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INDUSTRY OUTLOOK

NAVIGATING UNCERTAINTIES: INDIA'S RICE INDUSTRY OUTLOOK

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INTRODUCTION

Rice is the staple food for more than half the world's population. Globally, a half billion metric tonnes of rice is consumed every year. It has been the most common source of human nutrition and calorie intake amongst the Asian populace. Rice is the world's third-most produced agricultural crop behind sugarcane and corn (maize). Rice is extracted from paddy crop and cultivated in both Kharif and in Rabi season in India. Paddy as a Kharif crop is cultivated in autumn season in warmer regions during the monsoon from June to September while as a Rabi crop, it is cultivated during winter-spring season from November to March.

India exports a wide variety of rice, including basmati rice, non-basmati rice, and broken rice. Basmati rice is a premium variety that is prized for its flavour and aroma. Non-basmati rice is the most common type of rice consumed in the world. Broken rice is lower-grade rice that is often used in animal feed and processed food products.



India accounts for approximately 26 per cent of global rice production, consumes approximately 22 per cent of global rice stocks, and contributes around 40 per cent of the world's rice exports¹. India exported a record 22.2 million tons in 2022.

Global Outlook for Rice in 2023

The Food and Agriculture Organisation (FAO), a specialised agency of United Nation leads international efforts to defeat hunger globally, has reported that the global price of rice is at a 15-year high now. The spike in the price of rice stemmed from a constellation of factors. Such factors include:

- Russia halting of participation in the Black Sea Grain Initiative;
- India's decision to cease the export of non-basmati white rice with immediate effect (from July 20, 2023);
- Thailand's declining production;
- Robust demand from the world's top buyers in the Middle East and Europe and
- The onset of El Niño, which typically brings drier conditions to growing areas in Asia.

While rising rice prices partly contributed to higher inflation in major buyer countries, such as, Indonesia and the Philippines, such step increases in the price of rice prices hit hard a wide cross-section of persons in Asia and Africa where rice is the staple food for most persons. The most severe impact of this ban manifested in Bangladesh and Nepal, along with several African nations including Benin, Angola, Cameroon, Djibouti, Guinea, Ivory Coast, Kenya—who are the major buyers of non-basmati rice. The shortage of rice in the global market will have a knock-on effect on wheat, soya beans, corn, and maize, which are consumed as rice substitutes.²

The United States Department of Agriculture (USDA) has projected that the global rice production for 2023-24 at a record 520.5 million tons, up more than 2 per cent from a year earlier, with Bangladesh, the European Union, China, Pakistan, and the United States accounting for most of the expected increase (see Table 1).

Table 1: Major Rice Producing Countries in the World (Milled production in million tonnes)

Country	2022-23	2023-24	% change in 2022-23
China	145.95	149.00	3.05
India	135.50	133.00	-2.50
Indonesia	34.00	34.45	0.45
Vietnam	27.00	27.00	0.00
Thailand	20.20	20.50	0.30
Burma	11.80	12.50	0.70
Philippines	12.60	12.60	0.00
Japan	7.48	7.45	-0.03
Pakistan	5.50	9.00	3.50
Brazil	6.80	6.80	0.00
USA	5.09	6.12	1.03
Nigeria	5.36	5.23	-0.13
Egypt	3.60	3.78	0.18
South Korea	3.76	3.57	-0.19
European Union	1.34	1.46	0.12

Source: United States Department of Agriculture

Global domestic and residual use in 2023-24 is projected at a record 523.0 million tons, up 1.5 million from a year earlier, with South Asia accounting for most of the increase. With domestic and residual use projected to again exceed global production, global ending stocks in 2023-24 are projected to decline by 2.5 million tonnes to 166.7 million, the third consecutive year of decreasing global rice stocks and the smallest since 2017-18.³

