

Report of the Fact-Finding Visit to Jharkhand, on Rice Fortification in Government Food Schemes

Visit Dates: May 8-11, 2022

**Alliance for Sustainable & Holistic Agriculture (ASHA-Kisan Swaraj)
Right To Food Campaign**

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1.BACKGROUND

Prime Minister Mr Narendra Modi revealed the ambitious plans of Government of India in his Independence Day Speech of 2021, to supply fortified rice in all food schemes of India by 2024. Earlier in 2019, Gol initiated a Pilot Scheme for [“Fortification of Rice and its Distribution under Public Distribution System”](#) for 3 years, with an outlay of Rs.174.64 Cr. and this scheme was expected to unfold in 15 districts of 15 states upto March 2022. One of the stated objectives of this Pilot Scheme is *“to evaluate the provision, coverage and Utilization of Fortified Rice by the target population as well as the efficiency/effectiveness of the consumption of fortified rice in reducing the targeted micronutrient deficiencies in different age and gender groups”*. Even as the Pilot Scheme is underway, without really taking off as per plan, fortified rice distribution has been scaled up to [257 districts of India in fifteen states](#) by April 2022, covering more than 1.1 crore beneficiaries. It is reported that Food Corporation of India (FCI) and other state agencies have already procured around [88.65 Lakh Metric Tonnes](#) of Fortified Rice for supply and distribution (this had touched [1.04 crore metric tonnes](#) by the end of April 2022). Within this, approximately [4.3 Lakh Metric Tonnes](#) have been distributed through PDS in the Pilot Districts. This then appears to be the primary strategy of the Government to tackle malnutrition in the form of Anaemia in the country.

1a. ISSUES/CONCERNS WITH IRON FORTIFIED RICE AND ITS DISTRIBUTION IN GOVERNMENT FOOD SCHEMES

Synthetic fortification is not proven to be effective, and can be dangerous to many Indians: There is no consensus that fortification works. Evidence [published in the Cochrane Review](#) in 2019 shows that iron-fortified rice failed to impact anaemia in several countries. Excess iron is known to create oxidative stress and even small amounts of Iron are contra-indicated in the case of diseases like Thalassemia, Sickle Cell Anaemia, and during acute infections such as Malaria or Tuberculosis. The number of Indians with such diseases is significant and most are not even aware that they have such conditions. In this one-size-fits-all solution, fortified rice is being pushed onto unsuspecting citizens who have not given their prior informed consent.

Real community-controlled solutions neglected and eroded: When the Government aggressively promotes a singular reductionist corporate-controlled silver bullet solution like fortified rice, a myriad diverse local and natural solutions get neglected and even eroded. These diverse local and natural solutions primarily revolve around enhancement of dietary diversity and providing adequate calories for the affected. Nutrition cannot be approached through a micro-nutrient by micro-nutrient formula; it needs a holistic approach. For instance, for haemoglobin synthesis to take place, all available evidence shows that adding more iron into diets without a host of supportive enzymes, quality proteins, and other vitamins does not lead to iron absorption but only to higher ferritin levels, which is associated with biological risks pertaining to increased stores of iron in this form. The government's rice fortification policy promotes polished white rice as the staple that Indians must rely on for most nutrients. Polished white rice, born out of a narrow genetic base of modern breeding, begins to be viewed as a one-size-fits-all solution, just because it is fortified. The excessive consumption of cereals like rice, referred to as the ‘cerealization of Indian diets’ is actually a potential public health problem, increasing the risk of large-scale diabetes and hypertension, both a result of heightened triglycerides and of insulin resistance from too much carbohydrate consumption. Moreover,

large scale fortification will lead to irreversible market shifts, with concomitant infrastructure changes in the supply chain.

On the other hand, protein-rich diets, millets, healthy fats, traditional rices that are nutritionally superior, staple grains that are traditionally processed to preserve their nutrients, local (uncultivated) greens, diverse forest foods, and other material that can come from millions of kitchen gardens and other locally led efforts, will all be neglected by such a policy.

Food fortification is a multi-million-dollar corporate controlled industry: In the government-promoted reductionist approach, profits will be reaped by big corporations, that too a handful of them, since the global supply of micronutrients for food fortification is an industry controlled by a few mega-corporations. India will have to import many synthetic vitamins since most are not produced in the country. In this approach, in the name of tackling under-nutrition, our food chain will get more corporate-controlled and out of the hands of communities.

Threat to local livelihoods: The majority of our food is produced, processed and sold in the unorganized sector and is led by small and medium players. Even as rice fortification will create assured markets for foreign and Indian micronutrient mega companies, any push towards mandatory fortification will threaten local livelihoods including of those social enterprises that promote ethical, environmental and healthy food supply chains through better production and processing technologies and practices. In fact, the threat to livelihoods is also to small rice millers all over the country because of the new infrastructure required to fortify rice.

Policy Decisions are ridden with Conflict of Interest: In the Government's rice fortification push, the presence of foreign corporate lobbies is clear. Entities that will benefit from the rice fortification push are even housed in regulatory bodies like Food Safety and Standards Authority of India (FSSAI). These vested interests are wielding disproportionately enormous influence on policy decision-making even as the primary stakeholders like poor communities have not been informed or consulted. No pilot studies have been made public and in fact, scaling up is happening without waiting for public evaluation or scrutiny of pilot interventions.

A [leaflet](#) on this hyperlink explains all the above issues in adequate detail.

1b. WHAT PROMPTED THIS FACT-FINDING VISIT?

It was in February 2022 that villagers of Pahar Toli in Karra block of Khunti district of Jharkhand complained about diarrhea, stomach ache and body aches after they ate fortified rice supplied through the PDS. Officials rushed to the village to explain to them that this is rice that has been specially fortified with micro-nutrients as the Government's mega-strategy to tackle malnutrition in the country. Information indicates that they also took care to not supply fortified rice in the subsequent month in this village. In March 2022, after a state level Convention of the Right to Food Campaign in Jharkhand, when these ground reports were presented, members from the forum visited the village to gather more information and came back with [video documentation](#) of the voices of people.

Prior to this, for about an year now, national groups like [Alliance for Sustainable & Holistic Agriculture](#) (ASHA-Kisan Swaraj) and Bharat Krishak Swaraj have also engaged with the issue of near-mandatory fortification of rice in India, along with many public health experts and nutrition experts. Letters have been sent to concerned authorities in the Government of India and also [personal meetings](#) held. Meanwhile, as part of its Food For Future work, Greenpeace

India also released a report called [“Adding Diversity to Plate”](#) (February 2022) which also highlighted various concerns with regard to rice fortification and made public responses to RTI queries to government agencies.

After the Khunti district reports emerged, a joint effort was made to understand the issue and after gaining better understanding, this Fact-Finding trip to Jharkhand was planned.

1c. COMPLAINTS AND SIMILAR INCIDENTS REPORTED FROM OTHER PARTS OF INDIA

While ASHA-Kisan Swaraj and Right to Food Campaign organised this fact-finding in Jharkhand state, this is not an isolated incident that has been reported. In Jharkhand itself, there have been complaints from other places in Khunti district, apart from Korba, East Singhbhum, West Singhbhum and Lohardaga.

An online search (not exhaustive) of news articles shows numerous adverse reports emerging from different parts of this country. These reports are from Jharkhand as well as Chattisgarh, Uttar Pradesh, Bihar, Assam, Maharashtra, Madhya Pradesh, Himachal Pradesh and West Bengal as of now. There could be many other reports in local languages that our online search in english and hindi may not have brought out.

These reports mainly centre around (a) communities rejecting fortified rice on numerous grounds, including on the assumption that “plastic rice” has been supplied in the monthly rations that they purchased from PDS dealers; (b) children/other community members falling sick after consuming fortified rice (from Bokaro in Jharkhand, West Medinipur in West Bengal, Patna in Bihar and Korba in Chhattisgarh); (c) complaints/protests, special visits and meetings or statements by officials and others to look into the complaints.

Where communities have been reported to reject the fortified/plastic rice supplied in the PDS shops, it has also been reported that they have begun feeding the rice to livestock, or throwing them in garbage and that they have also threatened to stop to buy their entitlement from the ration shop, or that they are buying their supplies from other shops by paying more money.

*What is important to note is that the seemingly uneducated observations and protests against “plastic rice” are also clearly laced with preference and quality issues that community members are articulating from several parts of the country, about the taste, appearance, flavour/smell, and cooking quality of fortified rice. **This is not therefore just a matter of educating PDS beneficiaries or frontline workers in School Education/Civil Supplies/WCD departments about so-called ‘plastic rice’ being fortified rice, and need not be surmised in that manner.***

2.THIS FACT-FINDING VISIT

2a. TEAM MEMBERS

1. Dr Vandana Prasad, Community Pediatrician and Public Health Expert, Former Member (Child Health) National Commission for Protection of Child Rights (NCPCR), Member National Secretariat Advisory Group, Right to Food Campaign;
2. Kavitha Kuruganti, Co-Convenor, ASHA-Kisan Swaraj and Former Member, High Level Committee on the Status of Women in India, MoWCD, Government of India;
3. Balram, Right to Food Campaign Jharkhand;
4. Rohin Kumar, Project Lead, Food For Future, Greenpeace India;
5. James Herenz, Right to Food Campaign, Jharkhand;
6. Raj Shekhar Singh, Right to Food Campaign National Secretariat;
7. Soumik Banerjee, ASHA-Kisan Swaraj and Independent Researcher

2b. SCHEDULE ADOPTED FOR THE FACT-FINDING

This fact-finding in Jharkhand took place between 8th May and 11th May, 2022. The findings were put out on 11th May 2022. Online effort to gather more information, in addition to speaking to some offices/officials/elected Pradhans etc. took place as preparatory work.

| DATE | WHERE | WHAT | WHO |
|--------------------------|---|--|--|
| 8 th May 2022 | Visit to Pahar Toli, Birda and Karra villages in Karra Block of Khunti district | To meet and speak (1) to PDS beneficiaries who were affected after the consumption of fortified rice; (2) to Village Pradhan, (3) to PDS Dealer, (4) to CHC personnel, and (5) to Anganwadi and ASHA worker; (6) to cooks in Anganwadi & School; (7) to interact with a General Physician in a private hospital in Birda | Balram, James Herenz, Kavitha Kuruganti, Raj Shekhar, Rohin Kumar, Soumik Banerjee and Dr Vandana Prasad |

| | | | |
|---------------------------------|--|--|--|
| 9th May 2022 | Team 1 – East Singhbhum District (i) Villages of Block Chakuliya – Harinia village in Jamua Panchayat, Kerukocha village in Jamua Panchayat, Mural village in Baramara Panchayat, Boramchati village in Malkundi Panchayat (ii) Chakuliya CHC (iii) District Headquarters Jamshedpur - Visit to District/Sadar Hospital and MGM Hospital | (i) To speak (1) to PDS Beneficiaries in the villages to collect views and experiences; (2) To visit PDS Dealer; (3) To interact with Anganwadi Worker; (4) To speak to village pradhan; (5) To speak to CHC In Charge; (5) To speak to district level hospital official; (6) To meet Thalassemia patient family | James Herenz, Kavitha Kuruganti, Rohin Kumar |
| 9th May 2022 | Team 2: East Singhbhum district (i) Village Kuchiyasholi of Panchayat Kuchiyasholi in Block Chakuliya (ii) Rice Mill in Chakuliya (iii) Meeting with MLA of Chakuliya | (i) To speak (1) to PDS Beneficiaries in the villages to collect views and experiences; (2) To PDS Dealer; (3) To ASHA and Anganwadi Workers; (4) To Cook of Anganwadi; (ii) To speak to Rice Mill Owner and understand the full supply chain (iii) To appraise the MLA of emerging issues and concerns | Balram, Raj Shekhar, Dr Vandana Prasad, local activist Supriti Murmu |
| 10th May 2022 | Meetings in Ranchi 1. With Mr Saryu Roy, Ex-Minister & Current MLA 2. With Director, DWCD, GoJ 3. With Haemophilia Society representatives in RIMS 4. With civil society representatives | To present our key observations. To understand Jharkhand Government's perspectives and experience. To collect more information and data. | Balram, James Herenz, Kavitha Kuruganti, Raj Shekhar, Rohin Kumar, Dr Vandana Prasad |
| 11th May 2022 | 1. Meeting with Dr Rameshwar Oraon, Minister for Civil Supplies & Finance, Government of Jharkhand 2. Press Conference | Sharing of Fact-Finding team's observations and preliminary report | Balram, James Herenz, Kavitha Kuruganti, Raj Shekhar and Rohin Kumar |

