

Voluntary Report – Voluntary - Public Distribution

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Report Name: The Impact of Drought on Agriculture in 2020

Country: Thailand

Post: Bangkok

Report Category: Grain and Feed

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Report Highlights:

Analysts predict that the current severe drought in Thailand will cause losses in agricultural production estimated at approximately 26 billion Thai Baht (U.S. \$840 million), mainly due to reduced MY2019/20 off-season rice production. The drought is also expected to affect off-season field crops, fruit trees, and freshwater fish farming production but to a much lesser degree than for rice.

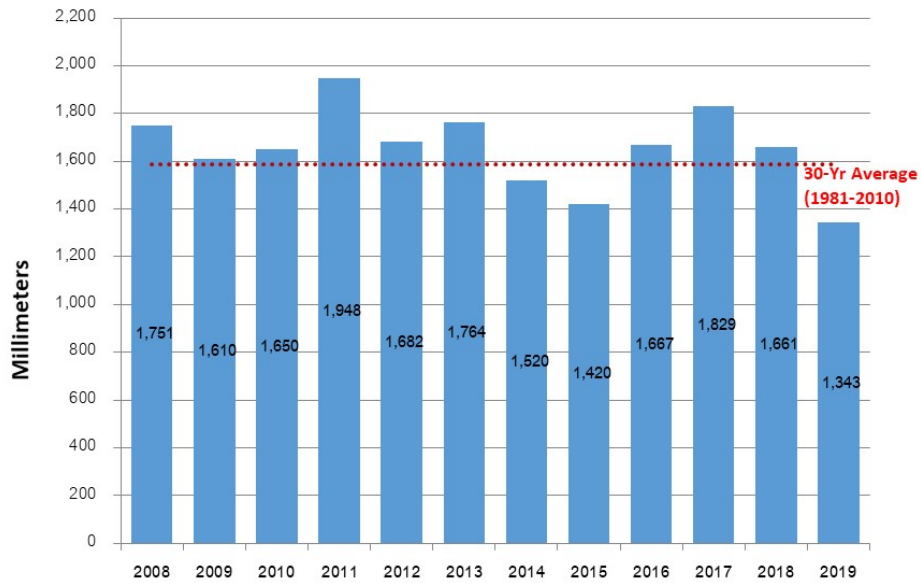
Executive Summary

Thailand is facing its second worst drought in a decade with estimated losses of approximately 26 billion baht (U.S. \$840 million) in agricultural production, mainly due to reduced off-season rice production. MY2019/20 off-season rice production is expected to decline 40 percent from MY2018/19 as the government has already restricted irrigation supplies for rice production. In addition, around 0.2 million rai (32,000 hectares) of field crops and fruit trees are reporting declined production due to the drought, particularly for MY2019/20 off-season corn production, which accounts for around 15 percent of total corn production. Aquaculture production has also declined significantly, particularly for cage-culture fish farming, which accounts for approximately 10 percent of total freshwater fish farms.

Drought Situation

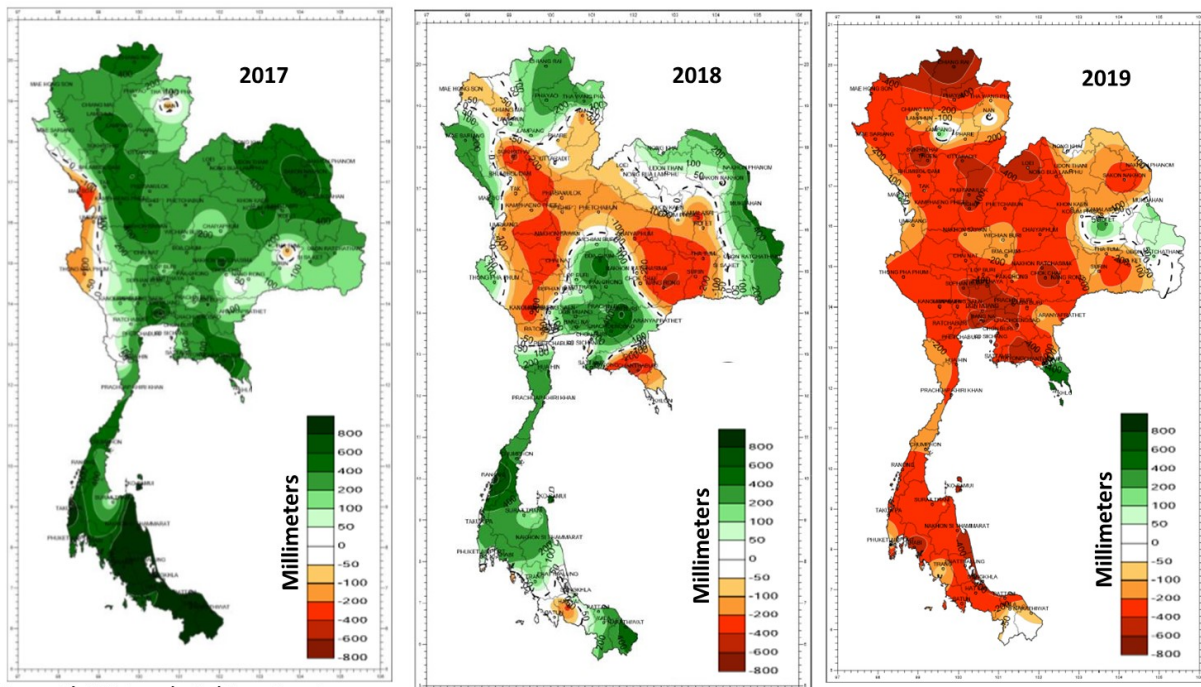
Current water supplies in Thailand are critically low due to adverse weather conditions in 2019, which saw precipitation levels 15 percent below the normal average and 19 percent lower than the previous year's levels (Figure 1 and 2). The Royal Irrigation Department reported that, as of January 30, 2020, water supplies in major reservoirs totaled 3.8 billion cubic meters, down 60 percent from the same period last year. The government has restricted irrigation supplies for rice production to ensure enough water supplies for household consumption and ecological management until June 2020.

