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Foreign Agricultural Service
Global Market Analysis
International Production Assessment Division
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Commodity Intelligence Report

BURMA RICE: SITUATIONAL OVERVIEW 2023/24 WET SEASON CROP

USDA estimates Burma rice production for marketing year 2023/24 at 11.95 million metric tons (milled basis), up 1 percent from last year. Harvested area is estimated at 6.86 million hectares, up 1 percent from last year. Yield is estimated at 2.72 tons per hectare, up marginally from last year. Burma's rice production accounts for 2.3 percent of global production, however its share of global exports is higher—3.5 percent (Figure 1).

Rice is the staple diet in Burma and accounts for the largest area of crops sown in the country (Figure 2). Most of the Burmese population that reside in the rural areas (70 percent of the total population), consume rice three times per day. In contrast, the Burmese population in the urban areas (30 percent of the total population), consume rice mostly two times per day. To achieve domestic consumption demand, two rice crops are produced in Burma annually, the first in the summer monsoon season (wet season) and the second in the winter months (dry season). Geographically, Burma has four principal agroecological zones: Delta, Central Dry, Coastal, and Hilly and Mountainous (Figure 3). Due to climatic conditions and rice ecosystem types (lowland rainfed, deepwater submerged, irrigated lowland, and rainfed upland) cultivation occurs at different periods. The predominant production period is during the southwest monsoon season, or wet season, from June to October, when 85 percent of the rice is produced. A large portion of lowland rainfed, deepwater submerged and irrigated lowland rice is cultivated in southern Burma known as the Delta agrocecological zone, which accounts for 55 percent of total production. The Delta zone is comprised of 4 regions: Ayeyarwady, Bago, Yangon, and Mon State. The Ayeyarwady Region accounts for the highest share of Burma rice production at roughly 30 percent (Figure 4).

Cultivation for the wet season in the Delta, Coastal, and Central Dry agrocecological zones coincides with the monsoon season rains, which begin in June and end in August, and harvest occurs in November through December. Though the monsoon season provides ample rainfall, irrigation practices are common as a supplemental water source during the wet season for the lowland rice areas. Cultivation for irrigated lowland rice typically begins in July after the start of the wet season and extends to October. The secondary rice crop is produced in the dry season from November to March and is largely dependent on water availability. Irrigated lowland rice is cultivated in southern Burma regions during the dry season. If water is abundant, cultivation of upland rice is mostly produced in the Hilly and Mountainous zone regions (Shan State

and Chin), however, upland rice can also be cultivated in the Central Dry zone regions (Magway and Mandalay). (Figure 5)

In late April 2023, a delayed start to the rainy season prompted rice farmers to delay cultivation operations for the main season rice in the Delta zone region, most notably in Ayeyarwady and Yangon (Figure 6). Inconsistent seasonal rainfall in this region throughout the growing season negatively impacted early rice growth and development (Figure 7). According to the rice growing outlook reports from the Association of South East Asia Network Food Security Information System (AFSIS), rice planting progress pace was slower compared to last year up through July, due to lack of water availability. In August, however, heavy monsoon rainfall benefited later planted crops. Consequently, the heavy rainfall resulted in localized flooding in southern Burma and river basin areas which caused rice crop damages (Figure 8). Though some areas were replanted, it wasn't enough to offset rice area loss. As of September, planting for the wet season rice was reported at 5.7 million hectares according to monthly progress reports from AFSIS, up from 5.6 million hectares in 2022/23. The national planting plan for the 2023/24 wet season was reported at 6.07 million hectares, unchanged from 2022/23.

In early October torrential rainfall in amounts greater than 400 millimeters was observed over a 4-day period which led to widespread flooding in the Delta zone, most notably in the Bago and Yangoon provinces. (Figure 9) According to preliminary reports from the Myrammar Rice Federation (MRF), an estimated 40 thousand hectares of rice fields were inunadated with water and another 12 thousand hectares of rice were flooded for a short time then recovered. Though rice hardiness can withstand short periods of being submerged in water, the longer rice is inunadated the more susceptible it is to damage. Flood analysis using satellite derived remote sensed methodologies supports MRF estimates, as rice was still submerged in water one week after the start of the rainy event. (Figure 10, Figure 11) The damages in rice area has been taken into account in USDA's estimates.