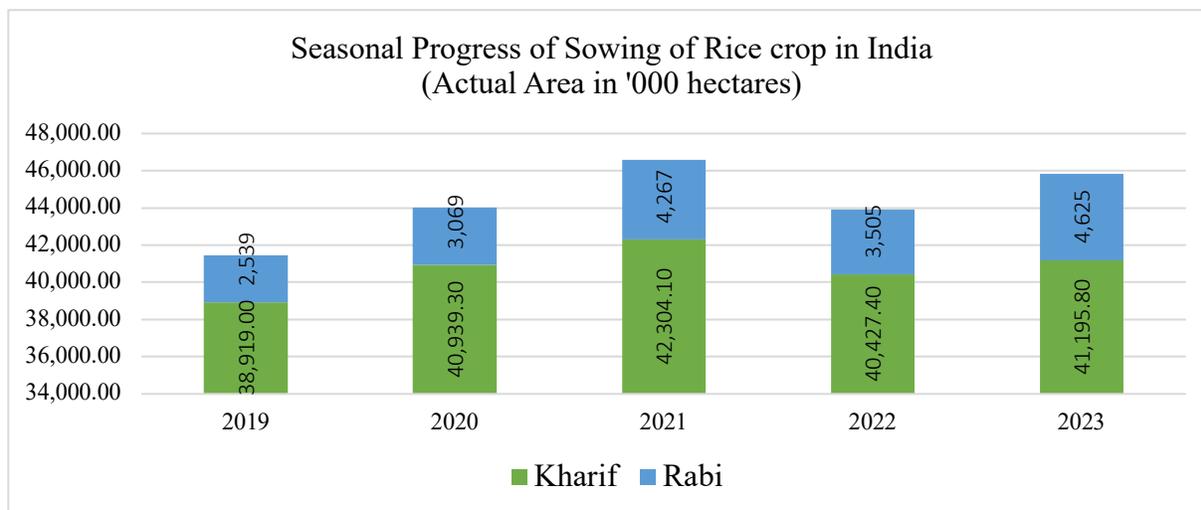
Rice Production (Paddy Crop) in India

Area sown under Rice crop

The kharif season is the main rice growing season in India, and accounts for about 84 per cent of the country's total rice production. Sowing for the kharif season typically begins in June and July, and harvesting takes place in November and December. The rabi season is a minor rice growing season, and accounts for about 9 per cent of the country's total rice production. Sowing for the rabi season typically begins in November and December, and harvesting takes place in March and June.

In the Kharif season, the area sown with rice rose from 38,919 thousand hectares in 2019 to 41,195.80 thousand hectares in 2023, with fluctuations in between. In the Rabi season, the area sown with rice also increased significantly over the years, from 2,539.00 thousand hectares in 2019 to 4,625.00 thousand hectares in 2023. This data provides insights into the trends and variations in rice crop cultivation in India over the specified years and provides an insight into the nation's agricultural landscape and production capacity (CMIE, as on 29 September 2023) (see Chart 1).