3.CONTEXT

3A. ANAEMIA IN INDIA, JHARKHAND AND GOVERNMENT INTERVENTIONS

Anaemia is a condition where the body does not have enough healthy red blood cells to carry oxygen to different parts of the body, for the body to carry the regular physiological functions. Here, Haemoglobin (Hb), the iron-containing oxygen-transport metalloprotein is important. When Hb levels are low, a person is supposed to be anaemic. This can be caused by low iron levels, mainly because of deficiency of iron in diets. Apart from low dietary intake, low iron levels could also be because of low absorption of iron in the body, which in turn is correlated with other nutritional deficiencies including folate, Vitamin B12, and Vitamin A. Acute and chronic inflammation, parasitic infections, as well as inherited or acquired disorders that affect hemoglobin synthesis, red blood cell production or red blood cell survival can all cause anaemia as per the World Health Organisation¹. Especially relevant to the context are haemoglobinopathies such as Sickle Cell Anaemia and Thalassemia which cause anaemia that resembles iron deficiency Anaemia but is not amenable to treatment by Iron and can be exacerbated by it. Further, blood loss can also be a cause for iron deficiencies. Haemoglobin concentration is measured usually for assessing prevalence of anaemia, even though not all anaemia is caused by iron deficiency.

Anaemia data in India is presented by the Government of India through its periodic National Family Health Surveys (NFHS), with the latest round being NFHS-5 from 2019-21 undertaken in two phases, with the report coming out in September 2021. While NFHS-5 is a large survey of more than 6.37 lakh households in the country, there are also many micro-studies that present such data. It is worth noting here that while there are some health experts who are contesting India's standards for anaemia prevalence assessment, methods of assessment and therefore official data on prevalence levels, most experts consider it as a public health problem worthy of long term and appropriate holistic solutions.

| ALL-INDIA - ANAEMIA LEVELS | NFHS-5 (2019-21) | | | NFHS-4 (2015-16) |
|--|------------------|-------|-------|------------------|
| | Urban | Rural | Total | Total |
| Children aged 6-59 months who are anaemic (<11.0g/dl) % | 64.2 | 68.3 | 67.1 | 58.6 |
| Non Pregnant women aged 15-49 years who are anaemic (<12.0 g/dl) % | 54.1 | 58.7 | 57.2 | 53.2 |
| Pregnant women aged 15-49 years who are anaemic (<11.0 g/dl) % | 45.7 | 54.3 | 52.2 | 50.4 |
| All women aged 15-49 years who are anaemic % | 53.8 | 58.5 | 57.0 | 53.1 |
| All women aged 15-19 years who are anaemic % | 56.5 | 60.2 | 59.1 | 54.1 |
| Men aged 15-49 years who are anemic (<13.0 g/dl) % | 20.4 | 27.4 | 25.0 | 22.7 |

| | | | | |
|---|------|------|------|------|
| Men aged 15-19 years who are anaemic (<13.0 g/dl) % | 25.0 | 33.9 | 31.1 | 29.2 |
|---|------|------|------|------|

Source: India Fact Sheet, NFHS-5 2019-21, September 2021

Compared to the national figures, Jharkhand fares the same on some parameters or marginally worse in some others. However, compared to NFHS-4, NFHS-5 indicates Jharkhand's improvements.

| JHARKHAND - ANAEMIA LEVELS | NFHS-5 (2019-21) | | | NFHS-4 (2015-16) |
|--|------------------|-------|-------|------------------|
| | Urban | Rural | Total | Total |
| Children aged 6-59 months who are anaemic (<11.0g/dl) % | 65.5 | 67.9 | 67.5 | 69.9 |
| Non Pregnant women aged 15-49 years who are anaemic (<12.0 g/dl) % | 61.6 | 67.0 | 65.7 | 65.3 |
| Pregnant women aged 15-49 years who are anaemic (<11.0 g/dl) % | 45.5 | 59.2 | 56.8 | 62.6 |
| All women aged 15-49 years who are anaemic % | 61.1 | 66.7 | 65.3 | 65.2 |
| All women aged 15-19 years who are anaemic % | 63.2 | 66.5 | 65.8 | 65.0 |
| Men aged 15-49 years who are anemic (<13.0 g/dl) % | 27.1 | 30.5 | 29.6 | 29.8 |
| Men aged 15-19 years who are anaemic (<13.0 g/dl) % | 39.0 | 39.9 | 39.7 | 35.3 |

Source: Compendium of Fact Sheets, Key Indicators - India and 14 States/UTs (Phase II), National Family Health Survey (NFHS-5) 2019-21, Ministry of Health & Family Welfare, Government of India, September 2021 (the Jharkhand survey covered around 22.8 thousand households in the state)

At the national level, there has been an increase in the prevalence of anaemia amongst women and children, compared to NFHS-4 data. Jharkhand however features amongst only four states that have recorded a reduction in prevalence of anaemia in children upto 5 years². Despite this, the state features higher than many other states, when it comes to prevalence levels.

Earlier, the approach of the Government of India was more holistic and comprehensive than the easy and reductionist rice fortification approach being emphasised currently. The National Iron+ Initiative guidelines clearly say the following, for instance: *“Prevention of both iron deficiency and anaemia require approaches that address all the potential causative factors. Interventions to prevent and correct iron deficiency and IDA, therefore, must include measures to increase iron intake through food-based approaches, namely dietary diversification and food fortification with iron; iron supplementation and improved health services and sanitation”*.

While this was on paper, actual interventions have been narrow and typically have not increased dietary adequacy and diversity. The Comprehensive National Nutrition Survey ([CNNS 2016-18](#)) highlights that only 6 per cent and 9 per cent of children between 6-23 months consume the minimum acceptable diet and iron rich food, respectively. There is a gap of nutritious dietary intakes when compared to Recommended Dietary Allowance (RDA). For instance, 75 per cent and 50 per cent lower iron amongst rural population and adolescents; 50 per cent lower vitamin A; and 50-75 per cent lower folate and riboflavin.

On the other hand, Government of India has an iron supplementation program running for many years now, from the Ministry of Health & Family Welfare. NFHS data shows that levels of IFA intake remain very low however. After realising that not all age groups have been targeted in the earlier phases of iron supplementation initiatives, the Government has launched a National Iron+ Initiative in 2013. “The National Iron+ Initiative is an attempt to look at Iron Deficiency Anaemia comprehensively across all life stages including adolescents and women in reproductive age group who are not pregnant or lactating. The schedule of IFA supplementation has also been reviewed to make both administration and compliance much simpler. For children, 6 months to 5 years, there is now a bi-weekly schedule of IFA supplementation with ASHA being responsible for administering the prescribed dosage under her direct supervision. For children of class I to class V in Government/Government aided schools, there is a weekly schedule of IFA supplementation, under the supervision of teachers. Similarly, adolescents from class VI to class XII receive weekly IFA supplementation in school itself. For women in reproductive age group who are neither pregnant nor lactating, ASHA shoulders the responsibility of providing IFA supplementation”³. Here, ASHA worker is sought to be suitably incentivised for provision of IFA supplements. The ASHA worker is reportedly educated to withhold IFA in case of acute infections, severe acute malnutrition and in cases of hemoglobinopathy. This is a targeted approach and not a one-size-fits-all approach.

However, Iron Supplementation intervention has notoriously suffered from supply side issues, especially with regard to iron syrups for children under the age of six years. In Jharkhand, for instance, there was a spell of around 4 years without any iron supplements available in the field.

Jharkhand now has a new State Action Plan (2019) for micronutrient supplementation⁴. The main focus of this Plan is proper procurement and distribution and strengthening of last mile effective delivery of micronutrient drugs including IFA. This Plan also acknowledges that the desired nutritional practices around the life course of a person are breastfeeding, adequate diet (diet diversity and frequency) and micronutrient supplementation. “Impure water, improper sanitation and hygiene, enteric infections and diarrhoea in children reduce the impact of nutrition. Hence, intervention in water, sanitation and hygiene, deworming and malaria prevention are essential for better nutrition results”, this Plan notes.

Ignoring such micronutrient supplementation, the Union Government is now eyeing mandatory rice fortification in all social safety net schemes by 2024 as a quick and cost-efficient way of addressing malnutrition⁵. The government is looking at the additional budgetary requirement for rice fortification at only 1% of the 2018-19 food subsidy bill or an additional cost of Rs.0.73 per kilo of rice as an attractive option, ignoring various other concerns from this approach.

3b. ADIVASI POPULATION IN INDIA & IN JHARKHAND

Before we move into presenting some relevant health-related parameters, it is important to get a picture of Adivasi population in India and in Jharkhand, because Adivasi communities are disproportionately affected by these adverse health conditions.

Census 2011 enumerated 10.42 crore scheduled tribe persons in India (about 8.6% of total population of India with the decadal growth rate being higher in urban areas incidentally), with a vast majority of them in rural areas. Adivasis belonging to 550 tribes constitute **11.3%** of total population of rural areas (2011).

Jharkhand was ranked 6th as per Census 2011 in terms of largest number of Adivasi peoples in each state, with 86.5 lakh people in 2011. Jharkhand's adivasis constituted 8.3% of the total adivasi population in India. In terms of proportion within Jharkhand, adivasi population constituted **26.2%** of the total population in the state, as per Census 2011. The highest proportion of tribal population has been recorded in Khunti district (73.3%). An annexure to this report provides a district-wise picture. *At least 8 districts of the state of Jharkhand have more than 40% of the population as adivasis.*

3c. DISEASE BURDEN OF SICKLE CELL DISORDERS, THALASSEMIA, TB, MALARIA ETC. IN INDIA AND IN JHARKHAND

In the context of iron-fortified rice, it is important to discuss about the existing disease burden in India and Jharkhand about sickle cell disorders (SCDs), Thalassemia, Tuberculosis (TB), Malaria etc.