Burma's national plan for the 2023/24 dry season rice crop has yet to be released. Though seasonal rainfall underperformed, heavy rains observed in late August could benefit irrigation supplies. As the rainy season ends, surplus rainfall through October would generate a good start to the dry season rice crop.

Contributions from USDA-FAS' Office in Rangoon are gratefully acknowledged.

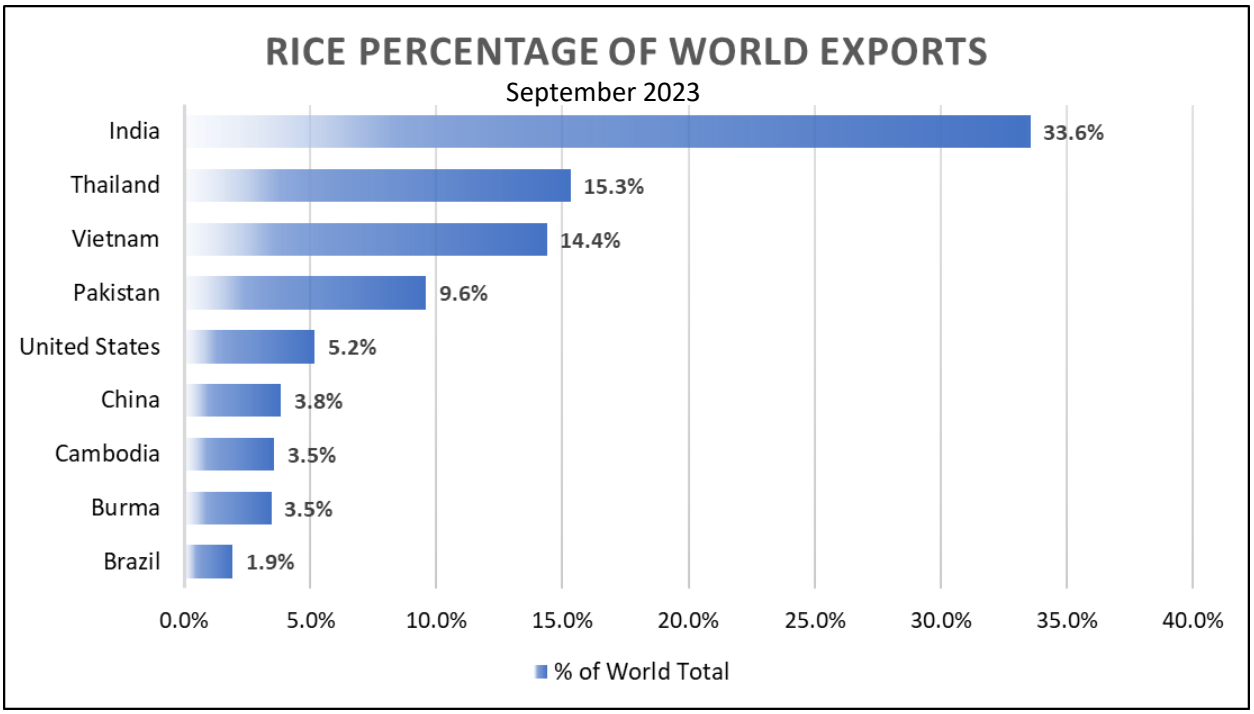


Figure 1. Burma exports 3.5 percent of rice on a global scale. Source: United States Department of Agriculture PSD Online