Figure 1: Annual Rainfall in Thailand



Source: Thai Meteorological Department

Figure 2: Precipitation Anomaly in 2018 and 2019



Source: Thai Meteorological Department

The government set the plan for MY2019/20 off-season crop cultivation at 7.2 million rai (1.2 million hectares) (Table 1). This is a 55 percent reduction from MY2018/19 due to limited water supplies. The plan gave 4.5 million rai (0.7 million hectares) for off-season rice, which is a 60 percent reduction from

the previous year. The remaining rai were for field crops and vegetables, which amounts to a 45 percent reduction from MY2018/19. Actual MY2019/20 off-season rice planting is already at 5.3 million rai (0.8 million hectares), well above the government plan. However, this off-season rice acreage declined 45 percent from the same period last year as the government is strictly controlling the release of irrigation water for rice production due to critically low reservoirs in major rice growing areas (Table 2 and Figure 3). Additional acreage of MY2019/20 off-season rice for the remainder of the dry season will likely be limited, particularly for new off-season rice planting after the harvest of the first off-season rice in February 2020 as the government announced that it will not supply irrigation for rice between February – May 2020.

Table 1: Government’s Off-Season Cultivation Plan

Unit: Million Rai	MY2018/19	MY2019/20	% Change
Irrigate Area	10.5	2.83	-72.9
Rice	8.0	2.31	-71.2
Field Crops and Vegetable	2.4	0.52	-78.6
Non-Irrigated Area	5.6	4.38	-22.1
Rice	3.2	2.23	-29.9
Field Crops and Vegetable	2.4	2.15	-11.9
Total	16.1	7.2	-55.2
Rice	11.2	4.5	-59.5
Field Crops and Vegetable	4.9	2.7	-45.2

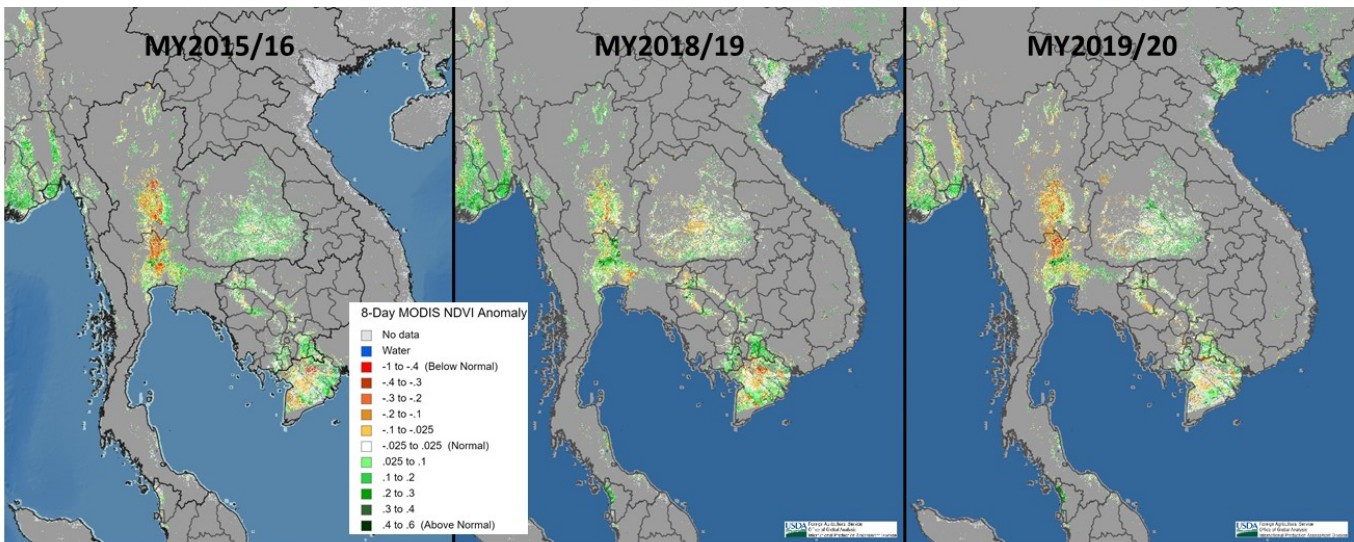
Source: Ministry of Agriculture and Cooperatives

