INCEPTION REPORT

FOR

CONSULTANCY SERVICES FOR THE PREPARATION OF WFP STUDY ON IRON RICE FORTIFICATION CAPACITIES, SUPPLY CHAIN AND CAMPAIGN INITIATIVES IN THE PHILIPPINES (WFP/PH/RFP/006/2022)

by

NUTRITION FOUNDATION OF THE PHILIPPINES, INC.

14 March 2022

Nutrition Foundation of the Philippines, Inc. *Dr. Juan Salcedo, Jr. Bldg., 107 E. Rodriguez, Sr. Ave., Quezon City 1102*

Contents

List of Annexes

List of Figures

List of Tables

List of Acronyms

BARMM	Bangsamoro Autonomous Region in Muslim Mindanao
CARAGA	Cordillera Administrative Region
CEST	Community Empowerment of Science and Technology
DepEd	Department of Education
DOH	Department of Health
DOST	Department of Science and Technology
DSM	Dutch State Mines
DSWD	Department of Social Welfare and Development
EPAHP	Enhanced Partnership Against Hunger and Poverty
FDA	Food and Drug Administration
FGD	Focus group discussions
FNG	Fill the Nutrient Gap Philippines
FNRI	Food and Nutrition Research Institute
GIA	Grant-in-Aid
IATF-ZH	Inter-Agency Task Force Zero Hunger
IEC	Information, education, and communication
IFR	Iron-fortified rice
KAP	Knowledge, attitude, and practices
KII	Key informant interviews
LCE	Local chief executives
LGU	Local government unit
MBTHE	Ministry of Basic, Higher and Technical Education
Mgs	Milligrams
NCR	National Capital Region
NFA	National Food Authority
NFP	Nutrition Foundation of the Philippines, Inc.
NGO	Non-government organization
NNC	National Nutrition Council
NNC-GB	National Nutrition Council Governing Board
NRLMB	National Resource and Logistics Management Bureau
OECD	Organisation for Economic Co-operation and Development
PhilRice	Philippine Rice Research Institute
PMB	Program Management Bureau
Ppm	Parts per million
PSTD	Provincial Science and Technology Director
RA	Republic Act
RFP	Request for Proposal
SBCC	Social and behaviour change communication

SET-UP	Small Enterprise Technology Upgrading Program
SOCCKSARGEN	South Cotabato, Cotabato, Sultan Kudarat, Sarangani, and General Santos
SPS	*Sangkap Pinoy* Seal
SSNP	Social safety net program
TA	Technical assistance
TOR	Terms of Reference
TWG	Technical working group
UNICEF	United Nations International Children's Fund
WFP	World Food Programme
WFP-TWG	World Food Programme Technical Working Group

Nutrition Foundation of the Philippines, Inc.
Dr. Juan Salcedo, Jr. Bldg. 107 E. Rodriguez, Sr. Avenue, Quezon City 1102
Tel. Numbers: (632) 8712-1474/0999-643-6550
E-mail: admin@nfp.org.ph

Adhering Body-International Union of Nutritional Sciences

Consultancy Services for the Preparation of the WFP Study on Iron Rice Fortification Capacities, Supply Chain and Campaign Initiatives in the Philippines (WFP/Ph/RFP/006/2022)

Inception report

I. Introduction and Rationale

In 2018, the World Food Programme (WFP) conducted a study entitled the "Fill the Nutrient Gap (FNG): Philippines", a nutrition analysis framework and decision tool. Table 1 is the summary of the results of the FNG study that shows the factors affecting malnutrition in the Bangsamoro Autonomous Region in Muslim Mindanao (BARMM) as compared to other regions.

Table 1. Factors affecting malnutrition in BARMM.

Indicator	Results for BARMM	Ranking	Result for lowest/highest ranking region	Remarks for BARMM
Stunting (Among population groups)	45%	1	23% (Region III) – lowest prevalence	Highest prevalence among regions
Median daily household food expenditure (Rural)	PhP 154.00	2	PHP 151.00 (Region X) – lowest expenditure	2nd lowest expenditure
Median daily household food expenditure (Urban)	PhP 155.00	1	PHP 370.00 (NCR) - highest expenditure	Lowest expenditure
Daily cost of energy-only diet	PhP 120.00	2	PHP 133.00 (NCR) – highest cost	2nd highest daily cost
Percentage of households that would not be able to afford energy-only diet	23%	1	NCR lowest at 0% - lowest percentage	Highest among all regions
Daily cost of a nutritious diet	PhP 165.00	4	PHP 148.00 (Region V) – lowest	4th lowest daily cost of nutritious diet
Relationship between daily cost and non-affordability of a nutritious diet by region	58%	2	59% (Region X) – lowest	2nd lowest daily cost

Since reestablishing its presence in the Philippines in 2006, WFP has focused its technical assistance to BARMM as it ranks lowest in human development due to internal conflict and insecurity resulting in restricted access to basic social services.

Part of the WFP technical assistance is the conduct of school feeding based on the guidelines of the Department of Education (DepEd), i.e., Department Order 39, S. 2017 – Operational Guidelines on

the Implementation of School-based Feeding Program for School Year 2017-2022, which was institutionalized by Republic Act (RA) 11037, An Act Institutionalizing a National Feeding Program for Undernourished Children in Public Day Care, Kindergarten and Elementary Schools to Combat Hunger and Undernutrition among Filipino Children and Appropriating Funds Therefor. The law encourages the use of iron fortified rice (IFR) in feeding programs as also provided in RA 8976, An Act Establishing the Philippine Food Fortification Program and for Other Purposes that among others mandates fortification of rice with iron. However, the use of IFR in school feeding has been limited in a few areas that were supported by the local government units in Pangasinan and Davao de Oro prior to the enactment of RA 11037.

It is in this context that WFP conducted a pilot study on the use of IFR for school feeding in Maguindanao Province, which was documented and presented to various stakeholders particularly the government's Interagency Task Force on Zero Hunger (IATF-ZH) headed by the Cabinet Secretary. As a follow-up to the successful pilot study, WFP has sent out a Request for Proposal (RFP) for a study on iron rice fortification capacities, supply chain and campaign initiatives in the Philippines mostly based on the recommendations of the pilot study. The results of this research can hopefully be used to expand rice fortification not only in BARMM but also nationwide.

Progress of Rice Fortification in the Philippines

Rice fortification has long been a strategy in the Philippines to address micronutrient malnutrition with the successful efficacy testing in 1946 with the addition of thiamine to address the problem of beri-beri as well as deficiencies in niacin and iron using a technology from Hoffman LaRoche. The research was pioneered by the then Secretary of Health, Dr. Juan Salcedo, Jr., the founder of the Nutrition Foundation of the Philippines, Inc. To ensure the eradication of beri-beri, the Philippine enacted the Rice Enrichment Law in 1952 but since the law was used as basis for taxation, it eventually was not implemented. However, by the end of the 1950s beri-beri was eradicated.

The success of the initial rice fortification initiative was the basis for the continued research on the fortification of rice from the 1980s and 1990s particularly with iron by the Food and Nutrition Research Institute (FNRI) of the Department of Science and Technology (DOST) using coating technology with iron for the production of iron rice kernel that is mixed with milled rice to produce IFR. Based on this technology, RA 8976 was enacted and mandated the iron fortification of rice at 6 milligrams (mgs) of iron to 9 mgs of iron/100 grams of milled rice. This technology was used in the iron fortification of rice for the Accelerated Hunger Mitigation Program of the National Nutrition Council (NNC) providing 1 kilo of IFR to grade 1 students and for the Food for Work Program using imported coated iron fortified kernel blended with National Food Authority (NFA) rice. This was done from 2005 to 2010 by NFA. At the same time, FNRI was developing, hot extrusion technology for the production of iron rice kernel through which the iron was imbedded in the kernel instead of being coated. Iron retention was 50% when the coated technology was used due to the practice of washing rice prior to cooking, and more than 90% if extruded iron fortified kernel is used. It was also during this time that there was a significant decrease in anemia among Filipinos as shown in Figure 1.

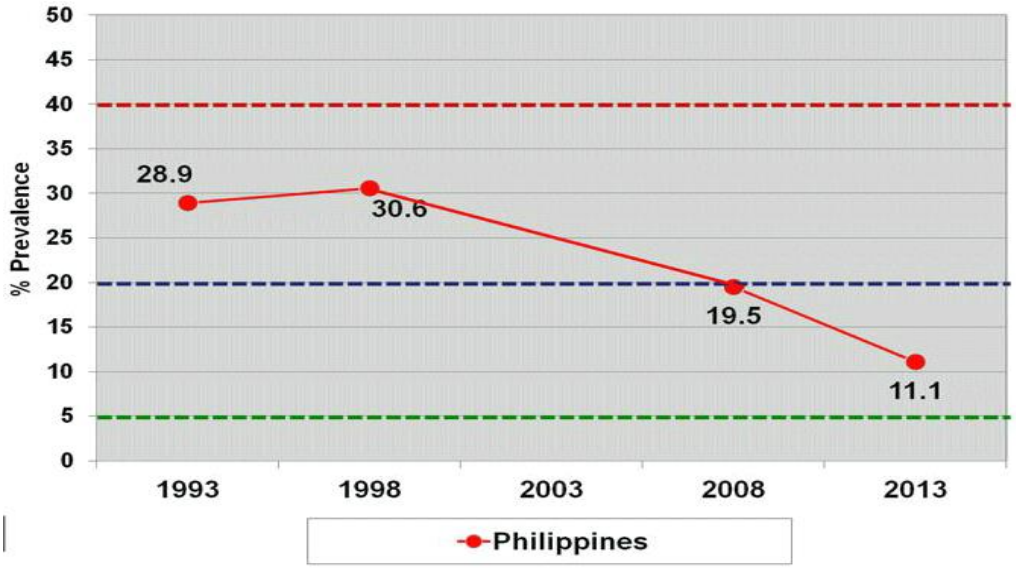

Figure 1. Trends in anemia prevalence in the Philippines, 1998 to 2013 (NNS, FNRI)

In 2018, there was not much difference in anemia prevalence (when compared with that of 2013) at 11.3%, with infants from 6 months to less than 1 year old having the highest prevalence at 48.2%, higher than the 39.2% in 2013. For school-aged children (6 to 12 years old), anemia prevalence increased slightly from 11.1% in 2013 to 13. 5 in 2018 which was considered as mild public health significance together with adolescents, adults, non-pregnant and non-lactating mothers. While, elderly and pregnant women were considered as moderate public health significance having prevalence of more than 20% in 2018. Figure 2 shows anemia prevalence by age group, by region in 2013.

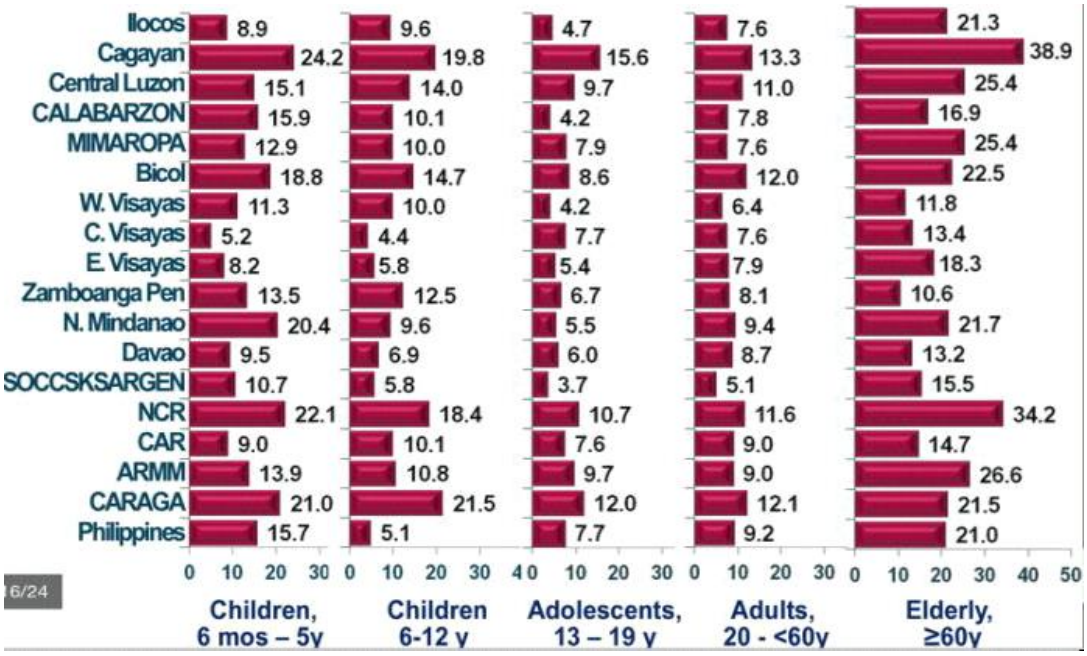

Figure 2. Prevalence of anemia by age group, by region in 2013. (NNS, FNRI)

In the regions, anemia prevalence is consistently high in Cagayan and CARAGA while low in the Visayas Regions and in SOCCSKSARGEN. For BARMM (formerly the Autonomous Region in Muslim Mindanao or ARMM) it is about average prevalence among all regions.

