

## Chapter 4 Focus

### 4.1 Rice situation in South and Southeast Asia

The present CropWatch bulletin puts the world rice production of 2012/13 (leading to 2013/14 marketing year) at 739 million tons (480 million tons milled equivalent for an extraction rate of 65 percent), an increase of 1.6 percent over the previous season, largely due to expanded areas that compensated for adverse weather in many locations.

Most of the rice production takes place in the Asia-Pacific region, where rice is the major staple food and where cropping intensities sometimes reach 300 percent. Of the global rice areas, 31 percent is harvested in Southeast Asian countries (6). However, rice production, especially in Southeast Asia, is generally constrained by several factors, including weather fluctuations, natural disasters, insect-pest and weed management, limited resources, and technologies and mechanization, not to mention the shortage of natural resources such as land and water in some countries, especially islands.

#### Crops and weather conditions

The rice season is well advanced in most countries of the region and early estimates mention an expansion in planted area (7). Rice production estimates in Indonesia decrease from the previous year by 2.4 percent. Similarly, the main season rice crop in Vietnam is expected to reduce to 43 million tons (-1.5 percent) due to inconsistent rains and hot weather from mid-January to March 2013, tropical storms, and an outbreak of pests and diseases in March and April, 2013 (8). In the Philippines, the bureau of agricultural statistics reported that rice production from January to June 2013 surpassed the 2012 production by 1.3 percent, while Western Visayas and Mimaropa reported declines in production due to extremely hot weather and insufficient water supply (9). In September 2013, growing conditions are reported as adequate, as the monsoon maintained good moisture across most of the region. According to (10) rice growing conditions were mostly favorable in India, Bangladesh, Indonesia, and Thailand, while Vietnam as well as the Philippines suffered from excess moisture.

#### Adverse factors

In the recent past, the increase in the number of floods and periods of drought has adversely affected rice productivity in the region. Among countries severely affected by floods are Sri Lanka, India, western Nepal, Cambodia, and the Philippines. In November and December 2012, the Sri Lankan Ministry of Agriculture forecast a 10 percent decline of rice plantation due to heavy rains and flooding, especially in the districts of Batticalo, Trincomalee, and Vavuniya (11). The Corporate Disaster Resource Network (CDRN, India) reported that excessive rain and consequent floods in June 2013 have led to rice production losses in the flood-prone areas of Uttarakhand and Himachal Pradesh, and western Nepal (12) (13). Typhoon Usagi has caused flooding and severe rice damage in many countries. In Cambodia, 120,000 hectares of rice paddies are reported lost due to heavy monsoon rains; the same occurred in the southern part of Itbayat Island, the Philippines (14). By contrast, the rice plantation areas in Vietnam have suffered from drought. Due to the inadequate water in Nepal from April to June, the farmers reportedly are shifting vast areas from rice to vegetable farming (15).

## Production/trade

In 2012/13, the top ten rice producing countries in the world are in Asia (they also include Brazil which ranks the ninth). Next to China, India occupies the world's largest rice plantation area. Recently, India has emerged as one of the world's largest rice exporters, displacing Thailand last year due to the government of India lifting the ban on exports of non-basmati rice after four years. According to data from the Food Corporation of India (FCI), the rice stocks stand at 23 million tons on October 1st, 2013, which is sufficient to cover domestic demand. According to the International Grains Council (IGC), India's 2013 rice exports are expected to reach 9.4 million tons based on stronger global trade and large supplies (16). Vietnam is the world's second largest rice exporter. Rice production in the country mainly occurs in the Mekong River and the Red River delta regions. Vietnam exported about 5.34 million tons of rice in the first nine months of 2013, according to the General Statistics Office of Vietnam (17). It is sharply down because of the strong competition from other major rice exporters (especially Thailand) and lower demand from its major customers, such as China, the Philippines, and Indonesia, due to the improved domestic production. Thailand's rice exports move to a third place due to the government's rice pledging policy, which goals are raising the income of farmers and pushing a higher price of domestic paddy (18) (19). In the first nine months of 2013, Thailand exported only 4.6 million tons of rice because of a drop in Thai jasmine rice and steamed rice export, according to (19). Meanwhile, the Philippines, one of the world's largest rice importers, are seeking to achieve rice self-sufficiency by increased yield and slight expansion in planted area (0.9 percent according to CropWatch estimates). Similarly, Indonesia allocates top priority on increasing self-sufficiency in rice in order to respond to the rise of food prices. The innovative financing programs for smallholder farmers were used to increase rice production in Indonesia. Laos is actually a small net exporter of rice with very low rice imports.