Chart 1: Seasonal Progress of Sowing of Rice crop in India from 2019 to 2023

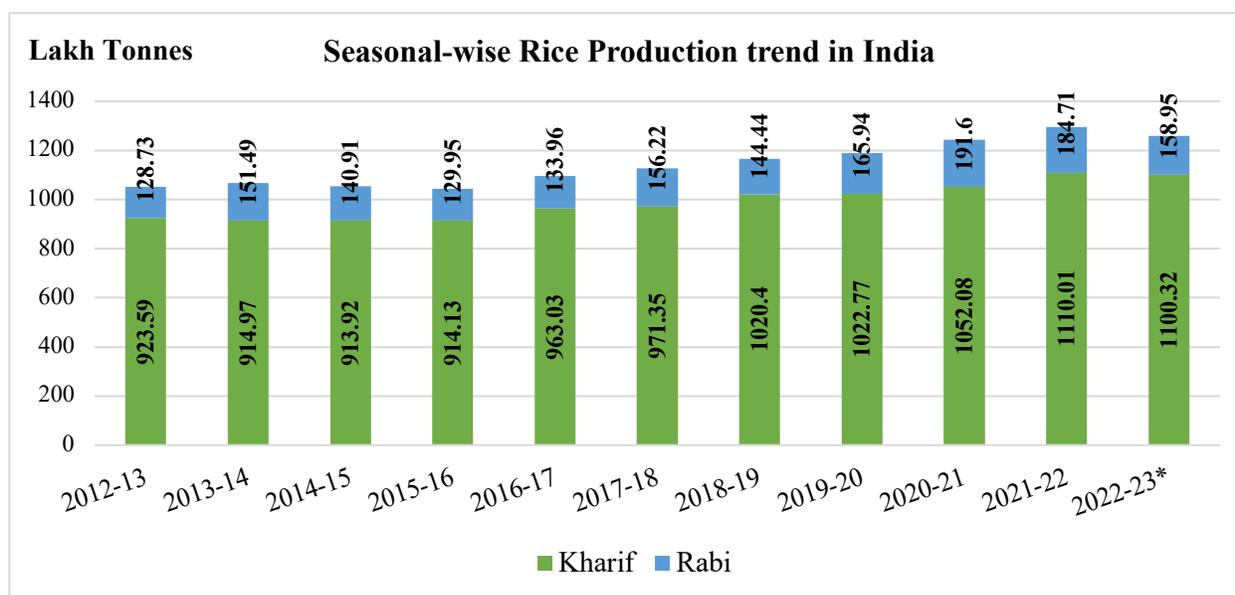


Source: CMIE | Infomerics Economic Research

Rice Production Trend in India

Over the past decades, the trend in rice production in India has shown a consistent increase in both Kharif and Rabi seasons, with a few fluctuations. From 2012-13 to 2020-21, rice production in both seasons rose steadily. During this period, Kharif rice production increased from 923.59 lakh tonnes to 1052.08 lakh tonnes, while Rabi rice production increased from 128.73 lakh tonnes to 191.6 lakh tonnes.⁴ This growth can be ascribed to various factors, including improved agricultural practices, increased use of technology, and government support for the rice farming sector. The figures for the year 2023, is based on the third advance estimates of production of rice in India (see Chart 2).