Following the end of the Accelerated Hunger Mitigation Program in 2010 and NFA iron-fortified rice commercial distribution in 2013, various studies were conducted to revive rice fortification with the continued transfer of technology of FNRI for the local production of extruded iron rice kernel. These initiatives were as follows:

1. UNICEF and the Food Fortification Initiative supported the conduct of a study in 2014 entitled "Rice Supply Chain Diagnostic in the Philippines". This led the NNC to organize the ad hoc technical working group (TWG) on rice fortification. Based on the findings of the study, the TWG agreed to focus rice fortification for rice distributed through the government's social safety net programs (SSNPs) and developed a workplan for this purpose.

2. UNICEF supported a follow-up technical assistance (TA) for the scale up of rice fortification in the Philippines in 2015-2016 through the conduct of a study entitled "Rice Consumption for SSN Programs of the Government of the Philippines and Non-Government Organizations". The study identified various SSNPs particularly with the DepEd and Department of Social Welfare and Development (DSWD), estimated the cost of using IFR in their feeding programs, identified sources, and showed models of rice fortification for SSNP for implementation by the local government unit (LGU). The study was used to conduct advocacy activities in regions with sources of IFR. A communications plan on rice fortification for SSNP was also developed.

3. Nutrition International followed up on the aforementioned TA on rice fortification for SSNPs in 2017 to 2018 with the conduct of a landscape policy analysis of rice fortification for SSNPs, documentation of best practices on LGU implementation of rice fortification, and the development of a national policy guidance for government agencies involved for rice fortification for SSNPs and mechanisms for production, supply and distribution of IFR within SSNPs. Based on this initiative, the NNC Governing Board adopted a resolution in support of rice fortification (approved in 2019). Information, education and communication (IEC) materials targeting local chief executives (LCEs) and consumers were also developed to advocate for rice fortification for SSNPs.

Following the conduct of these studies and continued advocacy for the use of IFR in the feeding programs of DepEd and DSWD as well as models of implementation of school feeding using IFR in Davao de Oro and Urdaneta City, major developments that could impact on production and consumption of IFR were as follows:

1. Passage of RA 11037, An Act Institutionalizing a National Feeding Program for Undernourished Children in Public Day Care, Kindergarten and Elementary Schools to Combat Hunger and Undernutrition among Filipino Children and Appropriating Funds Therefor" or the *Masustansyang Pagkain para sa Batang* Pilipino Act (Nutritious Food for Pilipino Children) on 24 July 2017. The law encourages the use of IFR in the school feeding program of DepEd for malnourished school children and pre-school children in child development centers of DSWD. In response to RA 11037, DepEd and DSWD, which were already conducting school feeding even prior to the passage of the law, updated their program guidelines to include provisions encouraging the use of IFR.

2. Adoption and issuance of National Nutrition Council Governing Board (NNC-GB) Resolution No. 1, Series of 2019, "Scaling Up Rice Fortification with Iron for Social Safety Net Programs in the Philippines" to support the rice fortification program (Annex 1),

3. Organization of the Inter Agency Task Force on Zero Hunger (IATF-ZH), through Executive Order 101 by President Rodrigo Duterte in 2020. The end goal of the IATF-ZH is to end hunger by 2030, in line with the United Nations Sustainable Development Goal No. 2. It is headed by the Cabinet Secretary. Cabinet Secretary Karlo Alexei Nograles chaired and led the task force until his appointment as Chairperson of the Civil Service Commission. The IATF-ZH envisages convergence of the essential services of government departments that specifically address hunger and poverty and promote inclusive social and economic growth. A related development was the formulation of the Enhanced Partnership Against Hunger and Poverty(EPAHP) that, among others, link food producers (e.g., agrarian reform beneficiaries) as suppliers of the food requirements of feeding programs.

   Following the conduct of various meetings of the IATF-ZH and advocacy activities, the following were the accomplishments by the member agencies as of December 2021 as reported:

   a. DepEd school district offices mainly in Luzon, are now procuring IFR for their feeding programs, amounting to PhP 85,640,857.81 while 2 cities in Mindanao are waiting for the confirmation of their orders in Mati City and Digos City. It was noted though that IFR was being procured at PhP 60 to 90 per kg mainly due to the transportation differences. Hopefully, this WFP study would provide strategies that could lower the price of IFR.

   b. The WFP pilot study on the use of IFR in school feeding in Maguindanao showed the feasibility of producing IFR in BARMM using facilities of NFA and rice from local farmers with iron rice kernel from Nutridense Food Manufacturing Corporation based in Pangasinan Province.

   c. FDA issued FDA BC 2007-0010A that lowered the standards for IFR from 60 – 90 ppm to 20-60 ppm iron. This issuance was a response to related discussions in a meeting of the IATF-ZH last 20 December 20201. considered the availability and use of hot extrusion technology for iron rice kernel production with minimal loss of iron. It is to be noted that when the law was passed, the standards for IFR were based on iron rice kernel produced using the coating technology (the only technology available then), which as noted earlier, resulted to higher losses in iron when compared to iron rice kernels produced using the extrusion technology. Attached as Annex 2 is revised standard for iron rice kernel and IFR FDA BC 2007-0010A lowering the standard for IFR from 60 ppm - 90 ppm iron to 20 ppm – 60 ppm iron.

   d. DOH to will issue a policy for all DOH hospitals, canteens, programs and projects to use only IFR. It will also design and implement a promotional campaign for IFR.

   e. NFA developed a workplan for rice fortification for 2022 and started its implementation with the procurement initially of four mixing machines for its pilot production of IFR in NCR and Regions II, III, and IV-A. NFA was also able to source 50% of the budget needed for its rice fortification activities for 2022.

   f. Following the conduct of the *1st Kumain* (eat) Webinar, there has been an increase in the number of producers of IFR particularly with the implementation of the DOST

Project Community Empowerment for Science and Technology (CEST). Attached as Annex 3 is the list of producers of IFR including those under training prior to production under CEST and producers and importers of iron rice kernel including those under training.

g. NNC has rolled out the implementation of a dietary supplementation program called *Tutok Kainan* for which it has reported the procurement of 127,999 kgs of IFR for pregnant women and children 6 to 23 months old.

h. NNC has an on-going project on the Assessment of Food Fortification in the Philippines that includes concerns on rice fortification with iron. The assessment is in its final stage of reporting. The assessment involved key informant interviews (KIIs) of various government agencies as well as the private sector. These interviews surfaced factors that facilitated or hindered implementation of rice fortification and recommendations, as follows:

1) Facilitating factors
   a) Support from national government, LGUs and government agencies (NFA, DSWD-National Resource and Logistics Management Bureau (NRLMB), fortificant supplier
   b) Continuous research and development with other participating agencies (NFA, Philippine Rice Research Institute (PhilRice), DSWD-NRLMB)
   c) Promotional campaigns on the use of fortified products (PhilRice, DSWD-Program Management Bureau (PMB), DSWD-NRLMB)
   d) Availability of fortificants (DSWD-PMB)
   e) Regulatory monitoring (DSWD – PMB, DSWD-NRLMB)
   f) Consultation, collaboration, and coordination of agencies (DSWD-Disaster Response Management Bureau (DRMB), DSWD-NRLMB, fortificant supplier)
   g) NFA production of IFR (DSWD-DRMB)
   h) Political advocacy on cost-effectiveness of food fortification (DSWD-NRLMB)

2) The following are the deterring factors for rice fortification:
   a) Lack of information dissemination on benefits of IFR (NFA)
   b) Budgetary requirements for IFR production (NFA, DSWD-DRMB)
   c) Limited capacity of rice fortification equipment and the need to sustain production (NFA, DSWD-DRMB)
   d) Cost of fortification (DSWD-PMB, DSWD-NRLMB)
   e) Executive Order (EO) 51 s.1998 requiring all government rice to be purchased from NFA (DSWD-DRMB)
   f) Lack of adequate food control (DSWD-NRLMB, PhilRice)
   g) Start-up cost for fortification (DSWD-NRLMB)

3) Recommendations for rice fortification
   a) Identify appropriate agency tasked to strictly monitor compliance (NFA)

b) Develop and implement MOA between agency tasked to monitor with rice millers and traders (NFA)
c) Regular monitoring and strict implementation (PhilRice)
d) Strengthen agency collaboration for effective communication between government agencies (PhilRice)
e) Public-private partnership with clear well-defined terms of partnership (fortificant supplier)
f) Private sector support to the promotion of fortified foods (DSWD-DRMB)
g) Develop strategies to reach vulnerable and at-risk population, consider supplementation if cannot be reached (DSWD-NRLMB)
h) More aggressive policy advocacy and need political will to legislate and regulate for public sector support and private sector involvement (DSWD-NRLMB, PhilRice, Fortificant Supplier)
i) Assess resources, constraints, quality assurance, consumption patterns, acceptability and cost (DSWD-NRLMB)
j) Tax incentives for private partner (Fortificant supplier)

The project team will ensure that the extent of implementation of the aforementioned developments will be studied in detail to determine applicability to the study. This, together with the analysis of information from consumers and stakeholders will help ensure that the study objectives are achieved.

II. Overall Objective

Based on the terms of reference (TOR) of WFP, the study aims to map iron-rice fortification capacities and campaign initiatives of the Philippines and to identify the supply chain issues that hinder the implementation of mandatory rice fortification as stipulated in the Philippine Food Fortification Act of 2000 and its Implementing Rules and Regulations. There is a need to better understand the supply chain, advocacy, and campaign (social and behaviour change communication (SBCC)) gaps that could explain the low supply, acceptance, and consumption of iron fortified rice. The study output will include recommendations and actionable guidelines to create stronger policies to help address the micronutrient gaps.

Based on the above-mentioned objectives**,** NFP would work toward the following additional objectives such that the study would be able to:

1. Identify the most cost effective and efficient delivery of IFR to target recipients.

2. Provide strategies for the increased consumption of IFR through its commercialization as well as involving those on the supply side through millers, distributors and retailers and local farmers and communities for access to the technology for the production of IFR.

3. Develop communication strategies for increased knowledge and acceptance of IFR by consumers, local officials, NGOs, and other stakeholders in BARMM.

III. Understanding the Requirements Based on the Objectives

Based on the objective for the consultancy of both of WFP and NFP, the NFP would prepare a final report based on the conduct of a research that would determine the issues and gaps in the implementation of iron rice fortification particularly in BARMM related to the following:

1. Supply chain of IFR from various sources in the production and distribution of iron rice premix (IRP) or iron rice kernels to blending with raw rice to produce IFR, to distribution channels and storage of IFR in BARMM, if possible, purposely including farmer cooperatives in BARMM, and its recipients that will be cost-effective and efficient.

2. Factors for the low supply, acceptance, and consumption of IFR through various methodologies such as but not limited to desk research, key informant interviews (KII), focus group discussions (FGD), consumer and market surveys among others.