INDIA:

India has the second highest SCD burden in the world, and within India, it impacts, socially, politically and economically marginalized groups especially scheduled tribes. SCD disproportionately impacts vulnerable tribal communities in India⁶. There are certain studies undertaken by ICMR showing that the prevalence of Sickle Cell Anaemia across the country amongst tribal population is 5-34% (as per a Parliament Reply to Question No. 3433, dated 9/8/2011). The Government of India however does not maintain any database, nor are there any systematic screenings to identify all the affected. A screening amongst tribal students found that 8.75% tested positive.

Thalassemia is another inherited disorder of red blood cells. As per ICMR, Thalassemia is the commonest genetic disorder in India. The prevalence of β -Thalassemia carrier varies from 1 to 17% in different population groups with an overall prevalence of 3-4%. As per a Parliament Reply in 2021, it is estimated that almost 8,000 to 10,000 children are born with Thalassemia every year in India⁷. As per another reply in March 2020, an estimated 10,000 to 12,000 children with β -thalassemia are born every year and there are about 65,000-67,000 β -thalassemia patients in our country.

Meanwhile, at the national level, 2021 witnessed a 19% increase from the previous year in Tuberculosis (TB) patients' notification. The total number of incident TB patients (new and relapse) notified during 2021 were 19.33 lakhs, as opposed to that of 16.28 lakhs in 2020⁸.

It is also reported that close to 1.3 billion people are at high risk of being infected with malaria in India. India carries 2% of the global malaria case burden and 2% of global malaria deaths. 80% of malaria reported in the country is confined to areas consisting of 20% of India's population residing in tribal, hilly, difficult and inaccessible areas⁹. In 2020, there were 1.9 lakh malaria cases in India, with 93 deaths recorded due to malaria.

JHARKHAND:

Blood Disorders: Jharkhand is an endemic zone of Sickle Cell Disorders (SCD) and Thalassemia, with a prevalence of 8 to 10% which is twice the national average¹⁰. As per this fact-finding team's interaction in RIMS Ranchi, school-based screenings for these disorders are throwing up positive results ranging from 10-20% of the persons screened.

A study by Rachana Nagar et al (2015) published in Journal of Biosciences¹¹ shows some regions like Purbi Singhbhum have high frequency of SCDs. Another study by Abhijit Chakraborty et al (2010) published in journal Blood¹² showed 28% of screened individuals (103) had carrier mutation while 16% were patients with mutation. Another study by Sona Pathak et al (2020) published in Global Journal for Research Analysis¹³ showed 87% of individuals screened had Sickle Cell trait while 5% had the disease, while 8.5% had Thalassemia. Muslims had a disproportionate share of 27% of the SCD cases among the 1294 screened individuals.

A study by Saikia et al (2016) published in Journal of Clinical and Diagnostic Research shows Mundari communities (Munda, Ho & Santhal) also have higher prevalence of 3.07%.¹⁴

Malaria: Jharkhand is also an endemic zone for Malaria; the slide positivity rate of the state in 2018 was 1.76% with 35% cases of Falciparum malaria¹⁵. In 2020, Jharkhand ranked third in the country when it comes to malaria deaths¹⁶. There were 16653 cases of malaria in the state in that year while there were 186532 cases in the country (about 9%).

Tuberculosis (TB): Jharkhand had a Drug Sensitive TB case load of 45,767 in 2020 with an increase of 22% in the last 6 years. There were also 1053 Multi Drug Resistant (MDR) TB cases and 24 Extremely Drug Resistant (XDR) TB cases in the state (2019). 59% of the TB cases were from adivasi communities. Between 2014-17, 4419 TB deaths were recorded in the state.¹⁷

3d. EFFECT OF IRON FORTIFIED RICE ON SCDs & THALASSEMIA

The Sickle shaped cells within red blood cells breakdown easily, releasing Iron in circulation; regular destruction of Red Blood Corpuscles (RBCs) results in the buildup of body stores of iron and may lead to liver damage. Fortified Rice adds on to the iron stores which cannot be used for Hemoglobin formation, thus potentially leading to iron overload and organ (liver, endocrine system, heart) damage. In Thalassemia, frequent blood transfusion adds to Iron overload causing cardiac damage, liver fibrosis, reproductive problems, and growth retardation.¹⁸

Individuals suffering from SCD, or Thalassemia are advised to refrain from taking standard iron supplementation or iron rich diet. Iron fortified rice is also contra-indicated for them, as mentioned in the [Government of India's Department of Food & Public Distribution guidelines](#) too - "*Not recommended for people with Thalassemia and people on low iron diet*". The FSSAI's [Food Safety and Standards \(Fortification of Foods\) Regulations 2018](#) require that fortified

products' pack mandatorily display the fortification logo (+F) along with "Fortified with Iron, Folic Acid and Vitamin B12), and that every package of food fortified with Iron shall carry a (warning) statement – "People with Thalassemia may take under medical supervision and persons with Sick Cell Anaemia are advised not to consume iron fortified food products" (Regulation 7(4) on Packaging and Labeling Requirements).

In Malaria endemic zones, increased amount of iron in the gastro-intestinal tract affects the structural integrity and gut microflora and immune systems.¹⁹ Iron supplements are also known to increase risk of malaria in resource poor locations²⁰ as well as bacterial and viral infections. Red Blood Cells (RBCs) use Ferroportin to remove excess iron, which malaria parasites consume as a food source; the absence of Ferroportin causes iron to accumulate to toxic levels inside RBCs. This stresses the cells and shortens their life span.²¹

Iron overload also has the potential of TB flare-up when given before the anti-TB drugs regime. Elevated levels of iron impair immune defence mechanisms and enhances *Mycobacterium tuberculosis* infection, replication, progression to clinical disease and death.²².

Jharkhand being the endemic zone for SCDs, Thalassemia and Malaria as well as prevalence of TB, increases the risk and complications of affected communities by consumption of Iron Fortified Rice.

3e. IRON FORTIFIED RICE DISTRIBUTION IN JHARKHAND SO FAR

Jharkhand state government has distributed around 4020 metric tons of fortified rice in its Pilot district so far. However, the full quantities distributed, beyond the pilot district, are not part of the data put out in public domain, either on Gol's portal, or the state government portal.

It was in [September 2021](#) that the Jharkhand Government decided to make East Singhbhum as the pilot district for the state. In this pilot district, distribution of fortified rice started in October 2021 as per the government portals. It is unclear when and why fortified rice started getting distributed beyond the pilot district of East Singhbhum, whether the so-called Piloting has been completed, and what the results of the same were.

Within East Singhbhum, Dhalbhumgarh and Chakuliya are the blocks in which fortified rice distribution is happening, and reported into the government portal. It is [reported](#) that the distribution will be scaled up to five districts next – East Singhbhum, West Singhbhum, Dumka, Hazaribagh and Ranchi.

In the month of January 2022, the Government began the formation of a State Project Management Unit with a State Level Project Manager and a Technical Support Staff in East Singhbhum.

It was in February 2022 that reports of adverse effects emerged from Karra Block of Khunti district. *This is a district with the largest proportion of adivasi population in the state.* Sporadic media reports were emerging about communities' responses to fortified rice in the meantime.

Right now, fortified rice is being distributed in all anganwadis of the state.

Mr Saryu Roy, a former (BJP) Cabinet Minister for Health in the Jharkhand State Government and currently an Independent MLA from Jamshedpur East in Jharkhand Assembly tweeted to the [Prime Minister](#) on April 9th 2022 asking the Government of India to rethink its policy. He requested the PM to put out the results of the pilots initiated in the public domain, and also wanted to know what is the comparative advantage of this strategy. The MLA also tweeted to the [Chief Minister](#) of Jharkhand and raised public health concerns. He specifically referred to the adverse effects experienced by Pahari Tola villagers of Khunti district.

4. KEY OBSERVATIONS OF THE FACT-FINDING VISIT

On the ground, the Fact-Finding Team found that there is no information to, or prior consent obtained from, communities which have been recipients of this fortified rice. PDS Dealers have not been informed beforehand, nor have been village-level frontline workers of various departments made aware of fortified rice. It appears as if the Government of India wanted to implement this program quietly if not clandestinely, and that the Government was under the misapprehension that FRK blended with regular rice will go unnoticed and therefore, consumed by citizens without any questions.

On the ground however, there is a perception and fear that ‘plastic rice’ has been mixed in regular rice, and the team was able to broach the subject in the villages often by asking whether there was any ‘*charcha*’ in the village about Plastic Rice (even as the team went to great lengths to explain to people it interacted with that this is not plastic rice). The team found that a vast majority of women are picking out and throwing away the FRK added to rice, and this includes women who are cooking for Anganwadi and School meals. Such FRK is clearly identifiable amongst the real rice kernels, and is being picked out by hand, and later, during washing of the rice before cooking (FRK is floating up). Further, after cooking, when the extra water is drained out, the added nutrients appear to be getting leached out.

Where people have kept the mixed FRK in the rice while cooking, or where they have tasted it separately as a grain, there is a distinct lack of preference for this “rice”. “*Khaane mein mazaa nahin hai*”, said an adivasi woman in Khunti. This is because of color/taste/smell/texture/feel reasons.

The team came across several people in Khunti district who report having experienced a distinct abdominal discomfort, gastritis, diarrhoea and nausea after consuming FRK-mixed rice.

Further, the team came across several thalassemia and sickle cell patients as well as those with suspected hereditary blood disorders. Many TB patients are present in the villages and some were met. Malaria was also reported. These persons have also been given fortified rice.

Due to a deep compulsion related to poverty and lack of access to other foods to be consumed, as well as any purchasing power to rely on non-fortified rice bought from the market, many families are consuming fortified rice. These are households who are simply being delivered a *fait accompli* with no choices accorded to them by the government.

The team also came across people who had no complaints either way (no fear and hesitation about ‘plastic rice’ especially after some official clarifications issued, and no complaints about the quality of fortified rice either, nor any complaints of effects experienced after consumption of fortified rice). There were also villagers who felt that the Government was intentionally feeding them with unsafe rice, to kill them off!

The team met several doctors and officials who expressed their concern with the blanket approach that rice fortification has, while it also found that PDS dealers, frontline functionaries and local elected representatives were uninformed, and lacking in knowledge on the various aspects related to fortified rice.

1. Jharkhand's pre-existing health conditions of genetic blood disorders and infections like malaria, TB etc. and consequent risks from fortified rice being ignored:

This Fact-Finding Team understood clearly that the Government of India and Government of Jharkhand have not taken into account the context and conditions of the state, even as iron-fortified rice distribution is being scaled up. The state has a significant proportion of adivasi population. Several districts have very large proportions of adivasi people in fact. Genetic blood disorders are common amongst these communities.

While a majority of people did not complain about having experienced adverse health effects after consuming fortified rice, there were certainly some consumers of this rice who described the effects that they experienced (gastritis, diarrhea). These persons also reported that symptoms disappeared after they discontinued eating the FRK-mixed rice (after they started removing the FRKs painstakingly, or simply stopped using that rice if they could so afford).

The team also came across diagnosed Thalassemia patients and Sickle Cell Disease patients who were also supplied with such rice. There were also undiagnosed and likely-to-be thalassemia patients who were met.

It is also apparent that the state does not have population-based screening by which all patients of SCDs and Thalassemia have already been identified, even though some screening efforts are underway. There is very poor understanding of Anaemia as well as Sickle Cell Anaemia in the villages, and even Health department functionaries seem to be confused.