Chart 2: Trend of Rice Production in India from 2012-13 to 2022-23

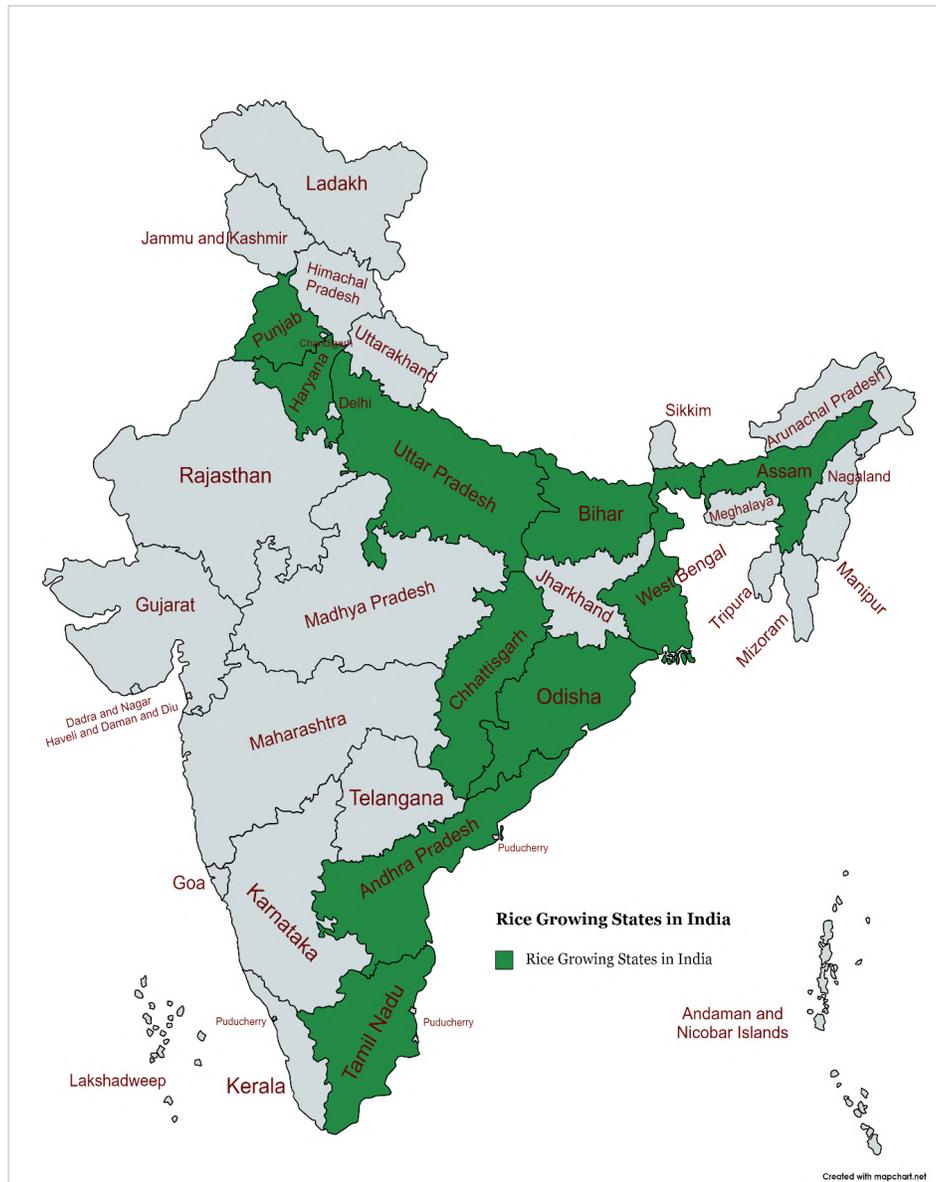


Source: Directorate of Economics and Statistics, Ministry of Agriculture, Gov. | Compiled by Infomerics Economic Research

Rice Growing States India

Major rice growing states in India are – West Bengal, Uttar Pradesh, Andhra Pradesh, Tamil Nadu, Bihar, Chhattisgarh, and Odisha (see Figure 1).

Figure 1: Major Rice Growing States in India



Source: Infomeric Economic Research

As per the Ministry of Agriculture, GoI, the Rabi paddy acreage as on 3rd February 2023 increased by 37.89 per cent to 53.91 lakh hectares (135.96 lakh acres) as compared to 39.90 lakh hectares (98.59 lakh acres) during the corresponding period of the last year. Higher acreage was covered in Telangana 22.84 lakh ha (56.44 lakh acres), Tamil Nadu 12.21 lakh ha (30.17 lakh acres), Andhra Pradesh 5.51 lakh ha (13.62 lakh acres) and Assam 1.84 lakh ha (4.55 lakh acres).

According to 3rd Advance Estimates of Production of Food grains for 2022-23, all India rice production estimate was 135.54 million tonnes (see Table 2).

Table 2: State wise area under Paddy in India

State	2021			2022		
	Lakh hectare	Lakh acres	% to total area	Lakh hectare	Lakh acres	% to total area
Telangana	14.50	35.83	36.34	22.84	56.44	42.37
Tamil Nadu	11.78	29.11	29.52	12.21	30.17	22.65
Andhra Pradesh	6.75	16.68	16.92	5.51	13.62	10.22
Assam	1.52	3.76	3.81	1.84	4.55	3.41
Kerala	0.88	2.17	2.21	0.83	2.05	1.54

Source: www.agricoop.gov.in

Cost of Production of Paddy Crop in India

The CACP projects three kinds of production cost for every crop, both at state and all-India average levels. The three costs, which are classified as A2, A2+FL, and C2, can be explained as:

- 'A2': Covers all paid-out costs directly incurred by the farmer in cash and kind on seeds, fertilisers, pesticides, hired labour, leased-in land, fuel, irrigation, etc.
- 'A2+FL': Includes A2 plus an imputed value of unpaid family labour.
- 'C2': It is a more comprehensive cost that factors in rentals and interest forgone on owned land and fixed capital assets, on top of A2+FL.

Three different cost categories are considered: 'A2,' which includes expenses directly incurred by the farmer on items like seeds, fertilizers, labour, and more; 'A2+FL,' which adds an imputed value for unpaid family labour to the A2 costs; and 'C2,' a more comprehensive cost that also accounts for rentals and interest forgone on owned land and capital assets in addition to A2+FL.

The evolving costs of paddy production over the years, with 'A2,' 'A2+FL,' and 'C2' increasing from 2013-14 to 2023-24, providing insights into the financial aspects of paddy farming in India. The all-India average cost of production of paddy on a C2 basis (which factors in all costs, including rentals and interest forgone on owned land and fixed capital assets) increased from ₹1,234 per quintal in 2013-14 to ₹1,911 per quintal in 2023-24 (see Table 3).