3. The results of the research and recommendations would be based on the following five criteria of the Organization for Economic Cooperation and Development – Development Assistance Committee Principles for Evaluation of Development Assistance as identified in the additional objectives of NFP as follows:

Relevance	The extent to which the intervention is suited to the priorities and policies of the target group, recipient, and donor.
Effectiveness	A measure of the extent to which a development intervention attains its objectives.
Efficiency	An assessment of whether development aid uses the least costly resources possible in order to achieve the desired results.
Impact	The positive and negative changes produced by a development intervention, directly or indirectly, intended or unintended.
Sustainability	Assessing the probability that the benefits of an activity are likely to continue after the programme cycle.

4. Based on the study findings, provide recommendations that would address the issues and gaps related to supply chain and logistics management, policy, and SBCC concerns on rice fortification to increase supply, acceptance, and consumption of IFR in BARMM and may be applicable nationwide.

IV. Proposed Methodology and Deliverables

The following is the proposed methodology based on the research objectives and understanding of the requirements and deliverables:

1. Conduct a desk review of the previous efforts on rice fortification relevant for the research as basis for determining other data requirements and methods to gather them (See Section II).

2. Prepare a data collection plan with list of target audience and guide questionnaire for the key informant interview (KII) and focus group discussion (FGD) and site visits. The list of possible target respondents is provided in Annex 4 using the WFP Respondent Tool Map.

Annex 5 is the question guide and procedure with ethical consideration in the conduct of KII and FGD, while the guide questions for each category of respondent is shown in Annex 6. Please note that during the conduct of KII and FGD and reporting, the team would ensure gender sensitivity in determining respondents particularly for consumer KII/FGD and private/commercial sector respondents.

3. Coordinate with WFP and target respondents for the administrative requirements and schedule for the KII and FGD for their smooth implementation.

4. Prepare an inception report identifying the specific activities and timeline including the data collection plan that will be conducted for the research and present to WFP for validation, coordination and approval **(Deliverable No. 1).**

5. Collect data as per the approved inception report. Please note that NFP proposes to conduct site visit and face-to-face interviews in BARMM with consumers, farmers groups, health and nutrition workers, and local government officials as part of the data collection process. This will be done in accordance with Covid 19 -IATF Guidelines.

6. Consolidate information gathered from the desk review, KIIs and FGDs, and analyze data collected, and prepare draft report and PowerPoint presentation for review and comments of WFP-TWG **(Deliverable No. 2).** The draft report will include the following**:**

    a. Mapping of IFR and fortificant suppliers in the Philippines, especially BARMM and supply chain issues and concerns among the businesses or key stakeholders in the supply chain.

    b. Assessment of the extent of advocacy, awareness raising and implementation of rice fortification in BARMM.

    c. Documentation on the knowledge, attitude, and practices of health and nutrition workers, communities, private commercial sector and consumers on rice fortification.

    d. Assessment of rice variety preference per in the country and the socio-ecological determinants that shape these preferences.

    e. Assessment of implementation gaps in the current IFR SBCC.

    f. Assessment of key messages as well as types of rice fortification methodologies to overcome the existing perceptions over IFR.

    g. Ways to address concerns and provide recommendations on how to best introduce new technologies including that for the multiple micronutrient (MMN) fortified rice, within the parameter of support from both the national and local government.

    h. Provide recommendations according to the WFP and NFP objectives for this research.

7. Based on comments from the WFP-TWG, if needed, conduct follow-up interviews and data cleaning and encode results of KII and FGD in the WFP-prescribed tools, if any.

8. Prepare pre-final report and PowerPoint presentation of the research conducted for review and comments of WFP-TWG and incorporate agreed revisions for the final report.

9. Present and disseminate final report and PowerPoint presentation to WFP, stakeholders in BARMM and key national government agencies or organizations. Disseminate report for review and comments by WFP and other stakeholders as will be identified.

10. Attend regular meetings with WFP-TWG on project updates and coordination.

11. In coordination with WFP, conduct a dissemination forum on the results to stakeholders in BARMM and key national government agencies or organizations.

12. Prepare and submit documentation report of dissemination activities, final report and financial report to WFP **(Deliverable No. 3)**

V. Proposed Implementation Plan

NFP would assign 5 consultant/experts in their own field of practice relevant to the conduct of the research and a project assistant as the Project Resource Team and their designation as follows:

a. Hector C. Maglalang (HM), Project Leader – a food fortification consultant since 1994, including studies on rice fortification in the Philippines and BARMM.

b. Marcela C. Saises (MS), Food Fortification Technology Adviser – has worked with FNRI for 27 years involved in the development various technologies and technology transfer on rice fortification and other nutritious fortified products.

c. Kristoffer C. dela Cruz (KC), Logistics/Supply Chain Adviser – with a graduate diploma on supply chain management with 22 years of experience on logistics and supply chain management on project development and operational improvement and a certified ISO Internal Quality Auditor.

d. Jesus Jose Maria V. Bombasi (JB), Marketing and Communications Adviser - has a Master's Degree in Business Administration major in Development Management and 27-year experience in the field of sales, marketing, trade marketing, business development, product developments etc.

e. Ms. Maria Lourdes Vega (MV), as Technical Adviser on nutrition policy and program implementation and SBCC, has a masteral degree in nutrition; formerly chief of the NNC Nutrition Policy and Planning Division and Nutrition Information and Education Division.

f. Ms. Fabiola Allysa L. Bringas, as Project Assistant - a registered nutritionist-dietitian.

Table 2 shows the proposed implementation plan highlighting the objectives, deliverable, responsibility center and timeline.

Table 2. Methodology and work-plan including responsible staff and timeline to start immediately after contract signing

Objective	Methodology/Activities	Output/ Deliverable	Responsi-bility	Time-line
INCEPTION PHASE				
1. Compile various information on rice fortification and BARMM for reference	Conduct a desk review of the previous efforts on rice fortification relevant for the research	Literature review of rice fortification efforts and BARMM (as included in the inception report)	All	March 9-11
2. To have a data collection plan relevant to the conduct of the research	Prepare a data collection plan with list of key personnel and target audience and questionnaire for the KII and focus group FGD and site visits (if necessary. Coordinate with WFP re schedule for site visits and contact persons of key personnel	Approved data collection plan with schedule of activities (as included in the inception report)	All	March 9-11
3. Finalize activities through an inception report	Based on the results of 1 and 2 above prepare inception report and present to WFP for approval.	Inception report as **(Deliverable No. 1)**	Maglalang as lead writer including PowerPoint as approved by the team	March 14
4. Finalize schedule for data collection (KII and FGD)	Liaise with partners and key stakeholders regarding the planned data collection activity.	Schedule for data collection including travel to BARMM finalized and started	All	March 9 to 18
DATA COLLECTION PHASE				
5. To gather data relevant to the objective of the research (data gathering may include travel to BARMM)	Based on the approved inception report conduct research and KII on supply chain and logistical data on fortified rice	Data on supply chain from premix production to blending with raw rice to distribution to BARMM	Saises and dela Cruz	March 21 to April 8
	Conduct consumer, health and nutrition workers, and local executives research KII and FGDs	Report of results of KII and FGD of stakeholders	Maglalang, Bombasi, Vega	March 21 to April 8
6. Data gathering and analysis for draft report and	Consolidate information gathered from the research and KIIs, conduct data analysis and prepare draft	Draft report **(Deliverable No 2)** and PowerPoint presentation	Maglalang as lead writer with inputs	April 11 to 20

	Objective	Methodology/Activities	Output/ Deliverable	Responsi-bility	Time-line
	PowerPoint presentation	report with conclusions and recommendations.		from team members	
REPORT WRITING< FINALIZATION AND DISSEMINATION					
7.	Draft report disseminated to WFP- TWG and other stakeholders as needed for review and comments	Present draft report to WFP and stakeholders	Comments of WFP and other stakeholders to draft report	All	April 21 to 25
8.	Revise draft report and prepare final report and PowerPoint presentation	Incorporate comments to draft report and prepare final PowerPoint presentation and encode results of KII and FGD in WFP tools	Final Report and PowerPoint presentation, KII and FGD results encoded in WFP tools	Maglalang as lead writer with inputs from team	April 26 - 28
9.	Present and disseminate final report and PowerPoint presentation to WFP, BARMM and other stakeholders.	Coordinate with WFP for the preparation for the dissemination activity of the final report of the research. Conduct presentation activity. Prepare documentation report of the presentation activity. Revise report if needed and finalize.	Revised final report (if with additional comments from stakeholders) and documentation report of the dissemination activity.	Maglalang with inputs from team	April 29 – May 4
10.	Coordination and updating WFP for smooth conduct of research	Attend regular meetings with WFP-TWG	Report of meeting highlights	All	As needed
11.	Submit all documentation reports of the research	Finalize all reports including financial report	All project reports including financial report **(Deliverable No. 3)**	All including NFP staff for financial report	May 6

References

Department of Education. (2017, August 7). *Department Order 39, S. 2017 – Operational Guidelines on the Implementation of School-based Feeding Program for School Year 2017-2022* . Retrieved from Department of Education : https://www.deped.gov.ph/2017/08/07/do-39-s-2017-operational-guidelines-on-the-implementation-of-school-based-feeding-program-for-school-years-2017-2022/

Department of Science and Technology - Food and Nutrition Research Institute (FNRI-DOST). (2015a). *Philippine Nutrition Facts and Figures 2013: Government Program Participation Survey.* Retrieved from http://enutrition.fnri.dost.gov.ph/site/preview.php?

DOST-FNRI, UNICEF, World Food Programme. (2019). Fill the Nutrient Gap: Philippines Nutrition Situation Analysis Framework and Decision Tool. World Food Programme.

Organisation for Economic Co-operation and Development (OECD) Development Assistance Committee (DAC). (2019). Better Criteria for Better Evaluation: Revised Evaluation Criteria Definitions and Criteria for Use. Retrieved from OECD-DAC: https://www.betterevaluation.org/sites/default/files/revised-evaluation-criteria-dec-2019_0.pdf

RA 11037 (2017, July 24). An Act Institutionalizing a National Feeding Program for Undernourished Children in Public Day Care, Kindergarten and Elementary Schools to Combat Hunger and Undernutrition among Filipino Children and Appropriating Funds therefor: https://www.officialgazette.gov.ph/2018/06/20/republic-act-no-11037

RA 8976. (2000, November 7). Policy - An Act Establishing the Philippine Food Fortification Program and for Other Purposes. Retrieved from Department of Health: https://www.doh.gov.ph/sites/default/files/policies_and_laws/RA08976.pdf

The Implementing Rules and Regulations of Republic Act No. 8976. (2004, November 7). Retrieved from Food and Drug Administration: https://ww2.fda.gov.ph/attachments/article/29049/RA%208976_IRR.pdf

World Food Programme (2021) Enhanced School Feeding with Iron Fortified Rice in Maguindanao. World Food Programme, Manila.

World Food Programme (2020) WFP Support to the Philippine Government Initiatives in Achieving Zero Hunger by 2030. Retrieved from https://reliefweb.int/sites/reliefweb.int/files/resources/WFP-0000122047.pdf

Annex 1. NNC Governing Board Resolution No. 1 Series of 2019 – Scaling Up Rice Fortification with Iron for Social Safety Net Programs in the Philippines.

Republic of the Philippines
Department of Health
NATIONAL NUTRITION COUNCIL

NNC GOVERNING BOARD
Resolution No. 1 Series of 2019

Scaling Up Rice Fortification with Iron for Social Safety Net Programs in the Philippines

WHEREAS, the Philippines has a reported high prevalence of malnutrition among pre-school and school children based on the National Nutrition Surveys of the Department of Science and Technology-Food and Nutrition Research Institute;

WHEREAS, anemia is of public health concern in the Philippines due to the high prevalence of anemia among 6-11 months old children at 40.5%, pre-school children at 13.8%, school-aged children at 11.1%, pregnant and lactating women at 24.6% and 16.7% respectively, based on the 8th National Nutrition Survey of the of the Food and Nutrition Research Institute of the Department of Science and Technology;

WHEREAS, iron plays a key role in brain function, resistance to infection, and growth, deficiency of which results to increased risk of low birth weight, maternal and perinatal mortality during pregnancy, adversely affects cognitive and motor development of children resulting to poor academic performance and decreased work capacity and productivity which contributes to the country's economic burden due to malnutrition.