The team was told in RIMS that around 60000 to 70000 registered cases exist in the state while school-based screenings are leading to +ve results in 10-20% of those screened. This is indeed a large and significant number of people who are likely to be affected by the consumption of fortified rice. The largest number of cases were reported to be from Gumla, East Singhbhum, Giridih, Koderma and Dumka.

It was also noted that in all villages visited, malaria is prevalent and 5-8 TB patients also exist. In Boramchati village in East Singhbhum, the village Pradhan turned out to be a TB patient. Despite such a large presence of vulnerable beneficiaries, absolutely no precautions are in place to address and avoid the risk to them. To this Fact-Finding team, this is an irresponsible and unethical experimentation by the state unfolding in the communities.

2. Fortified Rice is being distributed indiscriminately to all children in anganwadis and schools:

What was noticed in the monthly ration system was noticed in the daily cooked meals in anganwadis and schools, where there is no distinction that is being made, or that can potentially be made, between those children who can consume fortified rice and those who cannot and should not.

The Fact-Finding Team met with two brothers, 12 and 7 years old respectively, of Boramchati village in Chakuliya Block of East Singhbhum, in MGM Hospital in Jamshedpur, along with their parents. They were getting blood transfusion done. It was learnt that the boys are having to undergo weekly blood transfusions in the recent past, whereas the frequency was lesser in the past. The treatment involves costs for the family, even as the parents forego work/earnings when they run around hospitals. This family has also been consuming fortified rice for around 3-4 months now. When asked if they cannot avoid consuming such rice, as is being advised by the Government of India itself, the mother said simply that they have no option but to eat the PDS rice. Clearly, the Jharkhand Government and the Government of India have been blind to the reality of thousands of such people when they are pursuing the rice fortification program.

3. FSSAI's legal regulations and Gol's guidelines being violated by the Government itself in the case of fortified rice distributed by the Government:

The guidelines of the Gol's scheme require labels to be put on fortified rice. Further, current legal regulations under FSSAI mandate appropriate packaging and labeling for all fortified food. (Warning) Statements are required to be carried on every package of iron fortified food, warning people with Thalassemia and persons with Sick Cell Anaemia. However, the reality is that those suffering from SCA or thalassemia have not been screened to a large extent, and identified as patients. Moreover, in rice that is distributed loosely from the PDS dealer to poor and many illiterate beneficiaries, it is unclear what sort of labeling is possible when packaging itself does not exist.

Labeling is required to be in two different ways – stenciling on gunny sacks, and a proper label. During the fact-finding visit, it was found that some labels with statements as prescribed by the DFPD, Government of India were present in english on some fortified rice gunny sacks. The FSSAI labeling regulation is not being followed. The +F logo was not always printed on the gunny sacks, nor is the required stenciling being done on the gunny sacks to show that they contain fortified rice inside. Where the warning statement for Thalassemia patients was present (there was nothing about SCA patients however), it was only on a small label stitched onto the gunny sack, which usually goes away along with the opening of the sack. The visit showed that some sacks had no label at all, apart from the fact that FRK could be noticed distinctively, mixed within the rice. Some sacks had labels, but no warning statement related to Thalassemia or SCA patients. Only in one instance was the label found in hindi. The DSO in East Singhbhum assured that things are being ensured from now on, while the new labels in the rice mill in Chakuliya were still not compliant with FSSAI legal regulations that kicked in on March 1st 2022.

(4) Every package of food, fortified with Iron shall carry a statement *"People with Thalassemia may take under medical supervision"*.

Amendment for substitution of highlighted provision

²[(4) Every package of food, fortified with Iron shall carry a statement *"People with Thalassemia may take under medical supervision and persons with Sick Cell Anaemia are advised not to consume iron fortified food products."*]

[Amendment in force from 27th August, 2021; FBOs to comply with the provisions by 1st March, 2022]

Source:

https://www.fssai.gov.in/upload/uploadfiles/files/Compendium_Food_Fortification_Regulations_30_09_2021.pdf

Meanwhile, the team also came across a Circular dated 22/02/2022 from FCI that a stenciled statement should be put on every gunny bag stating “People with Thalassemia may take under medical supervision”.

4. Health Department has not been involved, and is not taking any proactive responsibility for the situation emerging with fortified rice:

It is seen that the Health Ministry/Department has not been involved in any way in the fortified rice distribution and scaling up, both in the Centre and at the State Government level. CHCs and other institutions in the healthcare system have not been alerted to, or engaged in the fortified rice program. This team met with doctor-administrators in two CHCs and one district hospital and confirmed this. No information related to at least the few identified Thalassemia or SCA patients in the records of the healthcare system is being shared with the civil supplies system, even as a semblance of avoidance of risk to certain patients. What was seen is that the Civil Supplies department is driving the whole effort, while the Health Department is not taking any proactive responsibility for the emerging situation.

5. No prior informed consent obtained from the ‘beneficiaries’:

The Right to Informed Choices about one’s food is a basic right. The right to know what one is consuming is also a basic right. In the case of rice fortification, it is seen that no prior informed consent was ever sought from the recipients. They were not told about the new rice being distributed. No information was shared. In this top-down undemocratic approach, these rights are being neglected and violated. The preferences of the recipients are not being paid attention to. For instance, people in this region take Usna Chawal or parboiled rice, and do not prefer Arwa Chawal or raw rice, while FRK is reconstituted from raw rice. After complaints from villagers, fortified rice was discontinued in PDS, but continues to be served in mid-day meals and anganwadi meals in a village like Pahar Toli, as another illustration. Media reports indicate that with fortified rice, villagers are not able to fall back on their traditional dish of soaking cooked rice in additional water overnight.

6. No scientificity in a so-called “Pilot” Scheme:

Even though the Government of India started the Pilot Scheme on Rice Fortification in 2019, it started unfolding in a noticeable form only in 2021. Instead of 15 states, only 11 states accepted and initiated the “Pilots”. In some locations, the pilot districts initially chosen were replaced with others. While the Scheme’s 4 objectives include *“to evaluate the provision, coverage and Utilization of Fortified Rice by the target population as well as the efficiency/effectiveness of the consumption of fortified rice in reducing the targeted micronutrient deficiencies in different age and gender groups”*, on the ground, there is no evidence of any data-gathering on this front. There is no monitoring found in the villages visited in the Pilot district. It is unclear what the Pilot is, therefore, about. If there is a Pilot underway (the East Singhbhum pilot in terms of fortified rice distribution started only in October 2021), it is inexplicable how scaling up is happening simultaneously without lessons from Pilots being culled out and collated, and incorporated into the scaling-up! While Pilots are supposed to be in 11 states and 11 districts, distribution of rice is in 15 states and 257 districts right now. The Fact-Finding team found no evidence of any evaluation underway, nor did it come across any district or state level officials who could vouch for such evaluation of the Pilots, nor capturing of any relevant data systems that will facilitate any such evaluation.

7. No transparent sharing of information:

There is no pro-active and transparent sharing of information on government portals on exactly where the fortified rice is being distributed. It is unclear how some villages in Khunti district ended up receiving fortified rice for just one month, and the supply being discontinued thereafter. There is no public scrutiny possible right now on the movement, till the consumption of fortified rice, from the time rice blended with FRK gets packaged. At present, there is no rationale or order or design discernible in terms of distribution of fortified rice across Jharkhand. The PDS dealers also don't seem to know what to expect for their shops until the rice is actually received. The government is leaving behind an impression that this scheme is being implemented clandestinely, intentionally.

8. FRK Shelf Life might have expired:

It was found by the Fact-Finding team that the fortified rice sacks received in schools and anganwadis from states like Chhattisgarh and Telangana do not have any “expiry dates” mentioned. While the Government of India claims that the shelf life for fortified rice is one year, it appears that the shelf life is over for the supplies seen in Khunti district, given that they were from Kharif 2020 (KMS 2020-21). It is however not clear when the FRK mixed into the rice in these bags was created or blended. These sacks have been received in February 2022 locally.

9. Data anomalies and inconsistencies:

It has been noticed that within the data in the public domain, no two information sources match fully with each other. The Government of India's Annavitran portal is one source (https://annavitran.nic.in/dfsoByState?st_code=20&st_name=Jharkhand&req_month=2&req_year=2022#), Gol's Rice Fortification Dashboard is another source (<http://annavitran.nic.in/FR/avFortifiedRice>) and Jharkhand Government's Aahar portal (<https://aahar.jharkhand.gov.in/>) is the third. As per each of them, the total quantities of fortified rice distributed in Jharkhand are different. Even the beginning month for fortified rice distribution is different across portals. Meanwhile, within the two [Government of India portals](#), the figures for allocations and distribution of fortified rice are [significantly different](#). This point is being raised by this Fact-Finding team to state that decision-makers in the government may not have a real-time handle on emerging issues with this kind of data systems. And such inconsistencies may also allow for this fortified rice reaching the wrong locations and wrong beneficiaries even during the so-called pilot phase.

10. Some functionaries in the Government are seriously concerned and keen on knowing what they can do:

The Fact-Finding team found that several functionaries in the government are concerned, once they started engaging with the potential ramifications of the rice fortification programme. They were very keen on knowing what they can do to address the emerging situation. It is clear that no consultations were held at all levels with different concerned departments and no reality-checks incorporated into Government of India's ambitious project (a properly designed, executed and evaluated Pilot might have brought such realities to the fore of course).

11. State Government not playing its role and is relying fully on the Centre while Health is a state subject as per India's Constitution:

The Fact-Finding team is surprised to note that the state government has not pro-actively engaged with the pros and cons of the rice fortification program of Government of India, keeping the state's own reality and interests in mind. This is a clear abdication of the responsibility of the State Government, especially given that Health is a state subject, as per India's Constitution. This is all the more surprising given that there is no compulsion on the party in power in the state to toe the line of the party in power in the Union Government.

12. Central Government adopting a one-size-fits-all approach to Nutrition is undemocratic, risky and possibly ineffective:

The lack of consultations and consent, from state governments as well as from end-consumers of the near-mandatory fortification of rice is quite apparent. The risks with this rice being distributed indiscriminately to all beneficiaries including contra-indicated persons are also clear. Meanwhile, Fortified Rice as an approach to tackling anaemia is unproven in its efficacy. On the ground, the fact-finding team found numerous reasons because of which this approach could be ineffective. Apart from end-consumer behaviour with regard to rejection of FRK, there are questions on the shelf life of the fortified rice being supplied, as well as efficacy of iron supply without bio-availability and bio-absorption addressed. This would only mean a wastage of public funds.

Fact-Finding Team's Doctor's Observations

It was clear from our interactions in the field that fortified rice was being distributed in Karra Block of Khunti district without information to the community, and without their prior informed consent. The rice was evidently different in colour, texture, cooking time, taste and feel leading to the community referring to it as 'plastic rice'. Recipients of this rice also attempted to keep out this rice from their consumption by picking it out and discarding it. Some community members did cook it to find that it dissolved in the water and was leached out when the rice was drained. However, most did not eat it out of concern about its nature. Of the people who had eaten the rice, a few perceived a distinct abdominal discomfort, gastritis, diarrhoea and nausea. Many did not suffer from any side effects.

In Chakuliya in the Pilot District of East Singhbhum, the rice was being distributed through the AWC, MDM and PDS for a few months and the above-mentioned findings were also present in this area with a slightly greater awareness of the nature of the rice as being 'vitamin fortified' due to some orientation received by government frontline workers after complaints had been made by the community.

