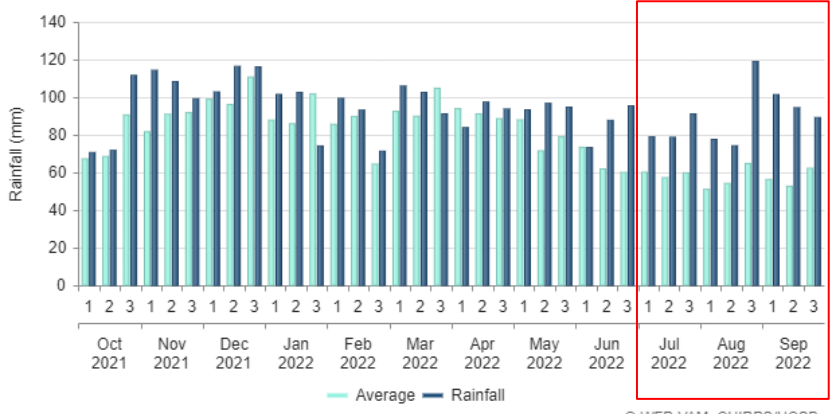
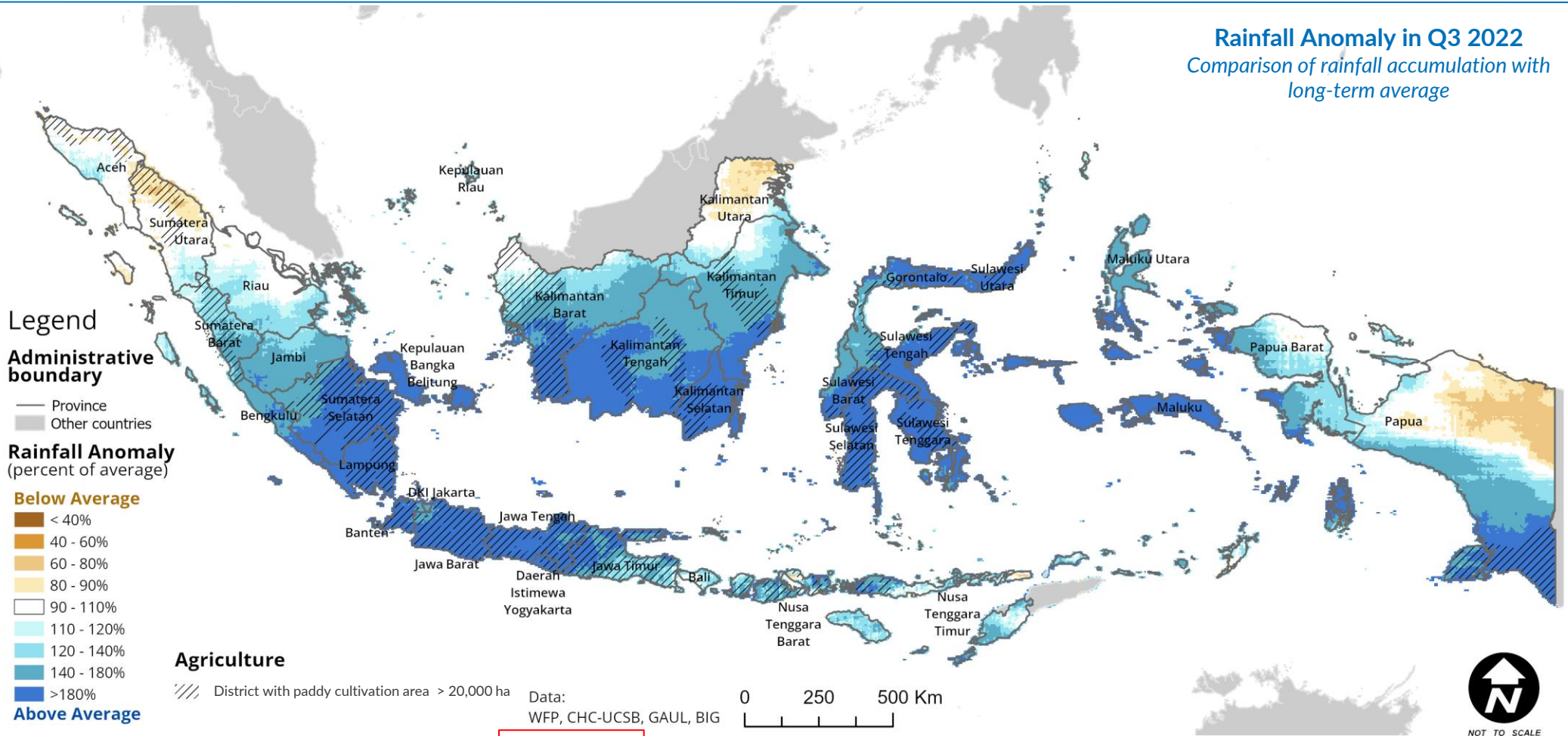
BMKG: Watch Out for Triple-dip La Niña Phenomenon