WHEREAS, Republic Act 8976 or the Philippine Food Fortification Act of 2000 serves as the medium-term response to eliminate micronutrient deficiencies which mandates fortification of staple foods, both imported and locally processed foods, such as rice, sugar, wheat flour, and cooking oil with micronutrients that are mainly iron and vitamin A;

WHEREAS, RA 8976 mandates the fortification of all milled rice with iron. Rice as a staple food of the Philippines is an appropriate vehicle for iron fortification to reduce iron-deficiency anemia;

WHEREAS, the Philippines through DSWD, DepEd, some LGUs, NGOs, CSOs, COOs and development partners implement various social safety net programs including but not limited to dietary supplementation for various population groups, distribution of family food packs in temporary displacement settings due to natural or human-induced events (typhoon, earthquakes, fire, civil strife), food for work among others;

WHEREAS, RA 11037 or An Act Institutionalizing a National Feeding Program for Undernourished Children in Public Day Care, Kindergarten, and Elementary Schools to

NNC GOVERNING BOARD
Resolution No.1 Series of 2019

Scaling Up Rice Fortification with Iron for Social Safety Net Programs in the Philippines

Combat Hunger and Undernutrition Among Filipino Children, requires the provision of at least one fortified meal per day for 120 days for malnourished children in day care centers and public elementary schools, compliance to which will necessarily use iron-fortified rice.

WHEREAS, government-managed social safety net programs procure their rice requirements from NFA, which currently faces challenges in producing iron-fortified rice;

WHEREAS, these social safety net programs provide rice as a major commodity, but use of iron-fortified rice is currently negligible;

WHEREAS, efficacy trials of the Department of Science and Technology – Food and Nutrition Research Institute on iron-fortified rice showed the reduction of anemia among schoolchildren in the Philippines and provided evidences on high acceptability of iron-fortified rice;

WHEREAS, the model on scaling up rice fortification program through techno transfer of DOST-FNRI enabled private millers to acquire and adopt the technology in the production of iron rice premix and iron-fortified rice

WHEREAS, studies have shown that the current supply of iron rice premix and iron-fortified rice from the private sector, including cooperatives, can meet the requirements for these social safety net programs;

WHEREAS, iron-fortified rice provided as part of the Accelerated Hunger Mitigation Program from 2005-2010 may have contributed to the significant decrease in anemia prevalence in the general population from 30.6% in 1998 to 19.5% in 2008 to 11.1% in 2013 based on the National Nutrition Surveys of the Food and Nutrition Research Institute of the Department of Science and Technology;

NOW, THEREFORE, BE IT RESOLVED, AS IT IS HEREBY RESOLVED, in consideration of the aforementioned premises, we the NNC Governing Board do hereby declare the need for collective effort in scaling up the use of iron-fortified rice for social safety net programs of the Philippines for the control of anemia particularly for vulnerable groups;

RESOLVED FURTHER, that iron-fortified rice be used for social safety net programs that use rice as a commodity as implemented by DepEd, DSWD, DOH, LGUs and NGOs, and development partners;

RESOLVED FURTHER, for the NNC Secretariat in close coordination with the Sub-Technical Working Group on Mandatory Food Fortification, to undertake the following:

1. Support and work with NFA on its compliance to mandatory rice fortification as provided in RA 8976 and to this Governing Board Resolution

2. Develop and implement an advocacy and communication effort to promote sale and consumption on the use of iron-fortified rice in the general population

3. Coordinate with government agencies, institutions and organizations that are not members of the NNC Governing Board, e.g. DAR that can be tapped to provide assistance on cascading the advocacy and promotion on the use of iron fortified rice for social safety net programs and NGOs.

RESOLVED FURTHER, to generate support of local chief executives to implement mandatory rice fortification through the enactment of related ordinances and to monitor compliance to these ordinances and provide reports thereafter on the compliance to these ordinances;

RESOLVED FURTHER, to promote the importance of rice fortification to the rice industry, beneficiaries of Pantawid Pamilyang Pilipino Program (4Ps), non-government organizations, and the general population;

RESOLVED FURTHER, for the following agencies to undertake the following specific actions:

The **Department of Health** shall issue a policy for all DOH hospitals, canteens, programs and projects that convene activities during which rice is served to use only iron-fortified rice; design and implement a promotional campaign on iron-fortified rice and explore the allocation of a budget for the iron-rice premix for use by NFA and other rice millers; Food and Drug Administration to set standards for rice fortification, including iron-rice premix and monitor quality and compliance in the production and importation of iron rice premix;

The **Department of Agriculture** through the National Food Authority shall develop its own policy to regulate millers, traders and retailers for the production of iron-fortified rice for government purchase, for social safety net programs and for the general population; enable their field personnel to assist in monitoring as provided by RA 8976 and promote rice fortification to farmers' groups and cooperatives.

The **Department of the Interior and Local Government** shall issue a policy instrument enjoining LGUs to: *1)* use iron-fortified rice for their social safety net programs such as for disaster response and rehabilitation and for feeding programs and for use in their canteens, hospitals and meetings and to enact ordinances in support of rice fortification similar to the ordinances of the provinces of Compostela Valley Provincial Ordinance No. 29-2015 An Ordinance Providing Mechanisms For Use Of Iron-Fortified Rice In The Province Of Compostela Valley Known As Comval I-Rice and La Union Ordinance No. 118-2017 An Ordinance Providing Mechanisms for the Production, Distribution and Use of Iron-Fortified Rice or the "La-Union Fortified Rice Ordinance of 2017"; and *2)* monitor rice fortification through their agricultural officers in coordination with NFA field personnel; and *3)* promote rice fortification to farmers' groups and cooperatives;

The **Department of Education** shall issue an order on the use of iron-fortified rice for the School-Based Feeding Program; for school canteens to sell only iron-fortified rice, and promote the use of iron-fortified rice through Parent Teachers Associations.

The **Department of Social Welfare and Development** shall undertake the following activities for the implementation of Social Safety Net Programs:

1. For Supplementary Feeding Program –remove the requirement on the use of NFA rice to allow procurement from the private sector, require the use of iron-fortified rice particularly by LGUs that receive funds from the DSWD. The guidelines should include the list of suppliers of iron-fortified rice (as also included in the DepEd Guidelines).

2. For Disaster Preparedness and Response – Implement the memorandum on the revised composition of the family food pack that among others indicates the use of iron-fortified rice.

3. For the Rice Subsidy Program of the 4Ps – Include the promotion of iron fortified rice for the beneficiaries of 4Ps.

4. For Bangsamoro Umpungan sa Nutrisyon (BangUN) Program – Use iron-fortified rice in the supplementary feeding for children, pregnant and lactating mothers.

The **Department of Science and Technology** shall continue research to reduce the cost of fortification (i.e. cheaper iron fortificant, cheaper blending machines for millers) and continue to provide incentives through interest-free loan for investors for the production of iron-rice premix and iron-fortified rice; and provide technical assistance to rice industry on rice fortification.

The **Department of Trade and Industry** shall adopt a policy that would provide incentives for investors/producers of iron-rice premix and iron-fortified rice through the Investments Priority Plan. It shall also assist relevant micro- and small enterprises along rice fortification through its Shared Services Facilities Program.

The **National Economic and Development Authority** shall assist in identifying ways of incentivizing those who are compliant to mandatory fortification of rice and other staples, including salt.

The **Department of Labor and Employment** shall promote the use of iron-fortified rice in company rice subsidy for employees and company canteens to help improve work productivity.

The **non-government organizations** shall promote the use of iron-fortified rice to their respective clientele; adopt a policy on the use of only iron-fortified rice for those with programs that use rice; and assist in advocating for the enactment of ordinances in support of rice fortification (League of Municipalities of the Philippines), explore the provision of incentives to compliant industry players, assist in the advocacy for the provision of rice fortification budget to NFA (Philippine Legislators' Committee on Population Development).

NNC GOVERNING BOARD
Resolution No.1 Series of 2019

Scaling Up Rice Fortification with Iron for Social Safety Net Programs in the Philippines

The **development partners** (i.e. relevant UN agencies and bilateral organizations that procure and provide milled rice as part of its programs) shall distribute only iron-fortified rice; All UN agencies and bilateral organizations shall support the promotion, sale and consumption of iron-fortified rice.

The **other national government agencies** shall promote the use of iron-fortified rice to their respective employees

RESOLVED FURTHER, for agencies concerned to implement their roles and responsibilities as provided for in Republic Act 8976, "An Act Establishing the Philippine Food Fortification Program and other purposes";

RESOLVED FURTHER, for the National Nutrition Council Secretariat to ensure that this policy is disseminated as widely as possible, implemented accordingly, and compliance to RA 8976 is monitored regularly with an annual report submitted and presented to the NNC Governing Board.

Approved this 15th day of February 2019.

FRANCISCO T. DUQUE III, MD, MSc
Secretary of Health and Chairperson
National Nutrition Council Governing Board

Attested:

AZUCENA M. DAYANGHIRANG, MD, MCH, CESO III
Council Secretary and Executive Director
National Nutrition Council

NNC GOVERNING BOARD
Resolution No.1 Series of 2019

Scaling Up Rice Fortification with Iron for Social Safety Net Programs in the Philippines

CONFORME:

EMMANUEL F. PIÑOL
Secretary of Agriculture
Vice-Chairperson, NNC Governing Board

EDUARDO M. AÑO
Secretary of the Interior and Local Government
Vice-Chairperson, NNC Governing Board

BENJAMIN E. DIOKNO
Secretary of Budget and Management
Member, NNC Governing Board

LEONOR M. BRIONES
Secretary of Education
Member, NNC Governing Board

SILVESTRE H. BELLO III
Secretary of Labor and Employment
Member, NNC Governing Board

FORTUNATO T. DELA PEÑA
Secretary of Science and Technology
Member, NNC Governing Board

ROLANDO JOSEFITO D. BAUTISTA
Secretary of Social Welfare and Development
Member, NNC Governing Board

ERNESTO M. PERNIA
Secretary of Socio-Economic Planning
National Economic and Development Authority
Member, NNC Governing Board

RAMON M. LOPEZ
Secretary of Trade and Industry
Member, NNC Governing Board

ROMEO C. DONGETO
Executive Director of Philippine Legislators' Committee on Population and Development Foundation, Inc. (PLCPD)
Private Sector Representative to the NNC Governing Board

AMADO R. PARAWAN
Health and Nutrition Advisor of Save the Children and Representative of the Philippine Coalition of Advocates for Nutrition Security (PhilCAN)
Private Sector Representative to the NNC Governing Board

Annex 2. FDA Circular No. 2007-010-A – Updated Standards for Iron-Rice Premix Amending Bureau Circular No. 2007-010 entitled "Guidelines in the initial Issuance and Renewal of License to Operate for Iron Rice Premix Manufacturer/Repacker/Importer and Setting forth the Standards for Iron Rice Premix

Republic of the Philippines
Department of Health
FOOD AND DRUG ADMINISTRATION

FDA CIRCULAR
No. 2007-010-A

22 DEC 2021

SUBJECT : **Updated Standards for Iron-Rice Premix Amending Bureau Circular No. 2007-010 entitled *"Guidelines in the Initial Issuance and Renewal of License To Operate for Iron Rice Premix Manufacturer/Repacker/Importer and Setting Forth the Standards for Iron Rice Premix"***

I. BACKGROUND

Pursuant to Republic Act (RA) No. 8976 entitled *An Act Establishing the Philippine Food Fortification Program and for Other Purposes*, particularly iron fortification of rice to achieve its goal of addressing Iron Deficiency Anemia (IDA), the subject Bureau Circular No. 2007-010 entitled *"Guidelines in the Initial Issuance and Renewal of License To Operate for Iron Rice Premix Manufacturer/Repacker/Importer and Setting Forth the Standards for Iron Rice Premix"* needs to be revised to ensure the iron content in *iron-rice premix* is at the suitable level to help curb IDA in the country.