Table 3: Cost of Production for Paddy Crops in India

Cost of Production as Projected by CACP: Paddy			
₹/Quintal: 2013-14 to 2023-24			
Year	A2	A2+FL	C2
2013-14	NA	962	1,234
2014-15	NA	978	1,266
2015-16	780	1020	1,324
2016-17	791	1045	1,378
2017-18	840	1117	1,484
2018-19	865	1166	1,560
2019-20	894	1208	1,619
2020-21	930	1245	1,667
2021-22	980	1293	1,727
2022-23	1,052	1360	1,805
2023-24	1,129	1455	1,911

Source: CMIE Economic Outlook | Infomerics Economic Research

Most surprisingly, the A2+FL costs, which includes the costs directly incurred by the farmer in cash and kind on seeds, fertilisers, pesticides, hired labour, leased-in land, fuel, irrigation, and imputed value of unpaid family labour, increased by more than 50 per cent.

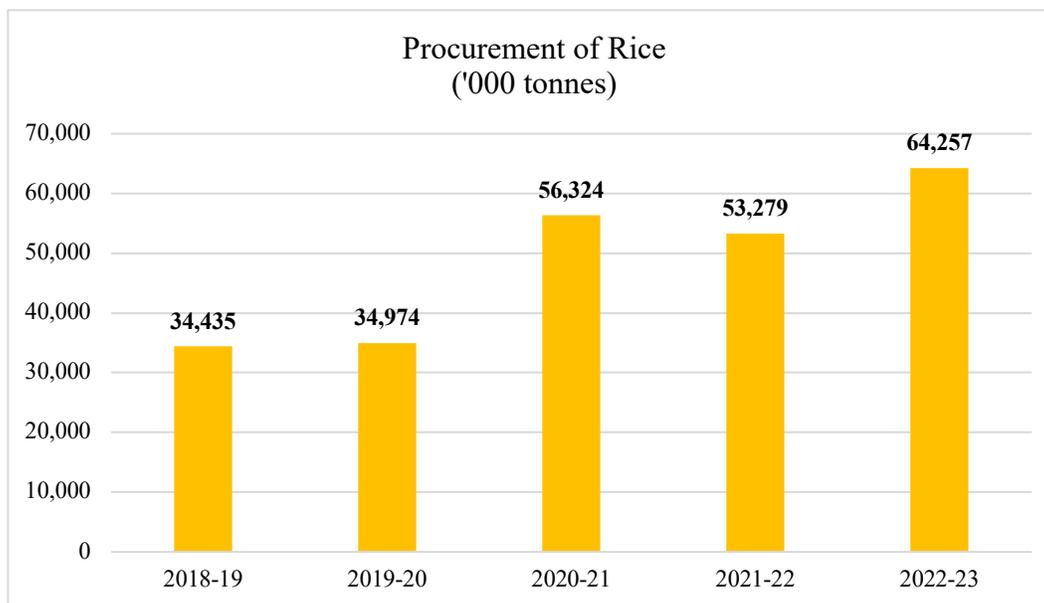
Institutional Initiatives

The Government policy of procurement of paddy has broad objectives of ensuring MSP to the farmers and availability of food to the weaker sections at affordable prices. It also ensures effective market intervention thereby keeping the prices under check, also adding to the overall food security of the country.

Rice Procurement Trend

In the last five years, the procurement of rice has been done to ensure the broad objectives of the Government (see Chart 3).

Chart 3: Trend of Rice Procurement in India



Source: CMIE Economic Outlook | Infomerics Economic Research

In 2022-23, a total of 34,181 thousand tonnes of rice were procured under the Targeted Public Distribution System (TPDS). Additionally, for various welfare schemes, 2,949 thousand tonnes were acquired, along with 25,080 thousand tonnes for PMGKAY, and 415 thousand tonnes for non-NFSA during the same year.

As of October 3, 2023, the government procured 12.21 Lakh Million Tonnes of paddy in Kharif Marketing Season (KMS) 2023-24 in three states namely, Tamil Nadu, Punjab & Haryana. This will benefit 99,675 farmers in the three states with MSP (Minimum Support Price) value of ₹2689.77 crore (US\$ 323.1 million). A total number of 125020.85 crore farmers were benefitted from procurement of Paddy by government agencies during KMS 2021-22.⁵

Minimum Support Price (MSP) for Rice

The Minimum Support Price is established by the Government of India to safeguard the interests of farmers by ensuring they receive a guaranteed price for their agricultural produce, thereby protecting them from severe price declines during years of surplus production.