The Fact-Finding team was easily able to establish the presence of 2-4 people with severe Anaemia in each village that was visited, many of whom were known to receive regular, recurrent blood transfusions. Hemoglobin levels were recorded and observed to be from 4-9 gms/dl across various episodes. However, shockingly, the majority of them had not been tested for SCD or Thalassemia despite this history. A few of them had a documented diagnosis of SCD or Thalassemia. What needs to be noted is that all of them were receiving and consuming

fortified rice despite the Government of India regulations that advise that SCA patients must not consume iron-fortified food and Thalassemia patients must consume iron-fortified food under medical supervision. The ASHA worker or the PDS dealer or the distributing Anganwadi worker or the school teachers/cooks were completely unaware of this advisory and had issued no warnings to the people concerned or any reports to the authorities. In any case, the people consuming the rice were given no other alternatives.

It was also clearly mentioned by community members, ASHA workers and doctors (private and public) that there is a high incidence of both malaria and TB in the area which is another context in which iron needs to be given only at a certain phase under medical supervision. The team did not attempt to identify children with SAM. However, malnourished children were visible in all the villages and the prevalence is known to be high in these areas, which is another medical context in which iron is prescribed in a specific phase only and with due caution and justification.

In summary, the community is finding ways to get rid of the FRK component of the rice, or the cooking process is eliminating the FRK component of the rice. Nonetheless, the risk to medical patients - undiagnosed and diagnosed - in the community persists with no attempt by the government to identify and protect them. Given the slim evidence on efficacy, the disruption to the food culture and systems and the risk to the community heavily outweigh any possible benefits of iron-fortified rice.

5.ALTERNATIVE HOLISTIC APPROACHES TO NUTRITION

While the Government of Jharkhand as well as Government of India are promoting the same risky, centralised and undemocratic approaches to addressing malnutrition in the form of anaemia, seemingly spurred by corporate lobbies which have also infiltrated regulatory bodies entrusted with food safety in India, several civil society organisations in Jharkhand are establishing promising alternative interventions on the ground. Here, nutrition is addressed in a holistic manner, and not micro-nutrient by micro-nutrient. Improving dietary diversity along with increasing the food intake to required levels is made the key objective.

We present two illustrations here, even though they are unpublished (incidentally, the Government of India is right now proceeding on the basis of a few unpublished evaluations, for scaling up fortified rice distribution - such studies have not always been peer-reviewed or published).

Supplementary Feeding Initiatives under a health project implemented by a Civil Society Organisation- PRADAN in Paharia villages of Sundarpahari block, Godda district under an UNICEF project (2008-12) showed a 12% drop in underweight children (N=232). The program included feeding of children with *Purak* made from organically grown native varieties of Sorghum and Bengal Gram flour along with distribution & use of mosquito nets, inculcating the habit hand washing with soap, disinfection of drinking water and promotion of Kitchen gardens and encouraging foraging and consumption of seasonal wild greens. *Purak* was grown and made by the Women Self Help Groups in the villages and distributed to underweight children (12-60 months) across 18 ICDS centres covering 51 villages during the project period.

A [cross-sectional study](#) was taken up to assess the impact of supplying locally grown safe food mix along with non-chemical organically grown vegetables as nutritional supplement across 12 ICDS Centres, on the nutritional status amongst under-5 children in Ghatshila Block's Barakurshi Gram Panchayat in East Singhbhum by Centre for World Solidarity (CWS). In the intervened centres in this well-evaluated intervention, total children in the Green Category of Underweight children increased, while number of GAM children reduced. The number of underweight children (yellow and red category) declined in the intervention centres whereas in the non-intervention centres, the yellow and red category children remained static or increased over the study period. Overall weight gain was 2.11 kilos in intervened centres, which was 0.835 kgs more than non-intervened centres. The intervention consisted of De-working, Consumption of locally made Nutri-Mix, Promotion of Nutrition Gardens and Consumption of non-chemical vegetables in the anganwadis, Consumption of Uncultivated Foods, Improvement in Dietary Diversity, Promotion of Hand Wash and Counselling. The nutrimix was created from parboiled rice, greengram, groundnut and jaggery.

It is also important to note here that several local foods, including uncultivated foods, are rich in various micro-nutrients, including Iron. Some of these could be seasonal and local, and might be available free of cost. Consumption of such foods will however require intense re-popularisation through large campaigns. For foods like Millets and Traditional Iron-rich Landraces, the government would have to set up incentive and support systems that address livelihoods, nutrition and resource regeneration in one go.

Some Millet crops are also rich in Iron and other micro-nutrients. Finger Millet has 4.62 mg of Fe per 100 g serving (Indian Food Composition Tables, NIN/ICMR, 2017) as compared to 2.5 mg/100 g in FRK. Khunti district has the 3rd highest acreage under Finger Millet in Jharkhand after Gumla & Ranchi districts. The following pictures illustrate some of the local options available for promotion with communities.

REAL FOODS ENRICHED WITH IRON



Source: Gopalan et al (1989): Nutritive Value of Indian Foods. National Institute of Nutrition/Indian Council for Medical Research

| Rice Variety | Iron Content (mg/100g) |
|--------------|------------------------|
| BAGH JHAPTA | 6.5 mg |
| BOURANI | 4.5 mg |
| CHEENAKAMINI | 6.8 mg |
| DEHRADUN | 5.2 mg |
| HAMILTON | 4.3 mg |
| KELAS | 3.5 mg |
| KHARA | 4.9 mg |
| KUMROGORE | 3.4 mg |
| LAL BAHAL | 3.2 mg |
| LAL GETU | 8.5 mg |
| MOINAGURI | 4.3 mg |
| MOTI | 4.3 mg |
| NOICHI | 3.9 mg |
| SUBASITA | 4.6 mg |
| TALMUGUR | 4.5 mg |

FORTIFIED FOLK RICES

These Folk Rices from West Bengal **have IRON content MORE than that of Spinach**, ranging from 3.2 mg to 8.5 mg per 100 gram of serving.

There are hundreds of Folk Rices that are **naturally fortified with Iron, Zinc, Manganese, Copper and different vitamins**.

Folk Rices offer **low-cost, healthy and sustainable solution** to address the Anemia and Micronutrient deficiency challenges of the nation as to synthetic fortification.

Source: Deb, D et al, CURRENT SCIENCE, VOL. 109, NO. 3, 10 AUGUST 2015

These Folk Rices are being conserved by Bhairab Saini at V-Panchal (Bankura dist) & Paschim Sridharkoti Janakalyan Sangha (North 24 Parganas dist) of West Bengal.

Panicle photos taken by Dipankar Bose @ Panchal & Hingalganj (WB).

There are also numerous local, uncultivated greens that are rich in various micronutrients including Iron. However, there is no promotion of such local natural, nutrient-rich foods by any government agency.

Foraged Greens from Ranchi Region

| GLVs | Nutrients per 100 g serving |
|----------|---|
| Koinar | Ca-312 mg, Fe- 7.8, β Carotene-1764 IU, Vit C- 173 mg, Antioxidants- 1817 AEAC |
| Matha | Ca- 1717 mg, Fe- 28.4 mg, Vit C- 438 mg, Antioxidants – 3400 AEAC |
| Sarla | Ca- 552.4 mg, Fe- 22.9, Zn- 2.6 mg, β Carotene- 56,678 IU, Antioxidants- 3900 AEAC |
| Phutkal | Ca- 157 mg, Fe- 7.3, Zn- 3.5, β Carotene- 13,336 IU, Antioxidants- 4100 AEAC |
| Beng | Ca- 1189 mg, Fe- 7.9 mg, Zn- 6.6 mg, β Carotene- 31,673 IU, Antioxidants- 3600 AEAC |
| Ban Poi | Ca- 704 mg, Fe- 16.4 mg, Zn- 9.9 mg β Carotene- 33,340 mg, Antioxidants- 1900 AEAC |
| Titha | Ca- 41.3, Fe- 9.2 |
| Chata | Ca-175 mg, Fe- 10 mg, Zn- 2.04 mg, β Carotene- 1830 IU, Vit C-78 mg, Antioxidants – 2575 AEAC |
| Muchri | Ca-978 mg, Fe- 9.2 mg, Zn- 5.6 mg, β Carotene- 43,342 IU, Antioxidants- 5200 AEAC |
| Chakonda | Ca- 520 mg, Fe-12.4 mg, β Carotene-10,152 IU, Vit C-82 mg, Antioxidants- 3733 AEAC |
| Mungo | Ca- 1114 mg, Fe- 9.6 mg, Zn- 1.5 mg, β Carotene-56,678 IU, Vit C- 155 mg, Antioxidants- 4600 AEAC |

IU- International Units; AEAC- Ascorbic Acid Equivalent Antioxidant Capacity

Foraged Greens from Santal Parganas Region

| GLVs | Nutrients per 100 g serving |
|--------------|---|
| Sing ara | Ca-312 mg, Fe- 7.8 mg, β Carotene-1764 IU, Vit C- 173 mg, Antioxidants- 1817 AEAC |
| Matha ara | Ca- 1717 mg, Fe- 28.4 mg, Vit C- 438 mg, Antioxidants – 3400 AEAC |
| Boibindi ara | Ca- 552.4 mg, Fe- 22.9 mg, Zn- 2.6 mg, β Carotene- 56,678 IU, Antioxidants- 3900 AEAC |
| Khanta ara | Ca- 41.3 mg, Fe- 9.2 mg |
| Saru ara | Ca -227 mg, Fe-10 mg, β Carotene-10,278 IU, Vit C- 12 mg, Antioxidants- 5200 AEAC |
| Kana ara | Ca-100 mg, Fe- 4.5 mg, Vit C- 41 mg |
| Bathua ara | Ca- 150 mg, Fe-4.2 mg, β Carotene-1740 IU, Vit C- 35 mg |
| Mungo ara | Ca- 1114 mg, Fe- 9.6 mg, Zn- 1.5 mg, β Carotene-56,678 IU, Vit C- 155 mg, Antioxidants- 4600 AEAC |

IU- International Units; AEAC- Ascorbic Acid Equivalent Antioxidant Capacity

Source- Sakshi Gupta et al, *Journal of Pharmacognosy & Phytochemistry*, 2017, 6(6):901-909

Gopalan et al, *Nutritive Value of Indian Foods*, NIN (ICMR), 1989

The Government's approach to iron-deficiency Anaemia needs to be replaced by dietary diversity, combined with a far better iron supplementation programme using better formulations and an individualised case-management approach handled by the health department. A process of nutrition awareness using participatory learning, combined with strategies enabling access to dietary diversity - such as promotion of kitchen gardens/nutri-gardens and nutrition sensitive agriculture that incorporates extensive livestock systems - needs to be established in the community. Long-standing recommendations arising from the National Food Security Act 2013 for addition of millets to the PDS, as well as recommendations from the on-ground campaigns for adding pulses and oil to the PDS and eggs to the MDMs and Angawadi hot-cooked meals and THR (Take Home Ration) need to be adopted.

Anaemia can be well-tackled through this approach without putting cultural practices, food systems and human health to such jeopardy.

6.CONCLUSION AND RECOMMENDATION

This fact-finding team is of the firm view that in a large-scale approach to rice fortification like is being adopted by Governments right now, even a screening process prior to fortified rice distribution does not resolve the problem of at-risk individuals, because within a household, it is unlikely that two different rices (fortified and unfortified) will be cooked for every meal for the contra-indicated cases and healthy persons.