Rice fortification includes the addition of highly concentrated iron-rice premix to raw rice at required mixing ratio to enable the iron-fortified rice to be within the standard. During the enactment of the law in 2000, the technology available for the production of iron-rice premix was coating rice with iron to produce the premix. This technology was used as the basis for the standard of iron fortified rice as well as in the BFAD Circular No. 2007-010 subject of this revision. While the use of coating technology for the preparation of iron-rice premix has improved over time to reduce iron losses during the usual washing prior to cooking and to produce kernels that meet nutrient retention requirements under different conditions and preparation methods, an evolving technology such as extrusion is an additional option for iron-rice premix fortification. The Food and Nutrition Research Institute (FNRI) of the Department of Science and Technology has developed an extrusion technology for the production of iron-rice premix. The iron-rice premix produced by extrusion has minimal loss of iron during washing of rice prior to cooking. Studies of FNRI also showed that iron-rice premix produced by extrusion is efficacious.

Establishing a common standard of iron content of iron fortified rice using either the coating or extruding technology for iron fortified premix is unlikely, thus a computed

Civic Drive, Filinvest Corporate City, Alabang 1781 Muntinlupa, Philippines
Trunk Line +63 2 857 1900 Fax +63 2 807 0751
Website: www.fda.gov.ph Email: info@fda.gov.ph

iron level of raw and cooked fortified rice using extruded and coated iron-rice premix per blending ratio as a standard level of iron in the iron-rice premix is established.

Based on the foregoing, the amendment of Bureau Circular No. 2007-010 is hereby imperative.

II. OBJECTIVES

This Circular aims to provide guidelines on updated standards in the manufacture, repack, and/or import of iron-rice premix to help address iron deficiency anemia in the country.

III. SCOPE

This Circular shall cover person(s) or establishment(s) that manufacture, repack and/or import iron-rice premix used as an ingredient for iron fortification of rice as provided in RA No. 8976.

Further, this Circular shall be applicable as guidance to all Food and Drug Regulatory Officers under the Regional Field Offices in conducting evaluation and inspection of iron-rice premix manufacturer/repacker/importer for the initial issuance and renewal of License to Operate.

IV. DEFINITION OF TERMS

For the purpose of this issuance, the following terms shall mean:

A. **Food Additives** – refers to any substance not normally consumed as a food by itself and not normally used as a typical ingredient of the food, whether or not it has nutritive value, the intentional addition of which to food for a technological (including organoleptic) purpose in the manufacture, processing, preparation, treatment, packing, packaging, transport or holding of such food results, or may be reasonably expected to result (directly or indirectly), in it or its by-products becoming a component of or otherwise affecting the characteristics of such foods. The term does not include contaminants or substances added to food for maintaining or improving nutritional qualities.

B. **Food Standard** – regulatory guideline that defines the identity of a given food product (i.e. its name and the ingredients used for its preparation) and specifies the minimum quality factors and when necessary, the required fill of the container. It may also include specific labeling requirements generally applicable to all prepackaged foods.

C. **Fortificant** – a substance, in chemical or natural form, added to food to increase its nutrient value.

D. **Fortification** – the addition of nutrients to processed foods or food products at levels above the natural state. As an approach to control micronutrient deficiency, food fortification is addition of a micronutrient, deficient in the diet, to a food which is widely consumed by specific at-risk groups.

E. **Good Manufacturing Practices (GMP)** – a quality assurance system aimed at ensuring that products are consistently manufactured, packed, repacked or held to a quality appropriate for the intended use. It is thus concerned with both manufacturing and quality control procedures.

F. **Ingredient** – means any substance, including a food additive, used as a component in the manufacture or preparation of food and present in the final product (in its original or modified form).

G. **Kernel Shavings** – very thin kernels or randomly sized or shaped clumps of dried extruded iron-rice premix.

H. **Labeling** – means any written, printed or graphic matter (1) upon any article or any of its container or wrappers or (2) accompanying the packaged food.

I. **Lot/Batch** – refers to quantity of food produced under essentially the same conditions during a particular production schedule.

J. **Lumped Kernels** – a kernel, thin kernel, and/or shaving that merged to form a large lump; some may look like enlarged whole kernels.

K. **Moisture Content** – the percentage weight of water in relation to the dry weight of the product.

L. **Packaging** – refers to an activity where a product is contained AND SEALED with the intention of storage and/or transport.

M. Thin Kernel – kernel with only half the size of a whole kernel or is crescent-shaped.

N. Whole Kernel – kernel with shape and size similar to well-milled rice; most prominent shape or size throughout the iron-rice premix.

V. GUIDELINES

A. The procedures and requirements for Licensing and Inspection of iron-rice premix manufacturer/repacker/importer shall be consistent and in accordance with the following:

1. Updated standards for iron-rice premix stipulated in the Annex A; and

2. Computed iron level of raw and cooked fortified rice using extruded and coated iron-rice premix per blending ratio in Annex B of this issuance;

3. Administrative Order (AO) No. 2014-0029 entitled *Rules and Regulations on the Licensing of Food Establishments and Registration of Processed Food, and Other Food Products, and For Other Purposes*;

4. AO No. 2020-0017 entitled *Revised Guidelines on the Unified Licensing Requirements and Procedures of the Food and Drug Administration Repealing Administrative Order No. 2016-0003*; and

5. AO No. 153 s. 2004 entitled *Revised Guidelines on Current Good Manufacturing Practice in Manufacturing, Packing, Repacking, or Holding Food* or latest amendments and pertinent rules and regulations containing the specific procedures of FDA.

B. Food establishments and other concerned personnel covered by the Scope of this Circular shall remain knowledgeable and updated in every provision of the said AOs and above-mentioned requirements and other pertinent rules and regulations.

VI. PENALTY CLAUSE

Any establishment found to be in violation of any provision of this issuance shall be a ground for disapproval of application and suspension or cancellation of License or Authorization pursuant to Section 4, Article 1, Book II of the Implementing Rules and Regulation (IRR) of RA No. 9711.

Notwithstanding the preceding paragraph, nothing in this section shall restrict the FDA in imposing the penalty and sanctions as prescribed under RA No. 8976 otherwise known as "Philippine Food Fortification Act of 2000" and its IRR.

VII. SEPARABILITY CLAUSE

If any provision of this Circular, or application of such provision to any circumstances, is held invalid, the remainder of the provisions of this Circular shall not be affected.

VIII. REPEALING CLAUSE

Provisions of previous issuances such as Bureau Circular (BC) No. 2007-010 which are contrary to those reflected hereon are modified/amended and/or repealed accordingly.

IX. EFFECTIVITY

This Circular shall take effect after fifteen (15) days following its publication in a newspaper of general circulation and upon filing three (3) certified copies to the University of the Philippines Law Center.

ROLANDO ENRIQUE D. DOMINGO, MD
Director General

DTN 20211006083010

ANNEX A

UPDATED STANDARDS FOR IRON-RICE PREMIX

I. SCOPE

This standard applies to iron-rice premix for domestic market distribution intended for human consumption.

II. DESCRIPTION OF THE PRODUCT

Iron-Rice Premix shall be made from rice and food grade ferrous sulphate, or (micronized) ferric pyrophosphate or any FDA Approved iron fortificant stipulated in the AO No. 4-A s. 1995 and food grade binders and additives sufficient to ensure quality, efficacy, and shelf life stability at ambient conditions and shall be packed in any suitable packaging material that could prevent the entry of moisture and contaminants

III. COMPOSITION AND QUALITY FACTORS

A. General Requirements

Iron-rice premix shall have the following characteristics:

1. Iron Content
   The product shall contain a minimum of 300 mg iron (Fe)/100 grams (g) and a maximum of 2,400 mg Fe/100 g provided that the mixing ratio of not less than 1:100 up to not more than 1:400 is indicated in the label resulting in an iron content of 2 to 6 mg Fe/100 g of raw (uncooked) iron fortified rice and 0.6 to 2.2 mg Fe/100g of cooked iron fortified rice. For further information on how to arrive at values: see Annex B for reference in terms of proportion and the availability of iron in raw and uncooked iron fortified rice also considering the losses during washing.

2. Moisture Content
   The product shall have a maximum moisture content of 13%.

3. Color
   The iron-rice premix shall have light yellow to yellow color based on the prevailing scientific reference.

4. The iron rice kernels shall be composed of at least 85% whole kernels and not more than 15% off-shaped kernels, namely: lumped, thin-shaped, and/or shavings.

5. No rancid-like odors.

6. Free from insects, filth and other extraneous matter.

IV. FOOD ADDITIVES

Food additives when used shall be in accordance with the current regulations established by the Food and Drug Administration i.e. BC 2006-016: Updated List of Food Additives or latest revision, updated CODEX STAN 192-1995 on General Standards for Food Additives or latest revision.

V. HYGIENE

A. It is recommended that the Iron-Rice Premix covered by the provision of this standard shall be prepared and handled in accordance with the appropriate sections of the DOH A.O. No. 153 s. 2004 entitled *"Revised Guidelines on Current Good Manufacturing Practice in Manufacturing, Packing, Repacking, or Holding Food"* and recommended International Code of Practice – General Principles of Food Hygiene (CXC 1-1969, Revised 2020) or latest revisions.

B. When tested by appropriate methods of sampling and examination, the iron-rice premix shall conform with the specific safety criteria in Table 1 and Table 2.

Table 1. Limit for Microorganisms and Contaminant in Iron-Rice Premix

Test Parameters	n	c	m	M
Molds and Yeast count, cfu/g	5	2	10^3	10^4
Aflatoxin, Total (ppb)	10			
Reference: (MR26) USDA Commodity Requirements Milled Rice and Fortified Milled Rice for Use in International Food Assistance Programs Effective Date: 13 July 2018				

Table 2. Maximum Level for Arsenic, Cadmium, and Lead in Iron-Rice Premix

Test Parameters	Maximum Level (ML) mg/kg
Arsenic	0.2
Cadmium	0.4
Lead	0.2
Reference: (PNS/BAFS 194:2017) General Standard for Contaminants and Toxins in Food and Feed	

VI. PACKAGING

The packaging material shall provide adequate product protection against the entry of moisture and adequate strength to withstand normal handling condition e.g., opaque polyethylene or polypropylene plastic and aluminum stand up pouches.

VII. STORAGE CONDITION

The product shall be stored in a cool dry place under 30 to 34 degrees Celsius with relative humidity not greater than 85%, away from ultraviolet light. The premises, warehousing, and distribution should be in accordance with AO No. 153 s. 2004 or its latest version.

VIII. LABELING

A. Each container shall be handled and marked with the following information or in accordance with A.O. No. 2014-0030 entitled "*Revised Rules and Regulation Governing the Labelling of Prepackaged Food Products Further Amending Certain Provisions of Administrative Order No. 88-B s. 1984*" or its latest amendments:

1. The name of the product shall be "Iron Coated Rice Premix" or "Iron Extruded Rice Premix" in accordance with the method of fortification used and shall be prominently and legibly indicated on the label of Iron-Rice Premix.

2. The brand name and/or trademark.

   If the establishment has a registered brand name or trademark, it shall be mandatory to declare the brand name or trade mark. May not be declared on the label if the product will be used for further processing.

3. The complete name and address of the manufacturer, packer and distributor.

4. Open date marking.

   The words "Expiry" or Expiry Date"/ "Use-by-date"/ "Consume Before Date (Recommended last consumption date)" indicating the end of period at which the product shall retain its optimum quality attributes at defined storage conditions.

   Expiration/expiry date shall be printed clearly, conspicuously and legibly on all product labels in the following order: Day, Month, Year. The declaration of day and year are numerical while the declaration of month must be in words to avoid confusion (e.g., Expiry date: 01 January 2012 or 01Jan12).

5. Lot/Batch identification code.

6. The words "Product of the Philippines" or the country of origin, if imported.

7. Complete list of ingredients specifying the type of iron fortificant used.

8. Instruction for use including mixing ratio.

9. The statement "This product is not suitable for direct human consumption" shall be indicated on the label conspicuously in big and BOLD letters.