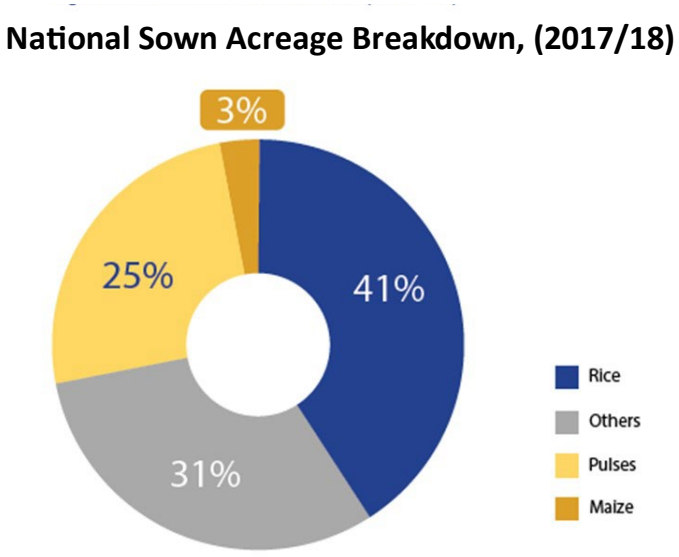


Figure 2. Burma's national sown area breakdown by crop type. Source Central Statistics Organization, Myanmar, 2018

Major Crops by Zone on the Map of Burma

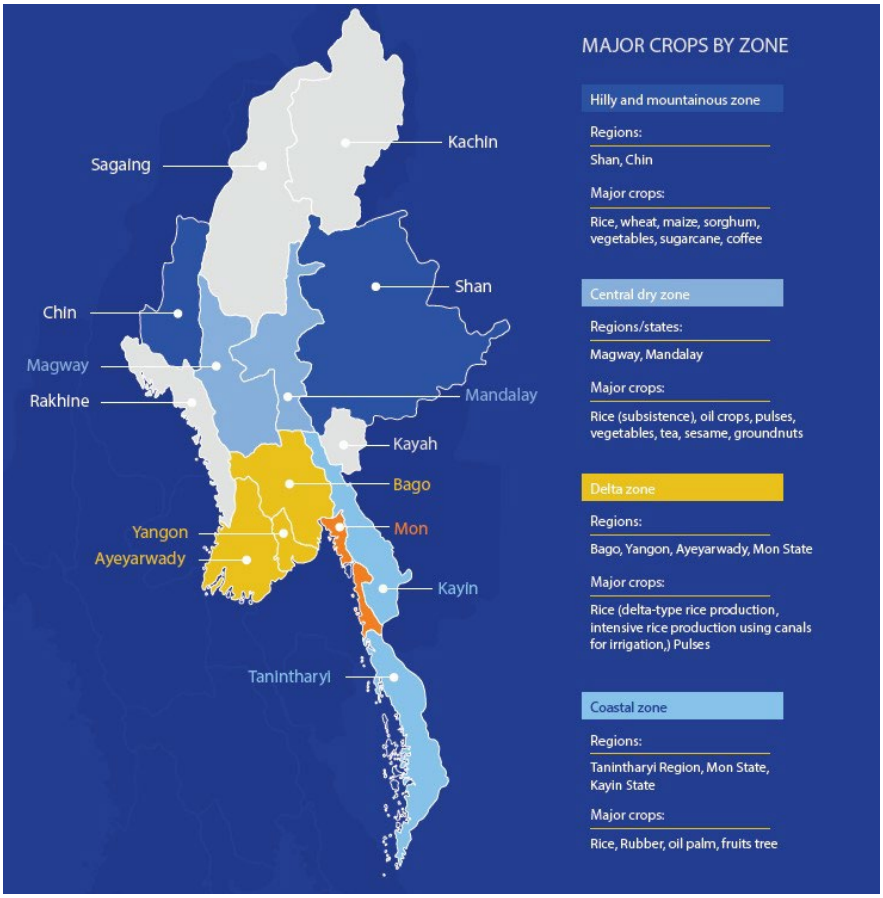


Figure 3. Burma has four principal agroecological zones. Each zone grows different crops based on climatic conditions, however rice is largely produced in the Delta zone. Source: Central Statistics Organization, Myanmar, 2018