## Policy trends

The Government of Malaysia has announced to establish new granaries focused on the East Malaysia region. The planted area is expected to expand by about 2.5 percent to increase rice production. The rice production is slightly above the previous year's record output, mainly reflecting adequate weather and subsidized farm inputs (20). The world's largest exporters in the history such as the Philippines, Malaysia, and Indonesia have also been more or less consistent importers of rice, which illustrates that food self-sufficiency is not an easily achieved goal (21). For instance, the Indonesian Bureau of Logistics has revealed plans to decrease rice imports this year, based on a rice surplus in the country that is expected to reach around 1.87 million tons by the end of 2013 (22). According to CropWatch, Myanmar will very rapidly become a major player in the agricultural landscape of the region. Rice exports in this fiscal year have reached a 46-year record high, supported by cross border trade with China and Thailand and duty-free rice exports to the European Union (23) (24).

## 4.2 Disasters and extreme events

This section focuses on some extreme geophysical factors that affected the countries monitored by CropWatch in 2013, most prominently cyclones and an exceptional cold spell that impacted crops and eventually the agricultural production in those regions. While many of these extreme factors and disasters have led to intense human suffering and deaths in many areas, the report focuses on factors with direct agricultural impacts. Earthquakes and other extreme factors are not included, as they disrupt human activities, but usually only indirectly affect crop production, for example through the destruction of infrastructure (irrigation channels, dams, and bunds).

### **Tropical cyclones in Asia**

Several cyclones (typhoons, cyclonic storms) have hit Asia this season, including Haiyan in November 2013, one of the strongest storms on record (25), to be reported on in the next CropWatch bulletin.

In early May 2013, the cyclonic storm Mahasen (26) affected Myanmar (27), Sri Lanka, India, Thailand, Indonesia (26), and Bangladesh, where it coincided with Aman rice crop planting. Fortunately, in the other countries, in particular India and Indonesia, the impact occurred before the June crop planting.

August 2013 witnessed the development and growth of Utor (28) (known as Mangkhut in Thailand and Trami in Vietnam) which mostly affected the Philippines (Central Luzon (29)) and China, especially the provinces of Guangdong, Guangxi, Jiangxi, and Hunan. In China, the cyclone caused the largest floods in five decades; over 1.07 million hectares of crops and other plants have been reported damaged (27). While not directly touching land in Thailand and Laos, the cyclone nevertheless “enhanced” rainfall and caused widespread flooding (29).

In September 2013, typhoon Usagi, the second strongest storm in 2013 (30) affected mostly the Philippines and China. In the Philippines (where the storm is known as Odette) significant damage was inflicted on agriculture to the first maize and rice crops (29). In China (29), landfall occurred in Guangdong province. In Cambodia, Usagi led to floods that affected mostly the central provinces (31) (29).