10. Net weight shall be in International System of Units (SI Units).

11. Storage instructions.

12. Specific iron content.

B. The ink of the label graphics shall not smear or wear off upon contact with any liquid and/or hard surface.

IX. METHODS OF ANALYSIS AND SAMPLING

A. Determination of Iron Content
According to the AOAC Official Method of Analysis (2019) 21st Edition, AOAC 975.03; AOAC Official Method of Analysis (2019) 21st Edition, AOAC 944.02.

B. Determination of Moisture Content
According to AOAC Official Method of Analysis (2019), 21st Edition, AOAC 945.38B; AOAC Official Method of Analysis (2019) 21st Edition, AOAC 925.10.

C. Determination of Aflatoxin
ELISA Method or Liquid Chromatography Method.

D. Determination of Heavy Metals
Atomic Absorption Spectrophotometric Method.

E. Method of Sampling
Sampling plan shall be in accordance with the Codex General Guidelines on Sampling CAC/GL 50-2004.

Annex B

Computed Iron Level of Raw and Cooked Fortified Rice Using Extruded and Coated Iron-Rice Premix per Blending Ratio

Premix	Computed iron level of Iron Rice Premix (IRP), mg iron/100g based on revised FDA standard (300-2400 mg/100g)																					
Mixing ratio	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400
Raw IFR	Computed iron level of raw iron fortified rice (IFR) based on revised FDA standard (2-6 mg/100g)																					
1:100	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00	11.00	12.00	13.00	14.00	15.00	16.00	17.00	18.00	19.00	20.00	21.00	22.00	23.00	24.00
1:200	1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50	8.00	8.50	9.00	9.50	10.00	10.50	11.00	11.50	12.00
1:300	1.00	1.33	1.67	2.00	2.33	2.67	3.00	3.33	3.67	4.00	4.33	4.67	5.00	5.33	5.67	6.00	6.33	6.67	7.00	7.33	7.67	8.00
1:400	0.75	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50	3.75	4.00	4.25	4.50	4.75	5.00	5.25	5.50	5.75	6.00
Cooked Extruded IFR-FP	Computed iron level of cooked IFR based on the retention data of extruded micronized dispersible Ferric Pyrophosphate (FNRI-DOST and ILSI Project) (minimum of 0.6 mg/100g)																					
1:100	1.25	1.66	2.08	2.49	2.91	3.32	3.74	4.15	4.57	4.98	5.40	5.81	6.23	6.64	7.06	7.47	7.89	8.30	8.72			10
1:200	0.63	0.83	1.04	1.25	1.45	1.66	1.87	2.08	2.28	2.49	2.70	2.91	3.11	3.32	3.53	3.74	3.94	4.15	4.36			5
1:300	0.42	0.55	0.69	0.83	0.97	1.10	1.25	1.38	1.52	1.66	1.80	1.80	2.08	2.21	2.35	2.49	2.63	2.76	2.91			3.3
1:400	0.31	0.42	0.52	0.62	0.73	0.83	0.93	1.04	1.14	1.25	1.35	1.45	1.56	1.66	1.76	1.87	1.97	2.08	2.18			2.5
Cooked Extruded IFR-FS	Computed iron level of cooked iron fortified rice (IFR) based on the retention data of extruded Ferrous Sulfate (FNRI-DOST and ILSI Project) mg iron/100g																					
1:100	1.17	1.56	1.95	2.33	2.72	3.11	3.50	3.89	4.28	4.67	5.06	5.45	5.84	6.22	6.67	7.00	7.39	7.78	8.17			9.4
1:200	0.59	0.78	0.97	1.17	1.36	1.56	1.75	1.95	2.14	2.33	2.53	2.72	2.92	3.11	3.31	3.50	3.70	3.89	4.08			4.7
1:300	0.39	0.52	0.65	0.78	0.91	1.03	1.17	1.30	1.42	1.56	1.68	1.68	1.95	2.07	2.20	2.33	2.46	2.59	2.72			3.1
1:400	0.29	0.39	0.49	0.58	0.68	0.78	0.88	0.97	1.07	1.17	1.26	1.36	1.46	1.56	1.65	1.75	1.85	1.95	2.04			2.3
Cooked Coated IFR-FS	Computed iron level of cooked iron fortified rice (IFR) based on the retention data using coated ferrous sulfate (FNRI-DOST and ILSI Project), mg iron/100g																					
1:100	0.97	1.29	1.61	1.93	2.25	2.58	2.90	3.22	3.54	3.86	4.19	4.51	4.83	5.15	5.47	5.80	6.12	6.44	6.76			7.7
1:200	0.48	0.64	0.81	0.97	1.13	1.29	1.45	1.61	1.77	1.93	2.09	2.25	2.42	2.25	2.74	2.90	3.06	3.22	3.38			3.9
1:300	0.32	0.43	0.54	0.64	0.75	0.86	0.97	1.07	1.18	1.29	1.39	1.39	1.61	1.72	1.82	1.93	2.04	2.14	2.25			2.9
1:400	0.24	0.32	0.40	0.48	0.56	0.64	0.72	0.81	0.89	0.97	1.05	1.13	1.21	1.29	1.37	1.45	1.53	1.61	1.69			1.9
For details, refer to Annex A, Section III. 1. a. Iron Content																						

Annex 3. Directory of Iron Fortified Rice and Iron Rice Premix/Fortified Kernel Producers/Suppliers (As of March 2022)

Iron Fortified Rice Producers/Suppliers

Iron Fortified Rice Producer	Address	Contact Person	Contact Number
Loronix Rice Mill	Nabunturan, Davao de Oro	Mr. Gaspar A. Lorono	0920-4129151
Antofel Trading Or Saavedra Rice Mill	Purok 3, Magsaysay Street, Poblacion, Mongkayo, Davao de Oro	Mr. Tata Saavedra Mr. Ricardo f. Saavedra	0948-7305736 0920 906 5332 cardingsaavedra@gmail.com
Bagayas Rice Mill and Allied Services, Inc.	Brgy. Caganganan, Banaybanay Davao Oriental	Ms. Catalina Bagayas	0927-5275317
Nutridense Food Manufacturing Corporation	Brgy. Malanay, Sta Barbara, Pangasinan	Mr. Racky Doctor	0999-7290234 0916-6418611 0923-7032198
JD Aguilar Commercial Center	Km. 99 Diversion Road San Leonardo, Nueva Ecija	Mr. Jorge D. Aguilar	0917-6201887
National Food Authority	Visayas Avenue, Diliman, Quezon City	Jeremy S. Regino	455-5274
Food and Nutrition Research Institute (FNRI) (Equipment for Rent)	DOST Compound, General Santos Ave., Bicutan, Taguig City	Dr. Imelda Angeles Agdeppa	837-3164 839-1836
Alheed International	Unit 2701 Antel Global Corp. Ctr. Julia Vargas Ave., Ortigas Center, Pasig City	Mr. Nelvin Co	0917-7350028 633-5892
Food Baskets Corporation	#6 Senator Lorenzo, Sumulong Memorial Circle, Brgy. Dalig, Antipolo City, Rizal	Mr. Arnel S. Pantaleon QA Manager	Email: arnel.pantaleon@foodbaskets corp.com
CamSur Multi-Purpose Cooperative	Zone 4 Cadlan, Pili, Camarines Sur	Ms. Annielen l. Panerio, CPA General manager	Tel # 0931-783-2295 (TNT) , 0936-921-0344 (Globe) Email address: camsur.mpc@gmail.com
Vergara-Tagorda Rice Mill Pangasinan	Quetegan, Mangatarem, Pangasinan	Mr. Cesar Tagorda Arnold Santos Provincial Science and Technology Director Lingayen,	0939-914-6321 cesartagorda64@gmail.com pangasinan@region1.dost.gov.ph Telefax No.: (075) 529-1764 Mobile Nos.: 0998-962-0228 SMART) 0917-840-8258 (GLOBE) DOST-SET-Up Funded

Iron Fortified Rice Producer	Address	Contact Person	Contact Number
LGU-Alaminos City, Pangasinan	City Agriculturist Tangcarang, Techno-Demo Farm, Alaminos City, Pangasinan	Ms. Arceli B. Talania Arnold Santos Provincial Science and Technology Director Lingayen,	0908-895-4121 agricultureoffice_alaminoscity@yahoo.com pangasinan@region1.dost.gov.ph Telefax No.: (075) 529-1764 Mobile Nos.: 0998-962-0228 (SMART) 0917-840-8258 (GLOBE) DOST GIA Funded
San Pablo Multi-Purpose Cooperative	Balaoan, La Union	Mr. Pedro Paterno Arnold Santos Provincial Science and Technology Director Lingayen,	0919-576-9519 0951-865-0246 0906-480-9877 pangasinan@region1.dost.gov.ph Telefax No.: (075) 529-1764 Mobile Nos.: 0998-962-0228 (SMART) 0917-840-8258 (GLOBE) DOST SET-UP Funded

Iron-fortified rice producers under training

The following are currently being trained by FNRI for the production of IFR through its Community Empowerment through Science and Technology (CEST) program that aims to provide livelihood and alleviate poverty in remote communities. The program's implementation entails provision and transfer of technology-based livelihood projects to the identified communities.

Partner	Location	Contact Details	Remarks
LGU Pateros	Pateros	DOST-NCR CEST Project Kim Atienza Warren Gomez 0287726157 0285710403	For training by DOST-FNRI
LGU Navotas	Navotas	DOST-NCR CEST Project Kim Atienza Warren Gomez 0287726157 0285710403	For training by DOST-FNRI
LGU Cavite	Cavite	DOST-Cavite CEST Project Kim Atienza Warren Gomez 0287726157 0285710403	For training by DOST-FNRI
LGU Ilocos	Rice Millers and Traders Association of Cervantes	DOST-Ilocos CEST Jordan Abad Provincial Science and Technology Director (PSTD) DOST Region 1-Cervantes 09178408203	For training by DOST-FNRI

Partner	Location	Contact Details	Remarks
		09959708808 Mr. Marlon Dummao President Rice Millers and Traders Association of Cervantes 09162978835	
LGU Ilocos	Metro Bugnay Multi-Purpose Cooperative	DOST-Ilocos CEST Jordan Abad Provincial Science and Technology Director (PSTD) DOST Region 1-Ilocos-Bugnay 09178408203 09959708808 Mr. Efraim Daya Chairman Metro Bugnay Multi-Purpose Cooperative 09297885899	For training by DOST-FNRI
LGU Ilocos	DOST Ilocos – Regional Office	DOST-Ilocos CEST Decth Libunao Project Leader IFR CEST Project 0917 5444357	Looking for LGU partners For training by DOST-FNRI
LGU Bukidnon	Bukidnon	DOST- Region 10 Bukidnon CEST Loloy Fuertes Provincial Science and Technology Director (PSTD) DOST Region 10 –Bukidnon 09564179216	For delivery and training by DOST-FNRI

Iron Rice Premix/Fortified Kernel Producers/Suppliers

Iron Rice Premix Producer	Address	Contact Person	Contact Number
Nutridense Food Manufacturing Corporation (**with FDA Registration)**	Brgy. Malanay. Sta Barbara Pangasinan	Mr. Racky Doctor	0999-7290234 0916-6418611 0923-7032198
Nutrition and Beyond Corporation	Km. 99 Diversion Road San Leonardo, Nueva Ecija	Mr. Jorge D. Aguilar	0917-6201887
Food and Nutrition Research Institute (Equipment for Rent)	DOST Compound, General Santos Ave., Bicutan, Taguig City	Dr. Imelda Angeles Agdeppa	837-3164 839-1836
Alheed International (Importer IRP and Blending Equipment)	Unit 2701 Antel Global Corp. Ctr. Julia Vargas Ave., Ortigas Center, Pa sig City	Mr. Nelvin Co	0917-7350028 633-5892
IMCD, Philippines Corporation **(with FDA Registration)**	9F IT Hub, 2251 Chino Roces Ave, Makati City	Ms. Daisy Fernandez	0917-8127717 daisy.fernandez@imcd.ph