In the last once decade, the MSP for both Paddy-Common and Paddy-Grade A has progressively increased. The rise in MSP reflects the government's commitment to providing fair compensation to farmers and supporting their livelihoods. In the most recent data for 2023-24, the MSP for Paddy Common is set at 2,183, while Paddy Grade A is at 2,203, demonstrating the government's ongoing efforts to enhance the income security of agricultural producers (see Table 4).

Table 4: Trend of MSP for Rice in the last one decade

Year	Paddy, Common	Paddy, Grade A
2013-14	1,310	1,345
2014-15	1,360	1,400
2015-16	1,410	1,450
2016-17	1,470	1,510
2017-18	1,550	1,590
2018-19	1,750	1,770
2019-20	1,815	1,835
2020-21	1,868	1,888
2021-22	1,940	1,960
2022-23	2,040	2,060
2023-24	2,183	2,203

Source: CMIE Economic Outlook | Infomerics Economic Research

In June 2023, the government had announced the hike of ₹143 in MSP of paddy to ₹2,183/quintal for KMS 2023-24. This is the second steepest increase in the last one decade and the last highest increase of ₹200 per quintal in the paddy MSP was recorded in 2018-19.⁶

The government is considering reducing the minimum export price (MEP) of basmati rice - a premium long-grain variety long famed for its aroma - to USD 850 per tonne from USD 1,200 per tonne at present. The issue was flagged by various rice industry stakeholders to cut the MEP on Basmati rice. As a part of regulation, the Government of India has banned export of rice. On July 20, 2023, India banned exports of non-basmati white rice to boost domestic supply, stabilize domestic prices and set the floor price for basmati rice exports. The Food and Consumer Affairs Ministry said the move was taken to “ensure adequate availability” in the country and “allay the rise in prices in the domestic market”. The Ministry added rice prices rose 11.5 per cent over the past year and 3 per cent over the past month in India.

The government maintained that this decision was crucial for securing the food security of 1.4 billion people. In the aftermath of the government decision of banning export of rice, a group of countries including the United States of America (USA) raised their concerns in a meeting with World Trade Organisation (WTO) Committee on Agriculture in Geneva on 27 September 2023. However, the central government allowed exports of non-basmati rice to Bhutan, United Arab Emirates (UAE), Mauritius and Singapore through the National Cooperative Exports Limited (NCEL).⁷

Trade of Rice

India has emerged as the world's largest rice exporter only in the last 10 years. Since 2010, rice production surged by 40 per cent (by over 40 million tons, to a grand total of 136 million tons, making it the second largest producer after China's 146 million tons). India's exports over the same period rose by 20 million tons (IFPRI, 2023).

India annually exports more than 4 million tons of basmati to Iran, Iraq, Yemen, Saudi Arabia, the United Arab Emirates and the United States, etc. Europe is another big market for the rice. The gap created by deficient Indian rice exports could largely be met by Thailand and Vietnam. But the vagaries of the weather (since rice is a water-sensitive crop susceptible to water shortages) in these markets could influence trade prices.

India is responsible for about 40 per cent of the global rice trade with the banned items amounting to about 15 per cent. India's rice exports need to be viewed in a proper historical and setting because of the implication of the decision to ban rice exports on the food security of 1.4 billion people. Earlier during the periods of rising global food prices, India regulated its food market. During the 2007-08 and 2010-11 food price crises India banned export of rice, mostly non-basmati rice, for extended periods. With global markets disrupted by Russia's invasion of Ukraine starting in February 2022, India initially imposed a wheat export ban, fearing domestic inflation and rising import demand from the rest of the world. Subsequently the limit on exports of 5 per cent broken rice and the 20 per cent export levy on un-milled and husked rice (both likely to continue through 2023)⁸ was imposed.

Trade Statistics – Non-Basmati Rice

In terms of non-basmati rice export, India has a strong and consistent position in the global rice market. The export of non-basmati rice over the past 8 years steadily rose from the value of US\$ 2,525 in 2016-17 to US\$ 6,357 units in 2022-23. In contrast, imports remained relatively low, with the highest figure of US\$ 11 in 2019-20. India's position as a net exporter of non-basmati rice is evident, emphasizing its role as a major global supplier of this staple food (see Table 5).