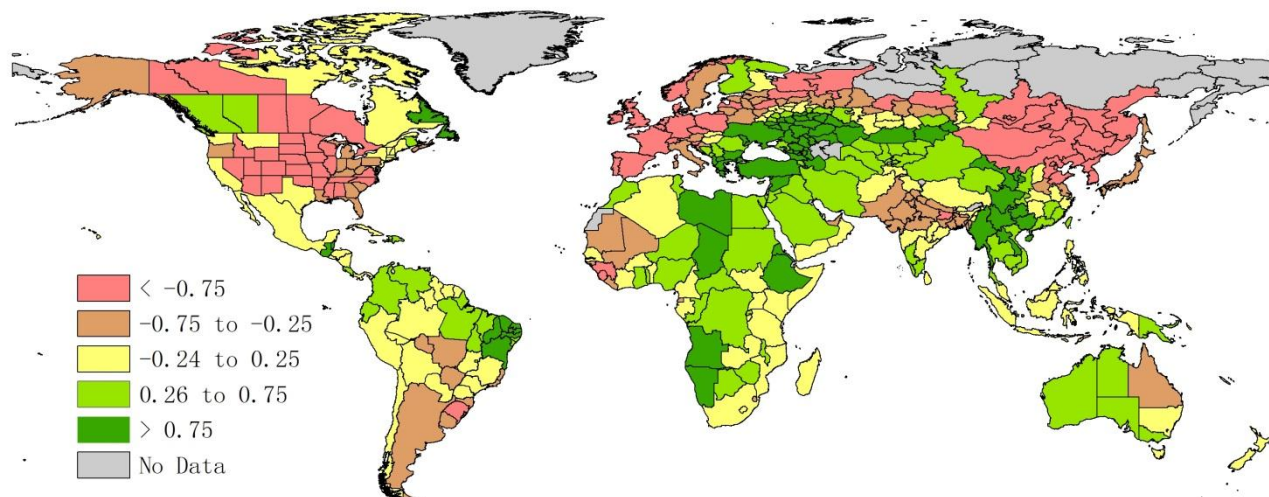
### **Early 2013 cold spell**

A cold wave spell that affected very large areas across the northern hemisphere is one of the major features of 2013. It started actually in December 2012, affecting Bangladesh (northern districts of the sub-Himalayan regions) (29) (32), Kazakhstan (northern, eastern, and central parts (29) (32), and Eastern Europe (32). Cold conditions are also reported for the United States (32), in particular the Midwest (32) and Southwest. In January, extreme cold weather was reported in Tajikistan (29) (32), Belarus (29) (32), north India (which experienced the coldest weather in decades in Uttar Pradesh, Punjab, and Haryana) (29), China (Anhui, Hubei, Jiangsu) (32), and the North American Great Lakes area in the United States (32). In February, again, the northeastern United States reported exceptionally cold weather, while in March the cold affected essentially Poland and the Ukraine (32).

In northeast China, cold weather in March and April—in line with weather in the northern hemisphere, specifically Europe and Russia—led to crop structure changes from soya to corn or spring wheat.

Figure 4.1 shows that the extreme conditions (averaged over the first six months of the year) actually involved some areas in the Southern hemisphere as well.

In August 2013 a more limited cold wave affected western-central South America, with abundant snowfall in five departments in Western Bolivia (29). The unseasonal cold weather and frost also affected Parana State of Brazil, which normally produces close to 50 percent of the wheat output of Brazil (33).

**Figure 4.1 Average temperature index anomaly, January to April 2013 (°C)**

### Floods

Floods were reported for various areas. Although their local impact may be devastating, their spatial extension is usually more limited and often confined to the bottom of valleys. Among floods with explicit agricultural impacts, the Parana and Iguazu Rivers created havoc in the littoral region of Argentina during June and July 2013. The neighboring countries of Paraguay and Uruguay have also been affected by the floods, as has southern Brazil (27) (29).

In Asia, India experienced floods during late June to August, particularly in northwest and northeast parts of the country (34). Landslides occurred over the states of Uttar Pradesh, Uttarkhand, and Himachal Pradesh, also touching Nepal (27) (29) (32). In neighboring Pakistan, floods occurred later, starting in August (Punjab and Sindh) and in September, destroying “hundreds of thousands of acres of crops” (27). In China, floods affected the North-East; in June 2013 they also created damage in the south and the east (Gansu and Sichuan provinces) (32).

In West Africa, floods occurred in late 2012, and again between July and September 2013, destroying farmland in the states of Zamfara, Kogi, and Bauchi in Nigeria (27) (29). Floods also struck large areas in Ethiopia starting in mid-April 2013, causing damage to infrastructure and loss of farmland (29).

In May 2013, floods affected Manitoba, Saskatchewan, Ontario, and Quebec provinces in Canada (32), but the most widely publicized floods are those that touched Colorado in September, exacerbated by a long and exceptional drought that effectively blocked the infiltration of rainfall into the dry soil.

In Eurasia, water excess affected agriculture in eastern Romania (September 2013) (29) and in Russia where August floods, the worst over a century, followed heavy rains which began in July, affecting the Amur Region, Khabarovsk Territory, and the Jewish Autonomous Region (27) (29).

### Drought

Droughts, like floods, occur in seemingly random patterns. In reality, they are often linked through the larger atmospheric circulation and seasonal movements of the monsoon, e.g., in Africa where delays of the start of the rainy season are necessarily associated with an unusually long season in the southern hemisphere. For the current reporting period, South America during September suffered extended wildfires in Cordoba province in Argentina, caused by high seasonal temperatures and strong winds.

15,000 hectares of land have been affected by the fires (27) (35). The same area also includes the Paraguayan Chaco (drought from May to September) (29).

In Africa, according to (36), rainfall was generally below average conditions. As a result, production was less than average in the semi-arid regions in the south and north. Central areas were impacted less, compared to the eastern part of the country, especially after improved rainfall (though still below average) from late August to September in the main maize and wheat growing areas reduced the worst effects of the drought. In Nigeria early season rain was irregular in the northeast. Rainfall was generally below last year's and often below average (36)

In India, rain was below average during July to August over much of eastern parts, mainly in the important rice producing states such as in Bihar, Haryana, and Tamil Nadu. (34). In Indonesia, 2013 also brought a drought, although it did not have a serious effect on rice growth.

In Europe, 2013 did not bring anything comparable with the regional 2012 drought that affected large parts of the Black Sea region, the Balkans and Central Europe (29) (32). The only noteworthy 2013 drought seems to be the one that occurred in Moldova, where a combination of low rainfall and a heat wave caused significant crop losses.

In the United States, the drought that affected Colorado was already mentioned in the context of the September 2013 floods, the destructive power of which partly resulted from the preceding drought period. (32) (27) (37)