Iron Rice Premix Producer	Address	Contact Person	Contact Number
LGU Bukidnon	Bukidnon-	DOST-Bukidnon CEST **Loloy Fuertes** Provincial Science and Technology Director (PSTD) DOST –Bukidnon 09564179216	For delivery of extruder machine and testing

Annex 4A. Respondent Tool Map for BARMM

Objectives	Methods/Tools	Respondents	Relevant Questions	Data Gathering Schedule
To determine experiences, issues and constraints in the conduct of school feeding in BARMM, future plans	KII by all team members	WFP BARMM	Questions related to the following: 1. Experiences during the pilot testing of IFR feeding in Maguindanao, issues and constraints (in addition to those identified in the report) 2. Activities conducted following the pilot testing, implementation of the recommendations (advocacy, follow-up feeding with IFR) 3. Additional recommendations for future school feeding with IFR	Day 1
To determine issues and constraints in the conduct of IFR school feeding and implementation of rice fortification in BARMM.	KII (all team members)	Regional Coordinators from MBHTE for the school feeding	Questions related to the following: 1. Overall school nutrition program (activities, targets, issues and constraints except school feeding) 2. School feeding program (target, use of IFR implementation issues and constraints and recommendations)	Day 1
To determine support to rice fortification program.	KII (all team members)	Head of Regional Offices of the following: DOH, NNC, DOST, DSWD, DA	Questions related to the following: 1. Programs for rice fortification, progress of implementation, issues and constraints, recommendations. 2. Requirements if any to avail of support.	Day 1
To determine knowledge attitudes and practices (KAP) related to fortification program specifically on rice fortification	Conduct hybrid KII/FGD for 8 to 10 for each group of consumer respondents. Fill up a simple questionnaire for each then discuss through FGD. (Maglalang and Bombasi)	A. Consumers from areas with iron fortified rice school feeding B. Consumers in areas without IFR school feeding	Questions related to the following: 1. Knowledge on nutrition in general 2. Knowledge on micronutrient malnutrition/factors on causes/prevention 3. Knowledge on fortification program/Sangkap Pinoy Seal/products 4. Buying practices of SPS products 5. Practices on rice consumption/varieties bought/price/where 6. Knowledge on iron fortified rice/usage/observations during school feeding/reaction of children/practices/if consumed/reaction/willingness to buy/preferred price	Day 2

Objectives	Methods/Tools	Respondents	Relevant Questions	Data Gathering Schedule
To determine KAP during conduct of school feeding	KII of at 3 schools for each group of school feeding coordinators (Maglalang and Bombasi)	A. School feeding coordinators of schools with IFR feeding B. School feeding coordinators of schools without IFR	Questions related to the following: 1. Knowledge micronutrient malnutrition factors on causes and prevention 2. Knowledge on food fortification program/Sangkap pinoy Seal/Healthy Food guidelines of DepEd 3. General conduct of school feeding (target number of children, menu sources, rice storage, cooking practices, amount provided per child, frequency of feeding). 4. Observation on sensory and physical or reaction of children on the use of IFR, taste, color, variety (for those with IFR feeding) 5. Issues and concerns on the general conduct of school feeding 6. Recommendations to address issues and concerns.	Day 2
To determine their KAP on fortification program specifically on rice fortification, advocate for implementation of rice fortification with local officials	KII by Maglalang and Bombasi	Local officials preferably Mayor or barangay chairmen or *Sanggunian* Health Committee chair	Questions related to the following: 1. Knowledge on malnutrition and micronutrient malnutrition, RA 8976 and other nutrition related policies such as RA 11037 2. Nutrition programs in area of concern particularly related to fortification specifically on rice fortification. 3. Issues and constraints on implementation and recommendations. In addition, inform them of how rice fortification is being implemented in other areas.	Day 2
To determine their KAP on rice fortification, inform on technologies and advocate to apply for government support such as DOST Projects CEST, SET-UP and GIA.	KII by Saises and dela Cruz	Farmers group or cooperatives particularly covered by the Agrarian Reform Program.	Questions related to the following: 1. Current status of their group/cooperative, membership rice variety produced, assets such as mills, warehouse, equipment, source, production capacity, price, profit etc. 2. Issues and concerns on their rice farming, government programs at their disposal 3. Knowledge on RA 8976 and RA 11037. 4. Willingness to fortify with government support such as the DOST CEST program.	Day 2

Objectives	Methods/Tools	Respondents	Relevant Questions	Data Gathering Schedule
To determine their KAP of commercial sector on fortification program and on rice fortification, willingness to sell IFR	KII during market visit by Saises and dela Cruz	At least 3 rice millers in nearby areas and 3 traders/retailers in market	Questions related to the following: 1. Knowledge to nutrition, micronutrient malnutrition, RA 8976, RA 11037, rice fortification 2. Types of rice sold, prices, issues and constraints in selling rice 3. For traders/retailers, after informing on rice fortification, determine willingness to sell IFR, 4. For millers, after informing on rice fortification and government support, willingness to avail of government support and produce IFR	Day 2
To determine their KAP of NGO's on fortification program specifically on rice fortification, advocate for use of IFR	KII by Maglalang and Bombasi	NGO's in BARMM with feeding programs	Questions related to the following: 1. Knowledge to nutrition, micronutrient malnutrition, RA 8976, RA 11037, rice fortification. 2. Nutrition programs implemented including feeding programs, targets, source of funds, source of rice, menu. 3. Experience with IFR if any. 4. After informing on the rice fortification program, determine willingness to use IFR for feeding.	Day 3
To determine their KAP on fortification program specifically on rice fortification, advocate for use of IFR	KII by Maglalang and Bombasi for government institutions and Saises and dela Cruz for private sector	Government and private institutions who procure rice such as hospitals, jails, Armed Forces, restaurants, caterers etc.	Questions related to the following: 1. Knowledge to nutrition, micronutrient malnutrition, RA 8976, RA 11037, rice fortification. 2. Practices in the conduct of rice procurement, prices, sources, volume 3. Experience with IFR if any. 4. After informing on the rice fortification program, determine willingness to use IFR for feeding.	Day 2 or 3
To determine plans for rice fortification	KII by Saises and de la Cruz	NFA-Isulan	Questions on the following: 1. Experiences during pilot testing of rice fortification 2. Issues and constraints, recommendations. 3. Knowledge of NFA Head Office on plans for rice fortification. 4. Willingness to continue the use of blenders for rice fortification for BARMM and other areas	Day 3 or 4

Annex 4B. Respondent Tool Map Outside BARMM

Objectives	Methods/ Tools	Respondents	Relevant Questions	Data Gathering Schedule
To determine issues and concerns in kernel production and importation, sales and cost, future plans	Conduct KII by all team members	Iron rice kernel producers (See Annex 3). Nutridense, Nutrition and Beyond and importers IMCD/DSM, Al Heed and Bukidnon under training	Questions related to the following: 1. Length of time in kernel production/importation 2. Government permits 3. 2021 Production/Importation if any 4. Current inventory/Pricing/Provision of samples 5. Packaging and storage conditions 6. Current costumers/orders if any 7. Issues in production/Importation 8. Overall rice fortification program concerns/gaps 9. Recommendations for address gaps For Bukidnon – reason for producing iron rice kernel, issues in the availment of CEST support	TBD
To determine issues and concerns in the production of iron fortified rice, issues on production and supply chain, variety used, future plans	Conduct KII by all team members	See Annex 3	Questions for those already producing: 1. Source of iron rice kernel 2. Production in 2022, cost, rice variety used 3. Government permits/reason for producing IFR 4. Clients 5. Issues in production of IFR 6. Overall rice fortification program concerns/gaps 7. Recommendations to increase sales/willingness to support in communications Questions for those currently being trained under CEST 1. Reason for availing government support for rice fortification/knowledge on RA 8976/Standards/Testing 2. Target date for production. 3. List of expected clients if any 4. Current problems prior to start-up/TA needed 5. Overall rice fortification program issues and gaps 6. Recommendations	TBD

Objectives	Methods/ Tools	Respondents	Relevant Questions	Data Gathering Schedule
To determine factors that hinders supply of ingredients for kernel production (fortificant, binders), current inventory and sales	Conduct KII by Saises and Maglalang	Currently only Vitachem Corporation is the known supplier of ingredients for kernel	Questions related to the following: 1. Current inventory of ingredients for kernel production, provision of samples 2. Length of time order to delivery, price fluctuation, 3. Issues in the importation of ingredients, with producers of kernels	TBD
To determine cost and duration for delivery to ARMM	Dela Cruz and Bombasi	Courier services at least 6 companies 2 for land, 2 for air, 2 for sea additional to	Questions related to the following: 1. Cost of courier service (de la Cruz to determine pick-up to delivery end point) particularly to BARMM 2. Requirements needed to delivery/terms	
To determine status of implementation of workplan for rice fortification and on-going pilot testing for rice fortification	KII by Maglalang and Bombasi	NFA officials including and Technical Services	Questions related to the following: 1. Status of the implementation of workplan for rice fortification 2. Status of blending machines/plans for revival/testing 3. Issues related to budget/technical/action to address 4. Issues and gaps related to rice fortification (overall) such as who will monitor quality 5. Recommendations to address issues and gaps.	TBD
To determine status of NNC-GB resolution on Rice Fortification, activities of various agencies in the NNC-GB, future plans, issues and constraints.	KII by all team members	KII of NNC officials	Questions related to as lead agency as policy and coordinating body for nutrition: 1. Status of implementation of various agencies with NNC-GB resolution for rice fortification/latest report/agency feedback on issues and concerns 2. Status of implementation of Tutok Kainan using iron fortified rice/how it is implemented/delivery of fortified rice for targets/issues and gaps/next steps 3. Issues and gaps in the implementation of Food Fortification Program in general and specifically on rice fortification. 4. Recommendations/plans for 2022 and beyond	TBD

Objectives	Methods/ Tools	Respondents	Relevant Questions	Data Gathering Schedule
Determine plans for the development of communications plan for food fortification and rice fortification	KII by Maglalang, Bombasi and Vega	DOH-NCHP led by Dr. Beverly Ho	Questions related to communication plan for food fortification and rice fortification: 1. Status of the development of communications plan for food fortification and specifically rice fortification/materials developed 2. Issues on implementation/budget 3. Issues and gaps on the overall implementation of food fortification particularly on behavior change communications and social marketing 4. Technical assistance needed 5. Recommendations	TBD
Determine technical assistance for rice fortification, issues and constraints, use of equipment, soft loans, current research especially on multiple micronutrient fortification of rice	KII by all team members	KII of FNRI officials led by its Exec. Dir. Dr. Agdeppa and DOST Officers	Questions related to the following: 1. Programs in support of food fortification and specifically on rice fortification such as CEST, GIA, SET-UP/ what is provided by each/requirements to avail support/current recipients/status of implementation 2. For FNRI, status of research on multiple micronutrient fortification of rice 3. Current activities for rice fortification and if any in BARMM (such as production of complementary food in Sulu State College). 4. Issues and Gaps on food fortification program 5. Recommendations	To be scheduled prior to travel to BARMM
Determine plans for continuing feeding program in BARMM on the use of IFR and experiences and issues and gaps and recommendations to improve rice fortification program.	KII by all team members	KII of WFP Manila officials	Question related to the following: 1. Expectations on this study of NFP on rice fortification/coordination between NFP and WFP 2. Issues and concerns in the conduct of feeding programs in BARMM specifically use of iron fortified rice. 3. Recommendations to address the identified issues and concerns. 4. Future plans for feeding using iron fortified rice.	TBD

Annex 5. Question Guide/Procedure for KII with Ethical Consideration

1. For the conduct of the KII/FGD, NFP would assign at 2 least consultants. One facilitator and one documenter and co-facilitator depending on the respondents as shown in Annex 4.