Table 5: Status of Rice Trade in India (US\$ million)

Fiscal Year	Export	Import
2016-17	2,525	1
2017-18	3,637	2
2018-19	3,038	5
2019-20	2,031	11
2020-21	4,811	3
2021-22	6,134	7
2022-23	6,357	5
2023-24	2,516	2

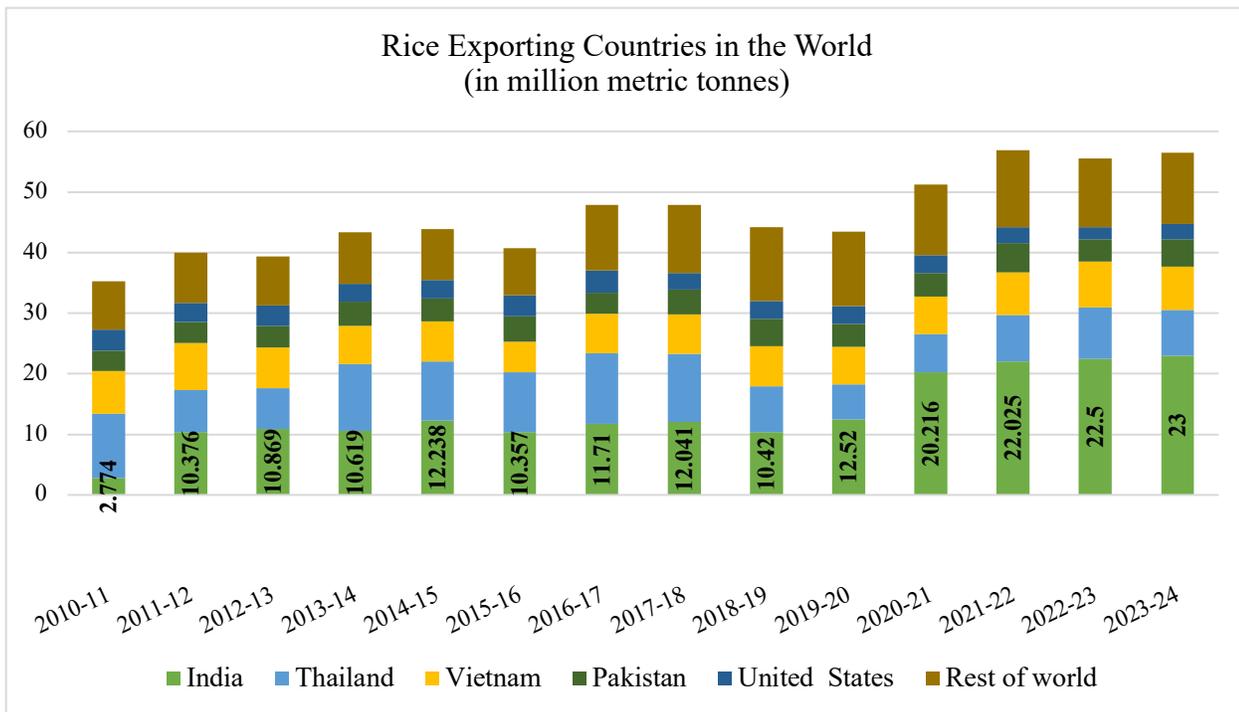
Source: Ministry of Commerce and Industry, Government of India

India's share in global rice exports is undeniably prominent. As one of the world's largest producers of rice, India consistently ranks among the top rice-exporting countries.

This prominent position is attributed to its vast agricultural landscape, diverse rice varieties, and competitive pricing. India's rice exports cater to both domestic and international demand, making it a key player in ensuring food security worldwide. The country's consistent export performance has established India as a reliable supplier, and its contribution to global rice trade is significant, emphasizing its crucial role in ensuring a stable rice supply on a global scale.

India's rice exports are distributed to over 140 countries around the world. The major importers of Indian rice include Bangladesh, Nepal, Indonesia, the Philippines, and Saudi Arabia (see Chart 4).