It is also unlikely that the government would be able to put into place any mechanisms by which entitlements of each person in a household can be distributed distinctly in the PDS system as fortified and non-fortified rice, to cater to individual needs and medical conditions. While that is about (lack of) capabilities of the State to deliver in a tailor-made fashion to patients separately from healthy persons in a community, it is also very apparent that most households are deeply dependent on the entitlements that they access from the PDS system. It is clear that avoidance of risk to the vulnerable contra-indicated persons requires the stopping of the supply of fortified rice itself in a state like Jharkhand.

In the name of rice fortification, the government is causing a major disruption to people's major source of nutrition – rice – unnecessarily, and without any due consideration of their right to choose what food they would like to consume.

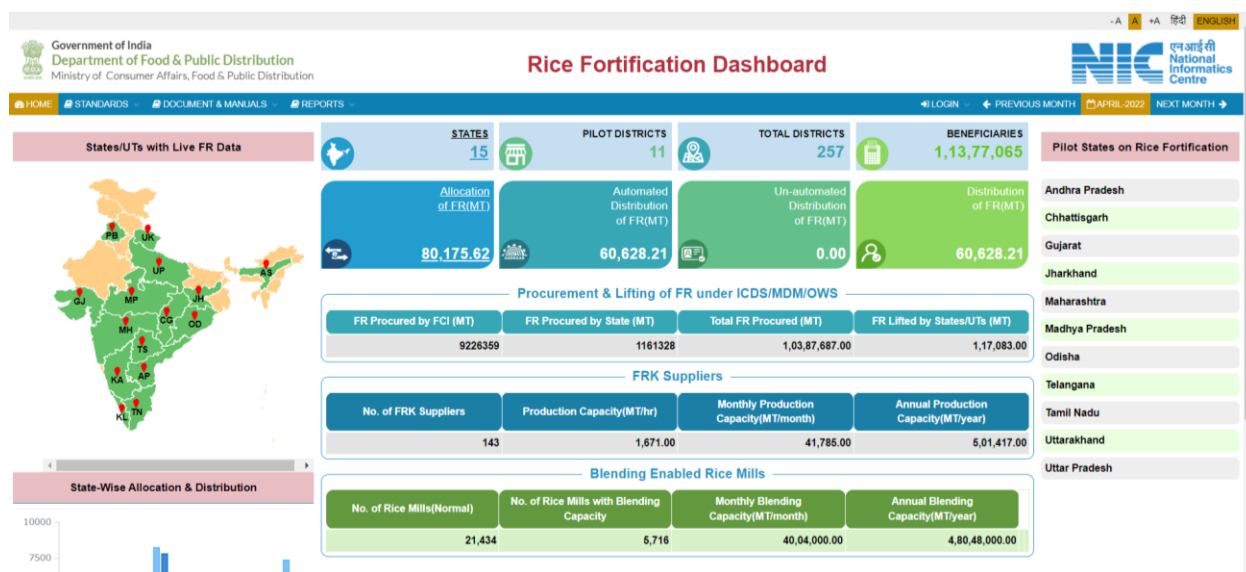
Considering that many other alternatives exist, like better micro-nutrient supplementation programmes and holistic approaches that promote adequate and diverse diets, this near-mandatory rice fortification is extremely high-handed and violative of people's right to food, especially when it comes to the poor.

The Fact-Finding team believes that Jharkhand Government needs to reject rice fortification in government food schemes as an approach to tackling malnutrition, and should communicate the same to the Government of India immediately.

The Central and State Governments should instead invest on holistic, sustainable, natural and community-controlled solutions, as described in the earlier section of this report.

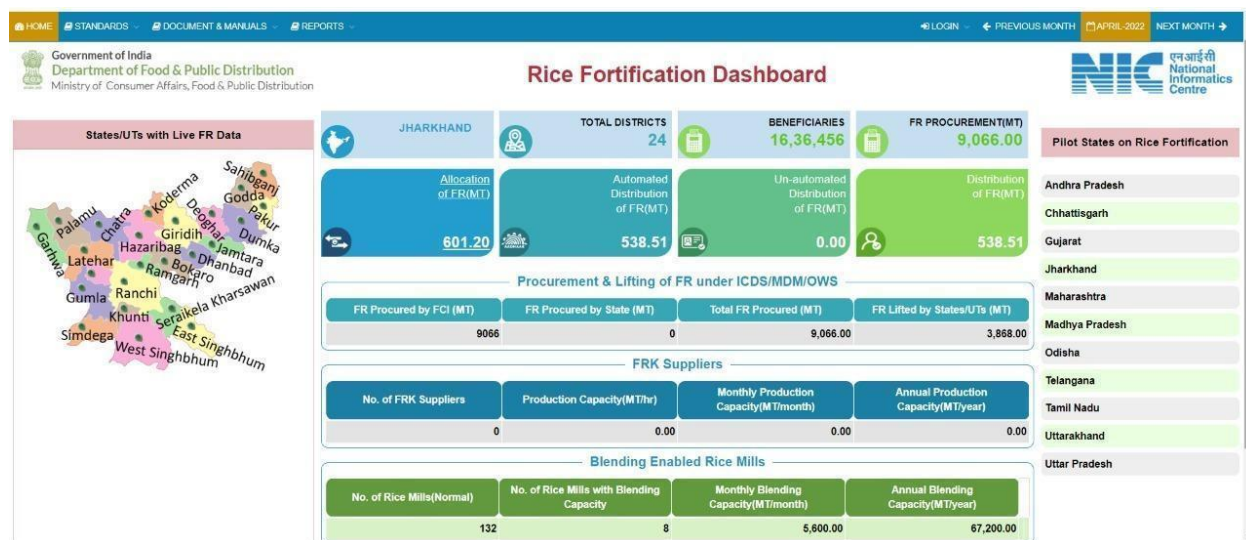
ANNEXURES

Government of India's Rice Fortification Dashboard at national level



Source: GoI's Rice Fortification Dashboard accessed on 1st May 2022
<http://annavitrان.nic.in/FR/avFortifiedRice?month=4&year=2022>

Government of India's dashboard on Rice Fortification for Jharkhand, April 2022



Source: http://annavitrان.nic.in/FR/stateByFrkCountryAjax?stateCode=20&req_month=4&req_year=2022

COVERAGE AND DISTRIBUTION OF FORTIFIED RICE FROM JANUARY 2020 (national)

| Month & Year | No. of States | Names of Participating States in that month | No. of Districts | No. of Beneficiaries | Allocation in MT | Distribution in MT | Distribution as per Annavitran portal in MT |
|--------------|---------------|---|------------------|----------------------|------------------|--------------------|---|
| Jan-20 | 2 | Gujarat, Maharashtra | 2 | 710,441 | 0 | 1529.44 | 0 |
| Feb-20 | 2 | Gujarat, Maharashtra | 2 | 1496610 | 0 | 4376.47 | 0 |
| Mar-20 | 2 | Gujarat, Maharashtra | 2 | 1489541 | 0 | 4374.22 | 0 |
| Apr-20 | 2 | Gujarat, Maharashtra | 2 | 1487979 | 0 | 4414.49 | 0 |
| May-20 | 3 | Andhra Pradesh, Gujarat, Maharashtra | 3 | 1612217 | 1650.11 | 6402.97 | 1602.26 |
| Jun-20 | 3 | Andhra Pradesh, Gujarat, Maharashtra | 3 | 1611733 | 1652.14 | 6405.94 | 1607.48 |
| Jul-20 | 3 | Andhra Pradesh, Gujarat, Maharashtra | 35 | 1527518 | 2431.66 | 6955.78 | 2376.9 |
| Aug-20 | 3 | Andhra Pradesh, Gujarat, Maharashtra | 35 | 1525441 | 2409.16 | 6944.98 | 2362.73 |
| Sep-20 | 3 | Andhra Pradesh, Gujarat, Maharashtra | 35 | 1528373 | 2405.4 | 6970.99 | 2382.61 |
| Oct-20 | 5 | Andhra Pradesh, Chhattisgarh, Gujarat, Maharashtra, Tamil Nadu | 37 | 2303655 | 2436.81 | 12,449.83 | 2403.83 |
| Nov-20 | 5 | Andhra Pradesh, Chhattisgarh, Gujarat, Maharashtra, Tamil Nadu | 37 | 2398412 | 2591.23 | 13571.02 | 2551.77 |
| Dec-20 | 5 | Andhra Pradesh, Chhattisgarh, Gujarat, Maharashtra, Tamil Nadu | 42 | 2484884 | 3159.62 | 16279.43 | 4268.92 |
| Jan-21 | 6 | Andhra Pradesh, Chhattisgarh, Gujarat, Maharashtra, Tamil Nadu, Uttar Pradesh | 117 | 1968663 | 3110.7 | 18817.37 | 10113.54 |
| Feb-21 | 5 | Andhra Pradesh, Chhattisgarh, Gujarat, Tamil Nadu, Uttar Pradesh | 132 | 2433048 | 4689.08 | 23575.81 | 13694.26 |
| Mar-21 | 5 | Andhra Pradesh, Chhattisgarh, Gujarat, Tamil Nadu, Uttar Pradesh | 140 | 2492471 | 5034.47 | 25929.25 | 15391.97 |

| | | | | | | | |
|--------|----|--|------------|---------|-----------------|----------|----------|
| Apr-21 | 5 | Andhra Pradesh, Chhattisgarh, Gujarat, Tamil Nadu, Uttar Pradesh | 143 | 2492401 | 5125.06 | 26048.95 | 15468.08 |
| May-21 | 5 | Andhra Pradesh, Chhattisgarh, Gujarat, Tamil Nadu, Uttar Pradesh | 139 | 2491133 | 9932.1 | 26636.17 | 15754.06 |
| Jun-21 | 6 | Andhra Pradesh, Chhattisgarh, Gujarat, Maharashtra, Tamil Nadu, Uttar Pradesh | 114 | 3924109 | 18898.04 | 41401.62 | 21974.9 |
| Jul-21 | 6 | Andhra Pradesh, Chhattisgarh, Gujarat, Odisha, Tamil Nadu, Uttar Pradesh | 139 | 3951000 | 19215.64 | 42893.11 | 21607.28 |
| Aug-21 | 6 | Andhra Pradesh, Chhattisgarh, Gujarat, Odisha, Tamil Nadu, Uttar Pradesh | 146 | 3918376 | 18441.26 | 41875.73 | 20709.04 |
| Sep-21 | 9 | Andhra Pradesh, Chhattisgarh, Gujarat, Madhya Pradesh, Odisha, Tamil Nadu, Telangana, Uttar Pradesh, Uttarakhand | 211 | 4959342 | 23772.5 | 47645.9 | 25098.76 |
| Oct-21 | 10 | Andhra Pradesh, Chhattisgarh, Gujarat, Jharkhand, Madhya Pradesh, Odisha, Tamil Nadu, Telangana, Uttar Pradesh, Uttarakhand | 213 | 5094284 | 23439.95 | 48611.85 | 25111.9 |
| Nov-21 | 10 | Andhra Pradesh, Chhattisgarh, Gujarat, Jharkhand, Madhya Pradesh, Odisha, Tamil Nadu, Telangana, Uttar Pradesh, Uttarakhand | 236 | 4943738 | 23989.18 | 48219.15 | 25606.37 |
| Dec-21 | 11 | Andhra Pradesh, Chhattisgarh, Gujarat, Jharkhand, Madhya Pradesh, Maharashtra, Odisha, Tamil Nadu, Telangana, Uttar Pradesh, Uttarakhand | 238 | 6108001 | 24834.65 | 27111.9 | 27075.85 |