Table 2: Off-Season Rice Planting Progress

Unit: Million Rai	Off-season Rice Crop Progress, as of February		
	MY2018/19 (Feb 6,2019)	MY2019/20 (Feb 5,2020)	% change
Irrigated Areas	7.690	3.380	-56.0
Non-Irrigated Areas	2.020	1.960	-3.0
Total Planted Areas	9.710	5.340	-45.0

Source: Ministry of Agriculture

Figure 3: Normalized Difference Vegetation Index for Off-Season Rice Crop in MY2015/16, MY2018/19 and MY2019/20, as of February 1



Source: FAS/USDA Global Agricultural & Disaster Assessment System

Estimated Agricultural Production Losses from Drought

The Ministry of Agriculture and Cooperatives reported that around 1.3 million rai (0.2 million hectares) of agricultural land were affected by drought during September 2019 – January 2020, accounting for approximately 18 percent of total off-season arable land (Table 3). Most of the affected area was MY2019/20 off-season rice crop, which was planted in November 2019. Around half of the farmers in the affected areas have received financial assistance from the government totaling 624 million baht (U.S. \$20 million).

Table 3: Agricultural Areas Affected by Drought, as of February 1, 2020

Affected Crops	Affected Area (Rai)
Off-season rice (MY2019/20)	1,168,883
Field crops (MY2019/20 Off-season Crops)	158,795
Others (Fruit and Vegetable Crops)	778
Livestock and Fishery	-
Total	1,328,456

Source: Ministry of Agriculture and Cooperatives

The drought in MY2019/20 will be the second most severe drought (after MY2015/16) in a decade with losses in agricultural production estimated at approximately 26 billion baht (U.S. \$840 million), which accounts for around 0.2 percent of GDP (Table 4). Most of the losses are likely to occur in MY2019/20 off-season rice production, which is expected to decline to 3.2 million metric tons. This is a 40 percent reduction in MY2019/20 off-season rice production from MY2018/19 with estimated losses of approximately 25 billion baht (U.S. \$1.2 billion). The reduced off-season rice production accounts for around 10 percent of total rice production, and most off-season rice production is for export. The shrinking exportable rice supplies triggered a surge in export prices of Thai white rice to U.S. \$425-430/MT between January - February 2020, up approximately 10 percent from the same period last year. Vietnamese and Indian rice prices were U.S. \$70-80/MT cheaper making Thai rice less competitive in the international market, which will likely cause a further reduction in Thai rice exports to 7.5 million metric tons in 2020, down 1 percent from 2019.

Table 4: Estimated Impact of Drought on Agriculture

MY2019/20	Production Losses (Million Baht)
Off-season rice	25,210
Field Crop (corn and cassava)	730
Fruit Trees	85
Freshwater Fish Aquaculture	35
Total	26,060

Source: FAS Estimate

In addition to the reduced MY2019/20 off-season rice production, around 0.2 million rai (32,000 hectares) of field crops are reportedly affected by the drought, particularly MY2019/20 off-season corn. Roughly 25 percent of MY2019/20 off-season corn acreage was affected by the drought. MY2019/20 off-season corn production, which accounts for 15 percent of total corn production, is expected to decline to 0.7 million metric tons, down approximately 23 percent from MY2018/19. Additionally, aquaculture production is reportedly affected by the drought, particularly for cage-culture fish farming along the rivers, which accounts for around 10 percent of total freshwater fish farming production. Farmers reduced their farming densities by 30 percent in the northern region in response to current low water levels.

On January 7, 2020, the Cabinet approved a budget of 3.1 billion baht (U.S. \$99 million) out of the proposed budget of 6 billion baht (U.S. \$194 million) for immediate nationwide drought mitigation efforts within the next 3 months. The program aims to increase water supplies for household consumption by expanding underground water facilities for communities. The Cabinet also agreed to increase the allocation of irrigation water by 5 percent from the initial allocation of 17.7 billion cubic meters for the MY2019/20 off-season crop cultivation plan.

End of report.

Attachments:

No Attachments.