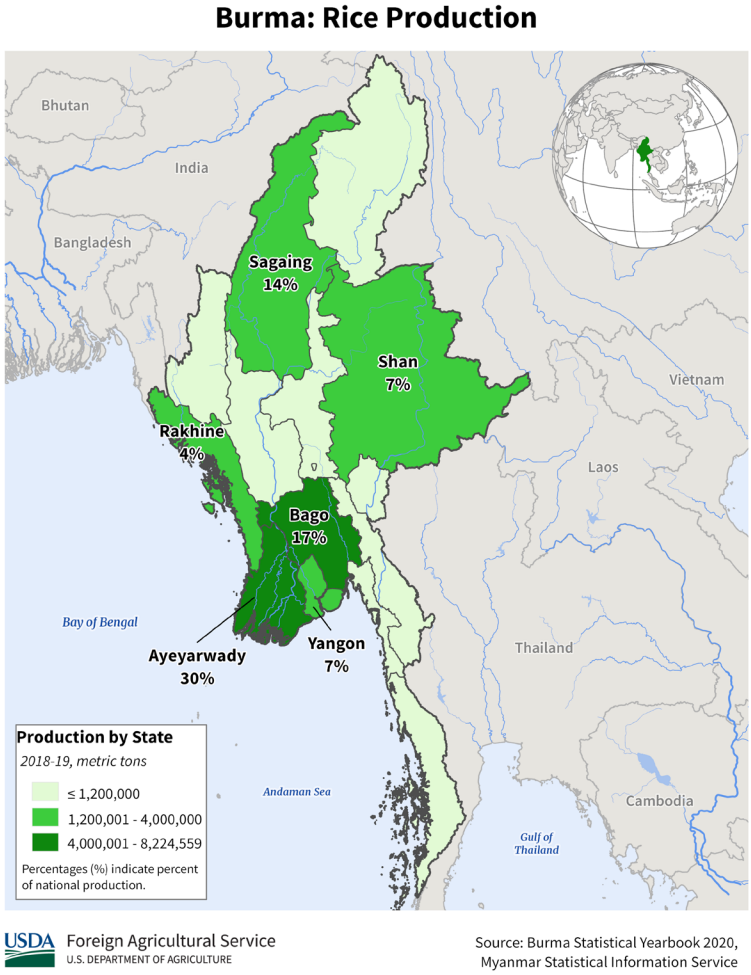


Figure 4. Burma crop production map highlighting major rice producing regions. Source: Myanmar Statistical Information Service