| | | | | | | | |
|--------|-----------|---|------------|----------|-----------------|----------|----------|
| Jan-22 | 11 | Andhra Pradesh, Chhattisgarh, Gujarat, Jharkhand, Madhya Pradesh, Maharashtra, Odisha, Tamil Nadu, Telangana, Uttar Pradesh, Uttarakhand | 222 | 4545726 | 32842.93 | 29018.47 | 27498.44 |
| Feb-22 | 11 | Andhra Pradesh, Chhattisgarh, Gujarat, Jharkhand, Madhya Pradesh, Maharashtra, Odisha, Tamil Nadu, Telangana, Uttar Pradesh, Uttarakhand | 241 | 6501025 | 43473.88 | 34558.84 | 34558.83 |
| Mar-22 | 11 | Andhra Pradesh, Chhattisgarh, Gujarat, Jharkhand, Madhya Pradesh, Maharashtra, Odisha, Tamil Nadu, Telangana, Uttar Pradesh, Uttarakhand | 245 | 9663482 | 60131.98 | 44234.43 | 44258 |
| Apr-22 | 15 | Andhra Pradesh, Chhattisgarh, Gujarat, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Odisha, Punjab, Tamil Nadu, Telangana, Uttar Pradesh, Uttarakhand | 257 | 11377065 | 80175.62 | 60628.21 | 60769.8 |

Source: <http://annavitran.nic.in/FR/avFortifiedRice?month=4&year=2022> accessed on 01/05/2022

As per the above, Total Allocation of Fortified Rice was 4.16 Lakh MT while Total Distribution has been 6.78 Lakh MT. Meanwhile, the main portal of Gol shows only 424,248 MT as having been distributed. Even in such a case, allocation being lower than the distribution figure is surprising.

DISTRIBUTION OF FORTIFIED RICE IN JHARKHAND SO FAR

| Month | Allocated | Distributed |
|--------|----------------|---------------|
| Oct-21 | 0 | 551.66 |
| Nov-21 | 555.19 | 518.63 |
| Dec-21 | 555.15 | 587.17 |
| Jan-22 | 601.97 | 585.24 |
| Feb-22 | 600.89 | 588.49 |
| Mar-22 | 599.91 | 574 |
| Apr-22 | 601.2 | 538.51 |
| | 3514.31 | 3943.7 |

Source: http://annavitran.nic.in/FR/stateByFrkCountryAjax?stateCode=20&req_month=4&req_year=2022 accessed on 28th April 2022

While the above is the picture from the Government of India portal, the following is the picture from Jharkhand's state government portal.

| Month | Allocated | Distributed |
|--------|----------------|----------------|
| Oct-21 | 604.43 | 584.82 |
| Nov-21 | 602.16 | 563.76 |
| Dec-21 | 602.18 | 584.23 |
| Jan-22 | 601.97 | 585.46 |
| Feb-22 | 600.89 | 588.73 |
| Mar-22 | 599.91 | 574.66 |
| Apr-22 | 601.2 | 538.79 |
| | 4212.74 | 4020.45 |

Source: <https://aahar.jharkhand.gov.in/district-monthly-reports/block-reports-forti-fied-rice>

ADIVASI POPULATION IN JHARKHAND, CENSUS 2011

| Name | Total Population | ST Population | % ST in Total Population |
|---------------------|------------------|---------------|--------------------------|
| JHARKHAND | 32988134 | 8645042 | 26 |
| Garhwa | 1322784 | 205874 | 16 |
| Chatra | 1042886 | 45563 | 4 |
| Kodarma | 716259 | 6903 | 1 |
| Giridih | 2445474 | 238188 | 10 |
| Deoghar | 1492073 | 180962 | 12 |
| Godda | 1313551 | 279208 | 21 |
| Sahibganj | 1150567 | 308343 | 27 |
| Pakur | 900422 | 379054 | 42 |
| Dhanbad | 2684487 | 233119 | 9 |
| Bokaro | 2062330 | 255626 | 12 |
| Lohardaga | 461790 | 262734 | 57 |
| Purbi Singhbhum | 2293919 | 653923 | 29 |
| Palamu | 1939869 | 181208 | 9 |
| Latehar | 726978 | 331096 | 46 |
| Hazaribagh | 1734495 | 121768 | 7 |
| Ramgarh | 949443 | 201166 | 21 |
| Dumka | 1321442 | 571077 | 43 |
| Jamtara | 791042 | 240489 | 30 |
| Ranchi | 2914253 | 1042016 | 36 |
| Khunti | 531885 | 389626 | 73 |
| Gumla | 1025213 | 706754 | 69 |
| Simdega | 599578 | 424407 | 71 |
| Pashchimi Singhbhum | 1502338 | 1011296 | 67 |
| Saraikela-Kharsawan | 1065056 | 374642 | 35 |

PREVALENCE OF ANAEMIA AMONGST 6-59 MONTHS' CHILDREN IN DISTRICTS OF JHARKHAND

| SI No. | District | 6-59 months' children Anaemia Percentage (<11g/dL) (2019-21) |
|--------|---------------------|--|
| 1 | Bokaro | 66.5 |
| 2 | Chatra | 62.6 |
| 3 | Deoghar | 73.9 |
| 4 | Dhanbad | 66.5 |
| 5 | Dumka | 75.1 |
| 6 | East Singhbhum | 67.4 |
| 7 | Garhwa | 62.5 |
| 8 | Giridh | 62.8 |
| 9 | Godda | 75.1 |
| 10 | Gumla | 65.8 |
| 11 | Hazaribagh | 62.1 |
| 12 | Jamtara | 72.8 |
| 13 | Khunti | 66.9 |
| 14 | Kodarma | 60 |
| 15 | Latehar | 68.3 |
| 16 | Lohardaga | 68.7 |
| 17 | Pakur | 72.1 |
| 18 | Palamu | 68.2 |
| 19 | Ramgarh | 59.7 |
| 20 | Ranchi | 62.8 |
| 21 | Sahibganj | 72.6 |
| 22 | Saraikala Kharsawan | 76.1 |
| 23 | Simdega | 75.4 |
| 24 | West Singhbhum | 73.3 |

Source: NFHS 5 data, from http://rchiips.org/nfhs/districtfactsheet_NFHS-5.shtml accessed on 28th April 2022

COMPILATION OF ADVERSE REPORTS ABOUT FORTIFIED RICE

1. <https://jharkhandnews.live/pds-dealer-distributed-plastic-rice-in-bokaro/>

<https://www.livehindustan.com/jharkhand/story-jharkhand-alleged-distribution-of-plastic-rice-from-government-ration-shop-investigation-started-after-uproar-5674622.html> - Bokaro, Jharkhand, 27/01/2022 – complaints of health effects from Kolbendi village in Bokaro district's Chas Block. Report indicates that villagers are now buying rice from non-PDS shops.

सरकारी राशन दुकान से प्लास्टिक चावल बांटने का आरोप, हंगामे के बाद शुरू हुई जांच

पेट दर्द के बाद प्लास्टिक चावल की बात आयी सामने. कोलबेंदी के विभिन्न टोला में प्लास्टिक चावल खाने के बाद लोगों में पेट दर्द, उल्टी आदि की शिकायत की है। घर-घर पेट दर्द की शिकायत के बाद ग्रामीणों को चावल में प्लास्टिक होने की जानकारी मिली। इसके बाद लगभग 5 सौ से अधिक घरों में पीडीएस दुकान से लिए गए लगभग सौ क्विंटल चावल में कुछ मात्रा प्लास्टिक जैसी चावल होने की बात सामने आई।

2. <https://zeenews.india.com/hindi/india/up-uttarakhand/uttar-pradesh/barabanki-plastic-rice-found-from-ration-shop-officials-said-about-investigation/1053688> - Barabanki, Uttar Pradesh, 22/12/2021 – From Fatehpur Tehsil's Maidaspur village – Complaint of no taste/flavour and that the fortified rice will now be fed to animals.

राशन की दुकान से मिला प्लास्टिक का चावल! पकाने पर निकलने लगा चिपचिपा पदार्थ, अधिकारियों ने कही जांच की बात

3. <https://www.bhaskar.com/local/jharkhand/jamshedpur/chaibasa/news/people-under-the-illusion-of-having-plastic-rice-in-the-mid-day-meal-rice-being-allotted-to-the-schools-of-west-singhbhum-129521134.html> - Chaibasa, Jharkhand

चावल में कृत्रिम चावल मिलावट किए जाने की चर्चा: पश्चिमी सिंहभूम के स्कूलों को आवंटित की जा रही मिड डे मील के चावल में प्लास्टिक चावल होने के भ्रम में लोग

4. <https://www.patrika.com/kawardha-news/plastics-found-in-rice-given-by-government-2651652/> - 15/4/2018 – from Kawardha, Birendranagar, Kabirdham in Chhattisgarh

अगर आपको भी मिलता है सरकारी चावल तो करें जांच, कहीं उसमें Plastic तो नहीं पिछले कुछ समय से चावल में प्लास्टिक मिले होने के कई मामले सामने आए हैं।

चावल को चबाने में दिक्कत हो रही है। वहीं पके हुए चावल को गेंद बनाकर उछालने पर गेंद की तरह उछल रहा है। इस कारण लोगों ने आशंका जताई कि कहीं चावल में प्लास्टिक तो नहीं मिला।

5. https://dailychhattisgarh.com/chhattisgarh-article-details.php?article=113928&path_article=23 16/12/2021 – Rajnandgaon, Chhattisgarh – Dengargadh Block Madiyan village – Many complaints from the villages and people are refusing to buy the PDS rice

6. <https://www.amarujala.com/uttar-pradesh/varanasi/fortified-rice-villagers-demonstrated-by-saying-plastic-rice-in-chandauli> - Chandauli district, Uttar Pradesh, 10/4/2021 – Barahani block, Pipardaha village -

यूपी : ग्रामीणों ने जिसे प्लास्टिक चावल बताकर किया प्रदर्शन, उसके हैं कई फायदे, जानें पूरा मामला कोटे की दुकान से मिले चावल में पीले रंग के चावल का दाना मिलने पर लोग सकते में आ गए। वे अपने-अपने घरों से कोटे से लाए गए चावल का मिलान करने लगे तो सब में एक जैसे चावल के दाने दिखाई दिए। इस पर उनका शक और गहरा हो गया।

7. <https://www.amarujala.com/uttar-pradesh/kushinagar/accused-of-distributing-plastic-rice-kushinagar-news-gkp407714938> - Kushinagar, Uttar Pradesh, 2/9/2021

प्लास्टिक का चावल बांटने का आरोप

खानू छपरा गांव के लोगों ने किया प्रदर्शन, चावल लेने से किया इनकार. इनका आरोप था कि जब इसे पकाया जा रहा है तो उसमें से चिपचिपा पदार्थ निकल रहा है।

8. <https://amritvihar.com/bareilly-uproar-over-the-information-about-distributing-plastic-rice-in-the-government-gully/> - Bareilly district, Uttar Pradesh – 10/9/2021 – Bidhauliya village

बरेली: सरकारी गल्ले में प्लास्टिक का चावल बांटने की सूचना पर हंगामा

चावलों को दांत से भी दबाने की कोशिश की लेकिन गड़बड़ लगी। जिसके बाद कोटेदार को चावल की शिकायत करने पहुंचे तो वह भाग गया। मामला पूर्ति विभाग के अधिकारियों तक पहुंचा।

9. <https://thenhzero.com/plastic-rice-in-barabanki-uttar-pradesh-how-to-identify-plastic-rice/> - Barabanki – Uttar Pradesh, 25/12/2021
10. <https://www.enavabharat.com/state/maharashtra/nashik/rice-melts-instead-of-cooking-allegation-of-getting-plastic-rice-in-nutritional-diet-398633/> - Nashik, Maharashtra, 25/8/2021

चावल पकने की बजाय पिघल गए, पोषण आहार में प्लास्टिक के चावल . लेकिन नाशिक जिले के त्र्यंबकेश्वर तहसील में, स्थानीय लोगों ने आरोप लगाया है कि आंगनवाड़ी को प्लास्टिक चावल की आपूर्ति की जा ..