Chart 4: Major Global Players in Rice Exports



Source: IFPRI | US Department of Agriculture PSD database, July 12, 2023

On July 20, 2023 while the government banned shipment of white rice to boost domestic supplies, exports were allowed to meet the food security needs of the countries. The Indian government approved exports of 0.85 million tonnes of broken rice to Senegal, Indonesia, Mali and Gambia since the beginning of the financial year 2023-24, according to an official from the Directorate General of Foreign Trade (DGFT). While 0.5 million tonnes of broken rice was approved for shipments to Senegal, the volume of rice exports permitted for Indonesia, Mali and Gambia was 0.2 million tonnes, 0.1 million tonnes and 50,000 tonnes, respectively.⁹

Industry Risks and Challenges

India's ban on rice exports has placed additional stress on global food markets, already disrupted by adverse weather conditions and the aggravating geopolitical tensions, viz., the worsening conflict in Ukraine and now the Israel- Hamas war. This ban also raises concerns of higher inflation in the global food market. From India's perspective, this move introduces an element of uncertainty, particularly for the export industry, and could result in lower prices and reduced profitability for farmers who are already grappling with rising costs of agricultural inputs like seeds, fertilizers, and pesticides.

The most significant risk India faces is the threat of climate change, which can negatively impact crop yields, reduce the area under cultivation, and lead to droughts. Recent erratic monsoons and early summer heat-waves have already diminished rice yields. Climate agencies are predicting a more than 50 per cent probability of an El Niño event in 2023, which would weaken the South Asian monsoon. The emergence of El Niño poses a potential threat to domestic rice output, likely causing a slight decline in the coming years. Additionally, high operating costs are expected to affect production, despite government support for the agricultural sector. The heating of the Pacific Ocean leading to drought in Southeast Asia, a major producer of commodities like palm, rubber, rice, sugarcane, and pulses, could further contribute to inflationary pressures on these prices.

Furthermore, India faces stiff competition from other major rice-exporting nations like Thailand and Vietnam, which benefit from lower labour costs and more efficient production methods, giving them a competitive edge in the global market.

The Road Ahead

In conclusion, India's rice industry outlook for 2023 is marked by a complex interplay of challenges and opportunities. The ban on rice exports has strained global food markets, raising concerns about inflation, while domestically, it has introduced uncertainty for the export industry and the potential for lower profitability for farmers already grappling with rising input costs. Climate change remains an imminent threat, affecting crop yields and intensifying drought risks. The emergence of El Niño, coupled with high operating costs, may slightly reduce domestic rice output. Furthermore, India faces fierce competition from other rice-exporting nations with cost-efficient production methods.

Despite these challenges, the industry retains significant potential, given India's position as a major player in global rice production. Adaptation to climate change, sustainable practices, and strategic market positioning will be the key to India's rice industry navigating the year ahead and consolidate its inherent strengths.

ENDNOTES

- ¹ <https://www.krungsri.com/en/research/industry/industry-outlook/agriculture/rice/io/io-rice-2023-2025>
- ² <https://www.aljazeera.com/news/2023/9/20/how-reliant-is-the-world-on-indian-rice-exports>
- ³ <https://pjtsau.edu.in/files/AgriMkt/2023/June/Paddy-June-2023.pdf>
- ⁴ <https://desagri.gov.in/wp-content/uploads/2023/05/Time-Series-3-AE-English-2022-23.pdf>
- ⁵ [https://pib.gov.in/PressReleaselframePage.aspx?PRID=1964526#:~:text=Kharif%20Marketing%20Season%20\(KMS\)%202023,value%20of%20%E2%82%B92689.77%20crore.](https://pib.gov.in/PressReleaselframePage.aspx?PRID=1964526#:~:text=Kharif%20Marketing%20Season%20(KMS)%202023,value%20of%20%E2%82%B92689.77%20crore.)
- ⁶ <https://www.tribuneindia.com/news/nation/cabinet-approves-rs-143-hike-in-paddy-msp-515011>
- ⁷ https://www.business-standard.com/economy/news/rice-export-ban-a-regulation-safeguards-food-security-india-to-wto-123092800922_1.html
- ⁸ <https://www.ifpri.org/blog/indias-new-ban-rice-exports-potential-threats-global-supply-prices-and-food-security#:~:text=India's%20growing%20presence%20in%20the%20global%20rice%20market&text=Since%202010%2C%20rice%20production%20has,rose%20by%2020%20million%20tons.>
- ⁹ <https://www.financialexpress.com/policy/economy-govt-approves-0-85-mt-of-broken-rice-to-senegal-indonesia-mali-and-gambia-3245244/>