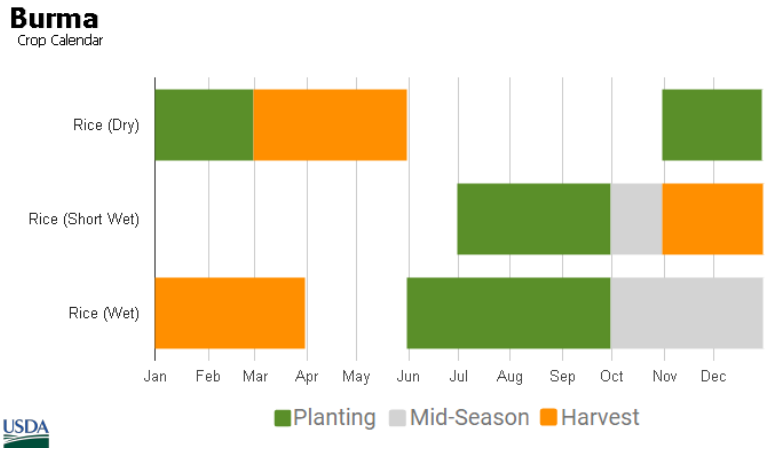
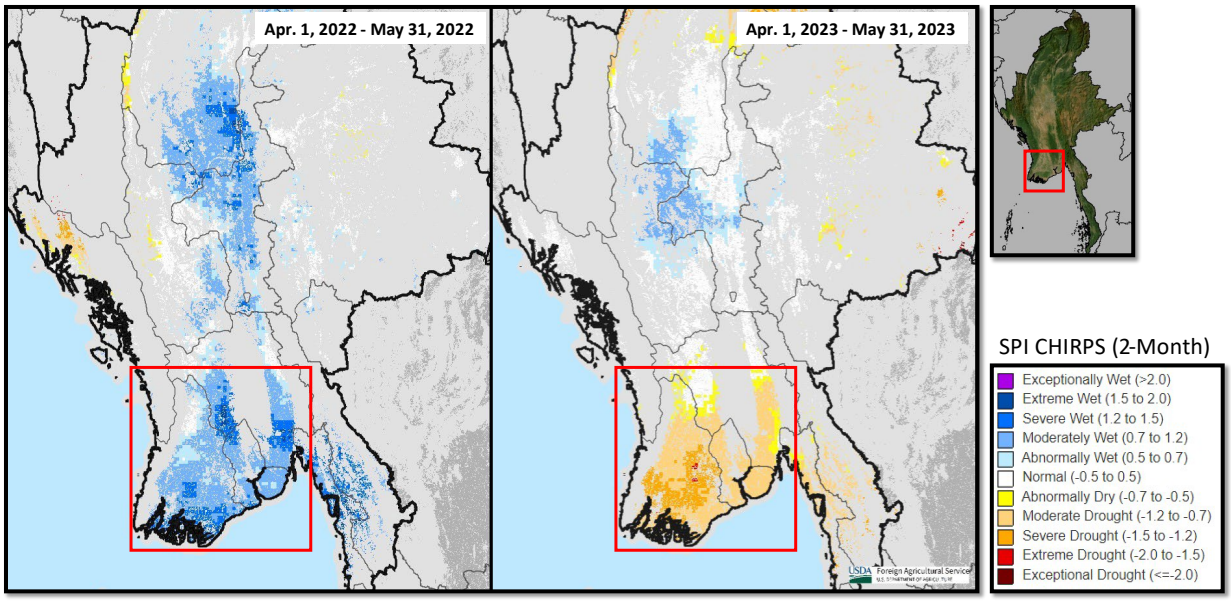


Figure 5. Burma crop calendar for rice. Source: Myanmar Statistical Information Service



Source: ESRI Sentinel-2 Non-Cropland Mask 2020 (10m), SPI CHIRPS

Figure 6. Delayed rainfall from April through May 2023 in the rice belt (right frame) led to delayed planting as compared to last year when surplus rains prompted an early start to the rice crop season (left frame). Source: ESRI Sentinel-2 Non-Cropland Mask 2020 (10m), Standardized Precipitation Index (SPI) Climate Hazards Group InfraRed Precipitation with Station data (CHIRPS)