11. <https://www.youtube.com/watch?v=hNQNXJmlp7o> – Nimdih, Jharkhand – March 3rd 2022
लोगों ने कहा कि जनवितरण दुकानदार से चावल में मिलावट में प्लास्टिक रंग के चावल दिया गया।
12. <https://drive.google.com/file/d/1Cf2hJwXoi47TUc4NBpKO46YqDxoqxKDs/view> - Chakuliya, Jharkhand, 1/2/2022 – Locals complain about plastic rice – villagers test it by soaking in water, and setting the grains on fire.
13. <https://www.chamaktaaina.com/chakulia-normal-rice-or-fortified-rice/> - Chakuliya, East Singhbhum, Jamshedpur, Jharkhand, February 1, 2022

14. <https://www.aajtak.in/india/jharkhand/story/lohardaga-free-ration-for-poor-plastic-mix-rice-people-complain-minister-orders-for-inquiry-1281903-2021-06-30> - Lohardaga, Jharkhand – 30/6/2021



झारखंड: लोहरदगा में गरीबों के मुफ्त अनाज में प्लास्टिक मिक्स चावल, पकाने पर आती है बदबू. प्लास्टिक मिक्स चावल को घंटों पानी में डुबाने के बाद दानों में चिपचिपाहट हो रही है. बदबू भी आ रही है.

यह मिलावटी चावल पकता नहीं है बल्कि दुर्गंध देता है और चिपकता भी है. लोहरदगा कुडू के बड़कीचांपी पंचायत में संचालित सरकारी राशन दुकान से लाभुकों ने चावल में प्लास्टिक का चावल मिले होने की आशंका जताई है. सूबे के खाद्य आपूर्ति और उपभोक्ता मामलों के मंत्री सह स्थानीय विधायक रामेश्वर उरांव ने इस मामले की जांच कराने की बात कही है. हालांकि शुरुआत में ही मामला पकड़ में आ जाने के कारण किसी ने यह चावल पकाकर नहीं खाया. लेकिन राशन दुकान से जिस चावल का वितरण हुआ है उसके पैकेट पर सचदेव फूड प्रोडक्ट और रावाभाटा छत्तीसगढ़ का पता लिखा हुआ है.

15. <https://cnrashtriya.com/bengal/9-children-sick-after-eating-rice-provided-by-icds-center-stirred> - West Medinipur, West Bengal, 22/1/2022 – 9 children fall sick after consuming “plastic rice” in ICDS meal

आईसीडीएस केंद्र द्वारा उपलब्ध कराए गए चावल खाने से 9 बच्चे बीमार, हड़कंप !!

पश्चिम मेदिनीपुर जिला अंतर्गत खड़गपुर ग्रामीण थाना क्षेत्र के शोभापुर आईसीडीएस केंद्र से कल दो किलो चावल दिया गया और उस चावल को लड़कों ने खा लिया। जिसके बाद 9 बच्चे बीमार पड़ गए। वाक्ये से क्षेत्र में काफी तनाव और गुस्सा है। स्थानीय लोगों ने आरोप लगाया कि चावल की गुणवत्ता बहुत खराब थी। कुछ प्लास्टिक चावल भी आईसीडीएस के लोगों द्वारा वितरित किए गए थे।

16. <https://www.naidunia.com/chhattisgarh/kanker-people-thinking-of-fortified-rice-as-plastic-rice-due-to-lack-of-information-7270446> - Kanker, Chattisgarh, 1/2/2022

जानकारी के अभाव में फोर्टिफाइड चावल को प्लास्टिक चावल समझ रहे लोग

लोगों का कहना है यह चावल पकाने से पकता नहीं। साथ ही इसे जलाने से प्लास्टिक जैसी प्रतिक्रिया होती है जो कि अन्य चावलों में नहीं होती। लोगों का कहना है सरकार लोगों के स्वास्थ्य के साथ खेलवाड़ कर रही है, इसलिए प्लास्टिक चावल उनको दिया जा रहा है। अंतागढ़ के श्याम नगर के कुछ घरों में लैंपस से चावल ले जाया गया किंतु जब चावल की छंटाई की गई तो उसमें कुछ अजीब से दिखने वाले चावल नजर आए, जिसके बाद मामला बढ़ने लगा, लोग एक के बाद एक चावल की शिकायत करने अपने घरों से बाहर आने लगे।

17. <http://samaynewslive.com/59461/> - Korba, Chhattisgarh, 19/3/2022

कोरबा: प्लास्टिक चावल बना हितग्राहियों के गले का फ्रांस, हितग्राही सरकार को कोसने पर मजबूर

दरअसल जिले के ब्लॉक पोड़ी उपरोड़ा अंतर्गत ग्राम पंचायत रामपुर के सरकारी राशन दुकान में जो राशन हितग्राहियों को वितरण किया जा रहा है वह कहीं से भी उपयुक्त नजर नहीं आ रहा है, कुछ लोग इसे प्लास्टिक चावल भी बता रहे हैं। हितग्राही बताते हैं कि सरकारी सोसायटी से मिलने वाला चावल देखने में ही अजीबोगरीब प्रतीत होता है और बनाते समय यह बेहद चिपचिपा व रबड़ की भांति नरम हो जाता है। इस चावल को खाने से पेट में दर्द व स्वास्थ्य पर सीधा असर हो रहा है।

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खूंटी: फोर्टिफाइड किस्म का चावल बंटता

खूंटी जिले के अधिकांश गांवों में ग्रामीणों के बीच यह भ्रम है कि सरकार के द्वारा जन वितरण प्रणाली की दुकानों और स्कूलों के मध्याह्न भोजन में प्लास्टिक के चावल की आपूर्ति की जा रही है। ऐसी ही शिकायत मुरहू प्रखंड के कुम्हारडीह गांव के ग्रामीणों एवं आरसी प्राथमिक विद्यालय के प्राचार्या की थी।


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Government of India's Pilot Scheme Objectives

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Government of India
Department of Food & Public Distribution
Ministry of Consumer Affairs, Food & Public Distribution



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Centrally Sponsored Pilot Scheme on "Fortification of Rice & its Distribution under Public Distribution System"

To address anaemia and micro-nutrient deficiency in the country, Government of India approved the Centrally Sponsored Pilot Scheme on "Fortification of Rice & its Distribution under Public Distribution System" for a period of 3 years beginning 2019-20 with total budget outlay of Rs 174.64 Cr.

Fifteen State Governments (with Districts) i.e Andhra Pradesh (Vizianagram), Kerala (Ernakulum), Karnataka (Yadgir or Mysore), Maharashtra (Gadchiroli), Odisha (Malkangiri), Gujarat (Narmada), Uttar Pradesh (Chandauli), Assam (Dhubri), Tamil Nadu (Tiruchirappalli/Trichy), Telangana (Jayashankar Bhupalapally), Punjab (Ludhiana), Chhattisgarh (Kondagaon), Jharkhand (East Singhbhum), Uttarakhand (Udham Singh Nagar) & Madhya Pradesh (Singrauli) have consented and identified their respective Districts (Preferably 1 District Per State) for implementation of the Pilot Scheme.

Out of above 15 States, Andhra Pradesh, Gujarat, Maharashtra, Tamil Nadu, Chhattisgarh, Uttar Pradesh, Odisha, Telangana, Uttarakhand & Madhya Pradesh have started distribution of fortified rice under the Pilot Scheme.

Objectives the Scheme: The key objectives of the Pilot Scheme are:

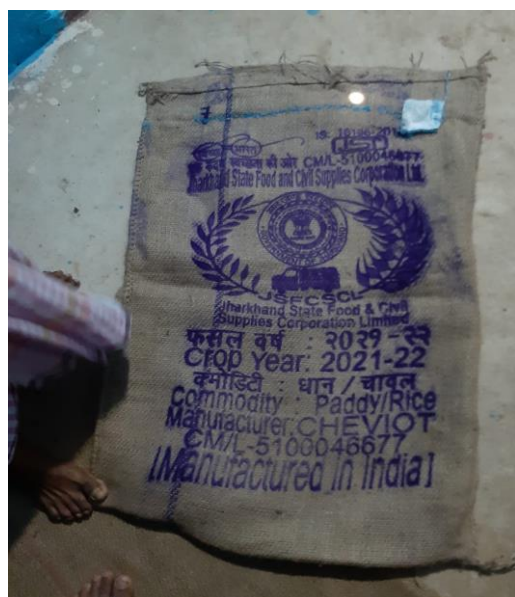
- Distribution of Fortified Rice through Public Distribution System, to cater 15 Districts in the country - preferably one district per State in the initial phase of Implementation.
- Coverage of NFSA, beneficiaries under PDS with Fortified Rice in the selected Districts.
- Facilitate cross learning and sharing of best practices among States/UTs and DoF&PD.
- To evaluate the provision, coverage and Utilization of Fortified Rice by the target population as well as the efficiency/effectiveness of the consumption of fortified rice in reducing the targeted micronutrient deficiencies in different age and gender groups.

[Operational Guidelines of Fortification of Rice and its Distribution under PDS](#)

Pictures from the Fact Finding Visit



ABOVE: Fortified rice under PDS without mandatory Statement on label (on the left) and Fortified rice under PDS with statement as per DFPD guidelines, not FSSAI regulations (on the right)



ABOVE: Fortified Rice gunny sack without any indication of it being fortified apart from a small label stitched on; Fortified Rice of 2020-21 KMS being consumed at present



Above: Gopal Munda (age 33 years) from Pahar Toli, diagnosed with SCD.



Left: Thalassemia patient (7 years old) met, with his parents in MGM Hospital in Jamshedpur. His brother was inside the PICU getting blood transfusion done. The family was supplied with, and consumed fortified rice without any information being provided. The two brothers are getting weekly blood transfusions.



Left: Villager of Pahar Toli who reported that she and her husband experienced diarrhea for a whole week when they ate fortified rice in that week. They were alright once they stopped.

Below: FRK becoming powdery after being soaked in water for 4-5 minutes



Left: Interaction with fortified rice recipients during the fact-finding



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