(16/10/2022) TEMPO.CO - Dwikorita Karnawati, Head of the Meteorological, Climatological, and Geophysical Agency (BMKG), stated that Indonesia should watch out for the 2020-2023 Triple-dip La Niña that threatens several countries worldwide.

The public, central government, and regional governments should be wary of hydrometeorological disasters, such as floods, strong winds, extreme weather, and landslides. Karnawati explained that La Niña started in mid-2020 and is estimated to continue until the end of 2022, potentially even the start of 2023. The Triple-dip La Niña had previously occurred only twice from 1973 to 1975 and from 1998 to 2001. The current phenomenon is likely to affect weather and climate patterns in Indonesia, including an early start of the rainy season across nearly half of the country. Karnawati warns to be alert for diseases that usually emerge during the rainy season, such as diarrhea, dengue fever, leptospirosis, acute respiratory infections (ARI), and skin diseases [3].

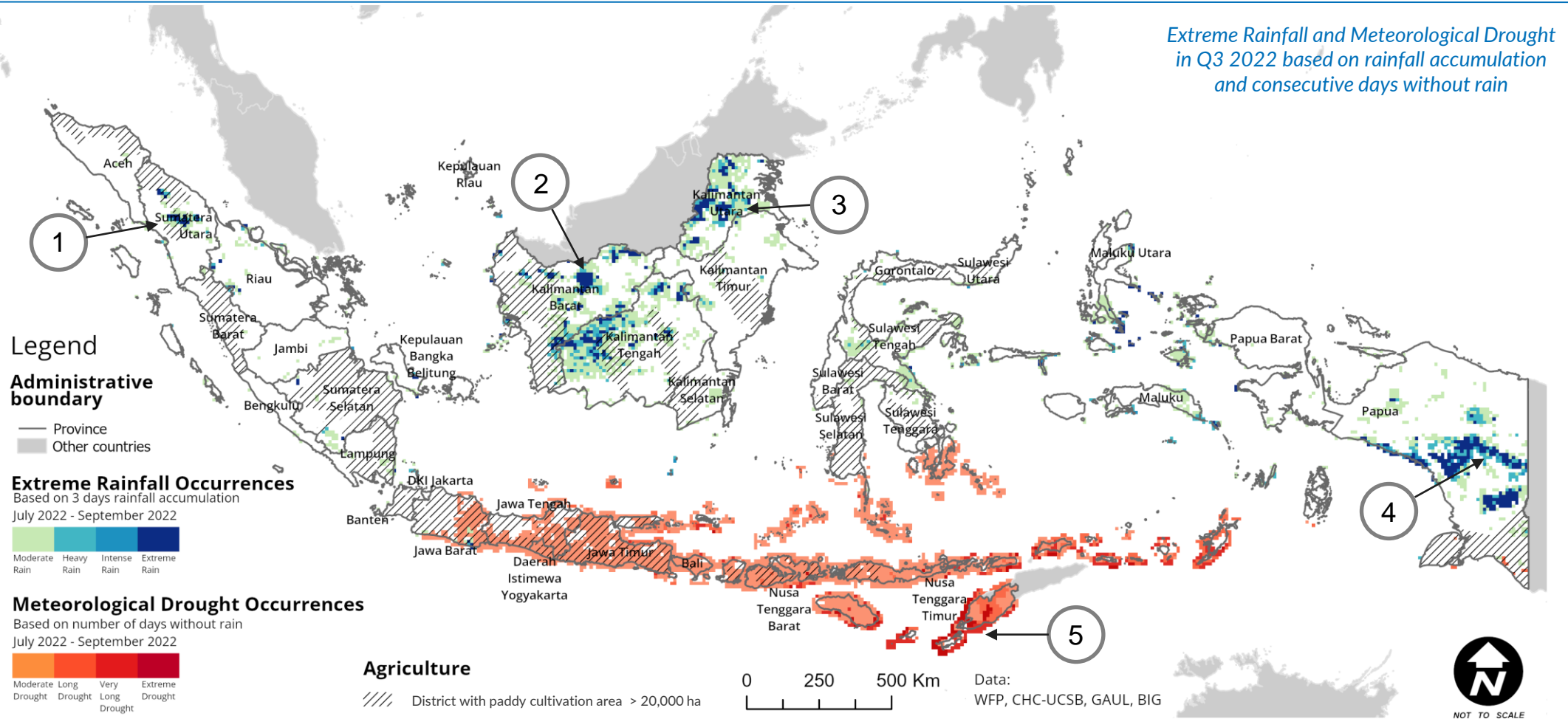
Rainfall Anomaly: July – September 2022

Rainfall Anomaly in Q3 2022
Comparison of rainfall accumulation with long-term average



From July to September 2022, rainfall across Indonesia was higher than the long-term average (30 years). The amount of rainfall started to increase significantly in the 3rd week of August indicating that most areas entered the rainy season early. Most areas in Jawa, Sulawesi, Kalimantan, Maluku, Papua and the southern part of Sumatera experienced rainfall above average due to a combination of early rainy season and persisting La Niña phenomenon. Contrary to this, the northern parts of Sumatera, Kalimantan and Papua experienced below average rainfall resulting in drier conditions compared to the long-term average.