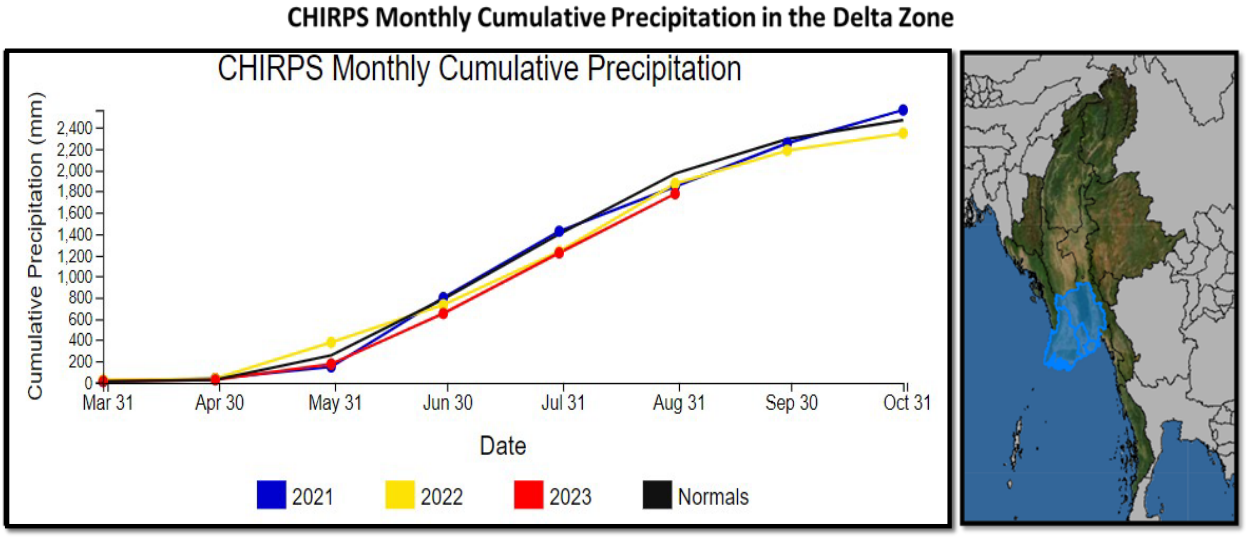


Figure 7. Inconsistent rainfall in the Delta Zone negatively impacted yield potential for the wet season rice crops. Source: UCSB CHIRPS

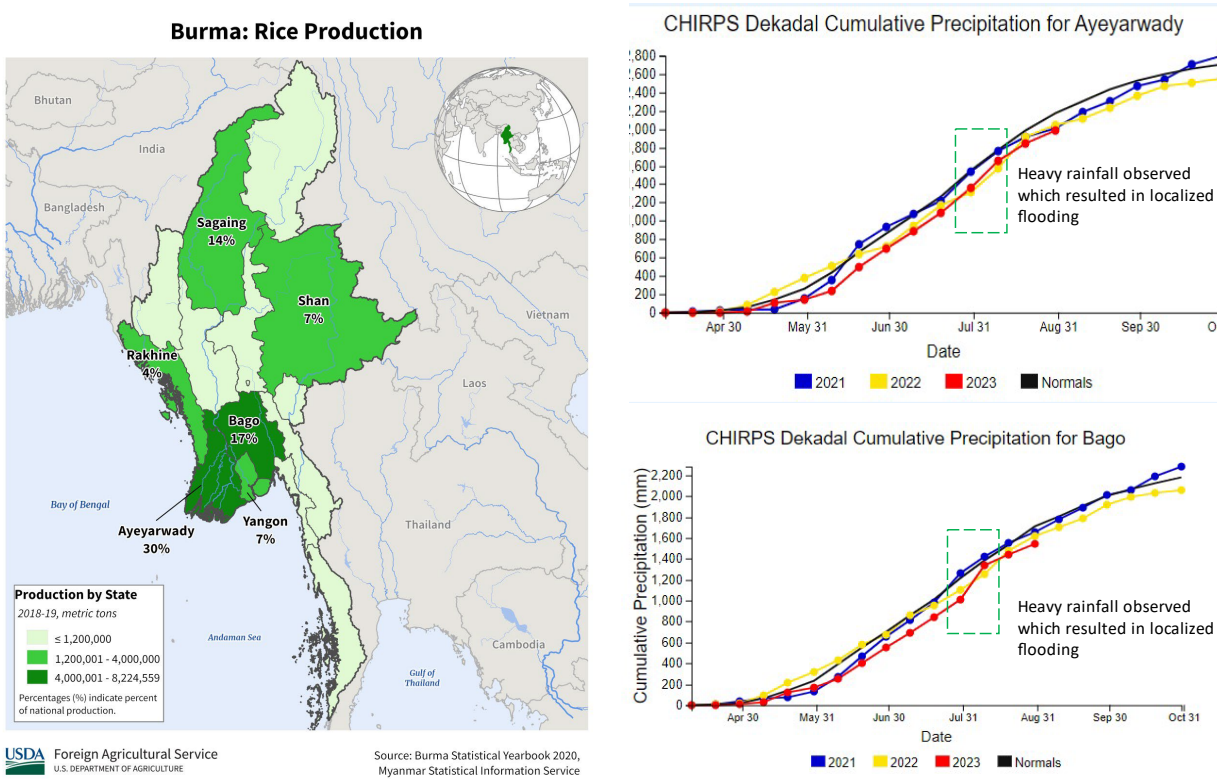


Figure 8. Heavy rainfall observed in August 2023 benefited later planted rice, although the heavy rains resulted in localized flooding. Source: UCSB CHIRPS