Meteorological Events: Extreme Rainfall and Meteorological Drought

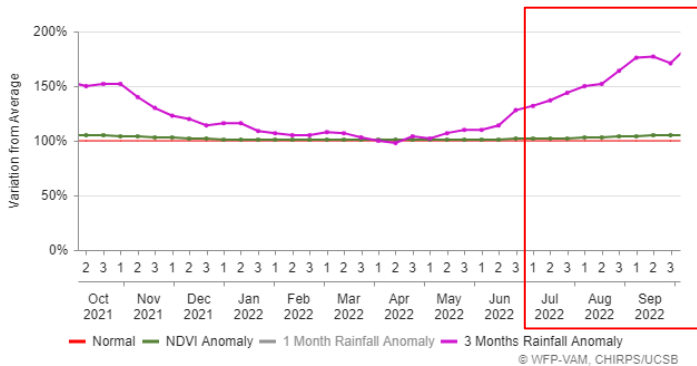
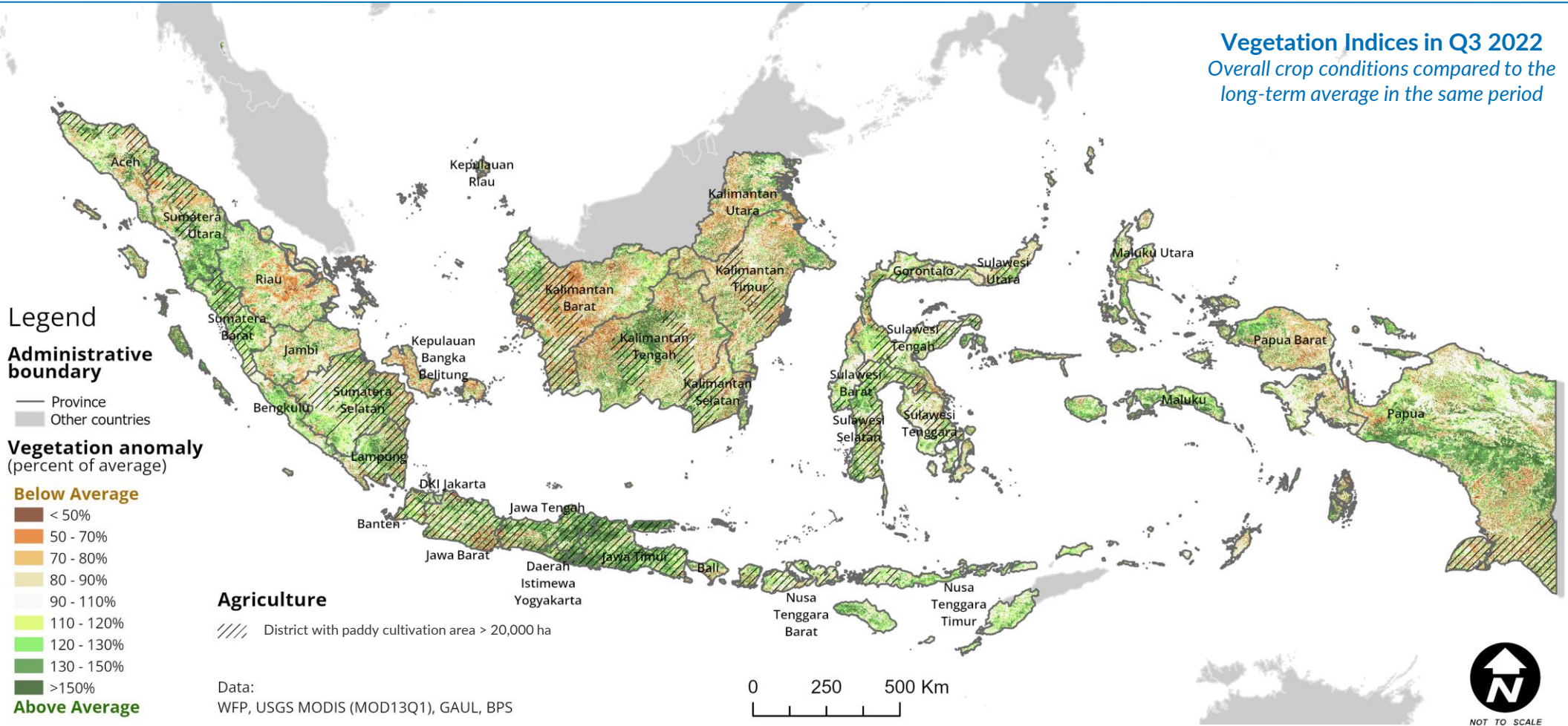


From July to September, extreme rainfall (based on 3-day rainfall accumulation) was detected in Sumatera Utara, Kalimantan Barat, Kalimantan Tengah, Kalimantan Utara and Papua. The occurrence of these events is associated with the early onset of the rainy season and the ongoing La Niña phenomenon. As indicated by circles on the map, the incidence of localised extreme rainfall caused floods and landslides in the districts of Toba (1), Sintang (2), Nunukan (3), Yahukimo (4).

At the same time, moderate meteorological droughts (>30 days without rainfall) were also observed in Jawa Barat, Jawa Tengah, D.I. Yogyakarta, Jawa Timur, Maluku and Nusa Tenggara. Some events of extreme drought occurred in the districts of Sumba Timur and Kupang where the period of consecutive dry days or days without rain exceeded more than five months (5).

Crop Monitoring: Overall Vegetation Situation in Q3 2022

Vegetation Indices in Q3 2022
Overall crop conditions compared to the long-term average in the same period



In Q3 2022, the Vegetation Index (VI) across Indonesia varied compared to the twenty-year long-term average. Higher VI figures represent an increase in vegetation greenness, which correlates with healthy vegetation or crop coverage. On the contrary, low VI indicates less biomass and lower vegetation density.

Above average VI were detected in Jawa Tengah, Jawa Timur, Sumatera Utara, Sumatera Barat, Kalimantan Tengah, and Papua. Meanwhile, below average VI were found in Riau, Kalimantan Barat, Kalimantan Utara, Kalimantan Timur, Papua Barat, eastern parts of Sumatera Utara, southern parts of Aceh, Jawa Barat and Papua.

Paddy Cultivation Disturbances by Floods and Droughts: August 2022



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https://www.yunbaogao.cn/report/index/report?reportId=5_32008