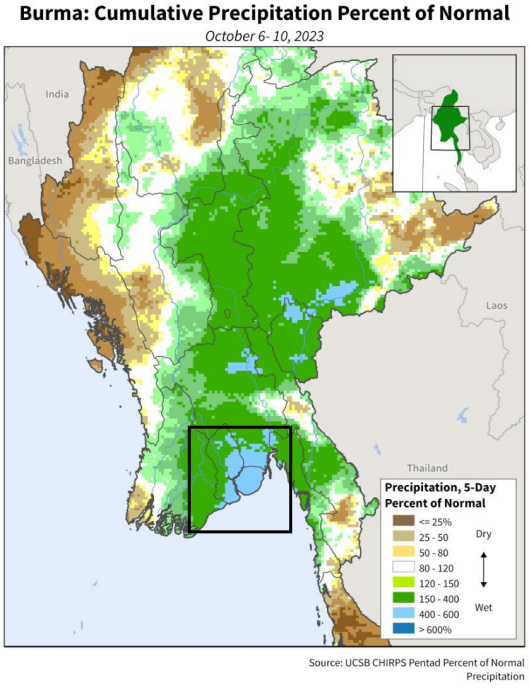


Figure 9. Excessive rainfall event led to widespread flooding. The flooding was mainly concentrated in the Bago and Yangon regions. Source: UCSB CHIRPS

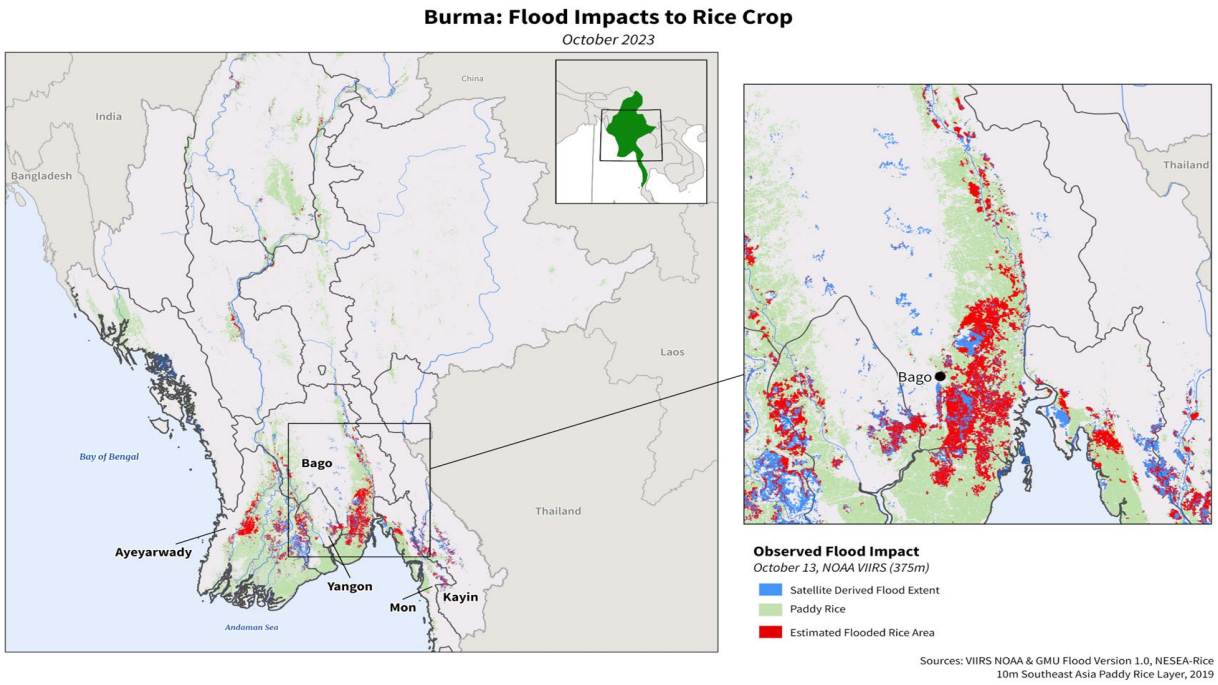


Figure 10. Satiellite derived menthodologies depict flooded rice areas observed on October 13, 2023, which are represented by the red pixels. Source: VIIRS NOAA & GMU Flood Version 1.0, NESA-Rice 10m Southeast Asia Paddy Rice Layer, 2019

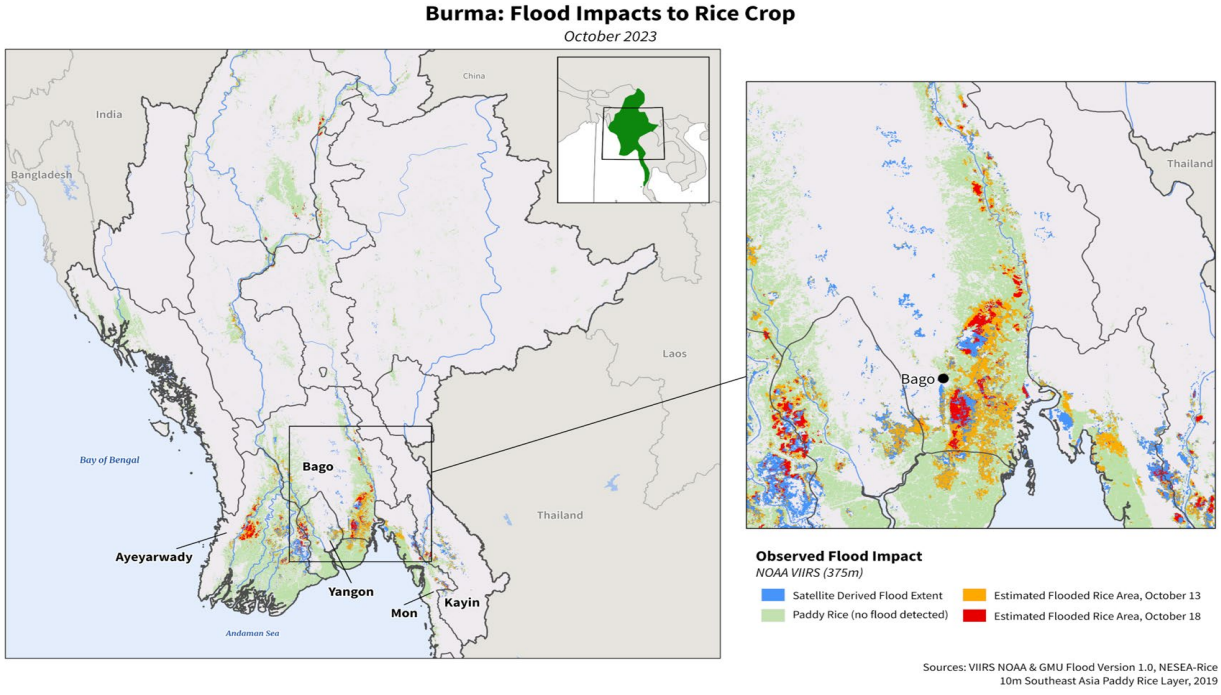


Figure 11. Satiellite derived menthodologies depict flooded rice areas observed on October 13, 2023 (red pixels) compared to rice areas still inunadated on October 18, 2023 (orange pixels).

Source: VIIRS NOAA & GMU Flood Version 1.0, NESA-Rice 10m Southeast Asia Paddy Rice Layer, 2019

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