2. Prior to the conduct of the KII/FGD, the NFP team will introduce themselves and inform the participants on the purpose of the interview as part of the Study on Iron Rice Fortification Capacities, Supply Chain and Campaign Initiatives in the Philippines, the objectives of the study, i.e., how best to expand rice fortification in the Philippines in terms of knowledge, attitudes, acceptability, production and consumption.

3. As part of the ethical consideration for the KII/FGD, the respondents will be informed that in the course of the KII/FGD, there will be no correct or wrong answer and information gathered will be confidential particularly those from consumers, private sector, except those with expressed consent particularly those from the government. Participants will also be advised that the interview will be recorded.

4. Following the introduction of the team and objective of the interview, the respondents will fill up the following information in the consent form for face-to-face KII/FGD, while for on-line interviews, respondents will be asked if they would agree that the interview would be recorded and transcribed.

5. The following is the consent form for face-to-face interviews, in English:

I, _____, with an appropriate age with residence at Barangay _____was invited to participate in a study related to the improvement of rice fortification with iron under the supervision of the Nutrition Foundation of the Philippines, Inc.

I attest that I was given ample time to know and understand the objective of this interview and I was given a chance to question anything related to this interview and was explained to me to my satisfaction.

I am now giving my permission to be interviewed and join in this study.

Print Name/Signature Date: _____

Gender: Male _____ Female: _____

Age: _____ Occupation: _____

Education: _____ (For consumer respondents only)

6. The consent form in Filipino is as follows:

Ako _____, na nasa wastong gulang, at nakatira sa Barangay _____ ay na-imbitahang sumali sa pananaliksik patungkol sa _____ sa ilalim ng pamumuno ng Nutrition Foundation of the Philippines, Inc.

Aking pinagtitibay na ako ay nabigyan ng panahon upang alamin ang layunin ng panayam at nabigyan din ng pagkakataon upang makapagtanong hinggil sa pananaliksik. Anumang katanugan ay nabigyang tugon ng maayos ng nananaliksik. Ako ay nagbibigay ng pahintulot nakapanayamin at kusang sumali sa pananaliksik na ito.

Pangalan at Lagda ng Kalahok: Petsa:_____

Kasarian: Lalake_____ Babae_____

Edad: _____ Hanapbuhay: _____

Antas ng pinag-aralan: _____ (para lang sa mamimili)

7. Following the agreement of the respondent for the interview, NFP will the proceed with the interview using as the guide the relevant questions according to each respondent as provided in Annex 4. At the end of the interview, NFP will acknowledge and thank the respondent for their support.

Annex 6. Guide Questions per Type of Respondent

1. WFP-Sub Office in BARMM

1.1. How long has WFP – BARMM being doing a feeding program in BARMM?
1.2. What is the relation between WFP BARMM and MBHTE in the conduct of school feeding? Who does what including in areas without IFR?
1.3. What were your experiences in the feeding program, what are the issues and gaps?
1.4. During the conduct of the pilot testing of feeding with IFR, what were the identified issues and concerns?
1.5. Were there activities conducted to address these issues and concerns?
1.6. Are there plans for continuation of the school feeding in BARMM with IFR? In Maguindanao and other BARMM provinces and cities? What do you see are the gaps and constraints in expanding the school feeding with IFR in BARMM?
1.7. Do you have recommendations for the conduct of school feeding with BARMM?

2. MBHTE - BARMM Regional Offices and DSWD - BARMM Regional Office:

2.1. What are the Nutrition Program activities in the schools other than school feeding? Were there problems in the implementation?
2.2. Who are the targets? What were the accomplishments?
2.3. Were there problems in their implementation?
2.4. When did you start the conduct of school feeding in BARMM?
2.5. What protocol or guidelines did you use in the conduct of school feeding?
2.6. Was there community support in the conduct of school feeding? In what way?
2.7. What were the problems encountered in the conduct of school feeding?
2.8. Were you able to address these concerns? How?
2.9. In areas with school feeding with IFR, what were the problems encountered in the use of IFR?
2.10 What are your recommendations to improve nutrition of schoolchildren and in expanding the use of IFR in school feeding?

3. Other Regional Offices in BARMM particularly DOST, DA, DOH and NNC

3.1. Do you have nutrition program for BARMM?
3.2. Enumerate each program and provide accomplishment reports? What are your issues and concerns in the implementation of each program?
3.3. Do you have programs on rice fortification as provided in RA 8976? What are your accomplishments? What are your issues and concerns in implementation?
3.4. Do you conduct advocacy activities for rice fortification? How? When was the last activity?
3.5. What are your recommendations to expand rice fortification in BARMM?
3.6. What Technical assistance you need for rice fortification?

4. Consumers/Guardians/Caregivers

4.1. What is malnutrition? What are the causes of malnutrition? How do you prevent malnutrition?

4.2. What is micronutrient malnutrition? What are the causes of micronutrient malnutrition? How do you prevent micronutrient malnutrition?

4.3. What are your sources of information on nutrition?

4.4. What is Sangkap Pinoy Seal? Have you consumed or bought products with Sangkap Pinoy Seal? Where?

4.5. On rice, what variety of rice you usually buy? Where? What is the price per kilo?

4.6. Are you familiar with iron fortified rice? Have you consumed/tasted iron fortified rice? Where and when?

4.7. Of those who consumed, what can you say on the taste and appearance of iron fortified rice?

4.8. After explaining the rice fortification program, respondents are asked if they are willing to buy iron fortified rice? At what additional price from the rice they usually buy?

5. School Feeding Coordinators

5.1. What is malnutrition? What are the causes of malnutrition? How do you prevent malnutrition?

5.2. What is micronutrient malnutrition? What are the causes of micronutrient malnutrition? How do you prevent micronutrient malnutrition?

5.3. What is Sangkap Pinoy Seal? Have you consumed or bought products with Sangkap Pinoy Seal? Where? Do use products with Sangkap Pinoy Seal as ingredients for school feeding? Why or why not?

5.4. What are the Guidelines of DepEd in the food sold in the school? Do you follow these guidelines?

5.5. In the conduct of school feeding what guidelines do you follow? What are the number of targets? What is your accomplishment for this school year?

5.6. Do you conduct monitoring of nutrition status of schoolchildren?

5.7. In the use of iron fortified rice, have you observed any reaction form the children in terms of the taste and appearance of iron fortified rice? What variety of rice you usually use? What is the price per kilo? How many cups of cooked rice you usually provide?

5.8. What are your issues and constraints in the implementation of school feeding? With the use of rice? What are your recommendations to address these issues and concerns?

5.9. Overall, what are your recommendations to expand the consumption of iron fortified rice.

6. Local Officials (Mayor or Barangay Chair or Sanggunian Health Committee Chair of Health Officer)

6.1 What are the laws to address micronutrient malnutrition? Please describe?
6.2 What are your efforts in implementing these laws particularly on RA 8976?
6.3. As part of RA 8976, are you familiar with Sangkap Pinoy products and those that are mandated to be fortified? Have you consumed these products?
6.4. Are you familiar with iron fortified rice? Have you consumed iron fortified rice? What are your observations when you consumed iron fortified rice regarding taste and appearance?
6.5. What are the issues and constraints in the implementation of rice fortification in your area?
6.6. After informing on the importance of rice fortification and strategies for implementation, determine are the doable activities that can be done for their communities to expand rice fortification?

7. Farmers Group or Cooperatives producing rice

7.1. What are the current status of the group in terms of membership, hectares covered, production per hectare, assets, mills if any, varieties produced, production in 2021, price of rice sold, where rice is sold?
7.2. What is rice fortification under RA 8976? What do you think will be your issues and constraints in implementing rice fortification?
7.3. After explaining, rice fortification under RA 8976 and government support, they will be asked if they are willing to fortify the rice?

8. Millers/Traders/Retailers

8.1 Are you familiar with RA 8976? If yes, please describe?
8.2. Where did you get your supply or orders? What variety of rice do you sell? Which is the most saleable?
8.3. How much is the amount of rice usually sold per day? What is the average price?
8.4. How do you order? Frequency of delivery? What is the mode of transport?
8.5. What is your inventory stock level? What is your payment scheme? COD or Terms?
8.6. Who are your buyers? Usually how much do they buy per transaction?
8.7. After explaining about rice fortification program and government support, would they be willing to sell iron fortified rice? What is the ideal price increase for the variety of rice sold?

9. Non-Government Organizations with Feeding Programs same with Government and private institutions who procure rice such as hospitals, jails, Armed Forces, restaurants, caterers.

9.1 What is malnutrition? What are the causes of malnutrition? How do you prevent malnutrition?

9. 2 What is micronutrient malnutrition? What are the causes of micronutrient malnutrition? How do you prevent micronutrient malnutrition?

9.3. What are your sources of information on nutrition?

9.4 What is Sangkap Pinoy Seal? Have you consumed or bought products with Sangkap Pinoy Seal? Where?

9.5 As part of your feeding program, where do you procure your rice? What is the volume of rice you consume per day? What is the variety? Price?

9.6 How do you manage your inventory?

9.7 Did you have experience in the use of iron fortified rice? What are your observations in the use of iron fortified rice? Where is your source of iron fortified rice? Would you be willing to buy again iron fortified rice and why?

9.8 For those who have not used iron fortified rice, discuss the rice fortification program, provide list of sources, and government support. At the end ask if they are willing to buy iron fortified rice? Price range?

10. NFA – Isulan

10.1 How were you able to revive your blending machine for rice fortification?

10. 2 Is it still operational? If not do you plan to revive the machine?

10.3 Are you familiar with the plan of the head office for rice fortification?

10.4. What are the instruction to your office regarding its implementation?

10.5. In case, you are provided with the premix, are you still willing to fortify the rice? What is your cost for fortify? What is the cost of NFA Fortified Rice?

10.6 What technical assistance you need to able to fortify based on the new standard of FDA?

11. Producers of iron rice kernels

11.1 How long have you been in the business of kernel production? What government permits have you acquired?

11.2 For local production, did you receive government assistance for the production of kernels? From whom and what type of assistance? Why did you go into the production of iron rice kernels?

11.3 Would you be willing to provide 2021 total production/importation? What is the current price of the iron rice kernel?

11.4. What is your current inventory? Do you provide samples for testing?

11.5. What is the technology do you use? What is the fortificant?

11.6. Who are your current costumers? Where do you supply? How do you transport your product?

11.7. What are your issues and concerns in the production/importation of kernels? Issues of sales of product?
11.8. What are your issues and concerns regarding the overall implementation of the rice fortification programs?
11.9. What are your recommendations to address these issues and gaps?

12. Producers of Iron fortified Rice

12.1 For those currently producing

12.1.1 How long have you been in the business of kernel production? What government permits have you acquired?

12.1.2 Did you receive government assistance for the production of iron fortified rice? From whom and what type of assistance? Why did you go into the production of iron fortified rice?

12.1.3 Would you be willing to provide 2021 total production? Where is your current source of iron rice kernel? Would you be willing to also use imported iron rice kernel? What is the current price of the iron fortified rice? What variety of rice do you usually use? Are also willing to use other varieties of rice?

12.1.4 What is your current inventory? What is the current price of the iron fortified rice? What variety of rice do you usually use? Are also willing to use other varieties of rice?

12.1.5 To whom do you sell iron fortified rice? Where do you supply? How do you transport your product?

12.1.6. What are your issues and concerns in the production/importation of iron fortified rice? Issues of sales of product?

12.1.7 What are your issues and concerns regarding the overall implementation of the rice fortification programs?

12.1.8 What are your recommendations to address these issues and gaps?

12.1.9 Would you be willing to conduct advocacy/promotion of iron fortified rice?

12.2 For those under training

12.2.1 Why did you go into the business of producing iron fortified rice?

12.2.2 When is your target date for production?

12.2.3 Who will be your expected clients?

12.2.4 What are the current problems in the start-up of your production of iron fortified rice?

12.2.5 What are the issues and concerns regarding the overall implementation of the rice fortification program?

12.2.6 What are your recommendations to address these?

13. Suppliers of ingredients for producing iron rice kernel

13.1 Are you familiar with RA 8976? If yes, please describe? How about rice fortification?
13.2 What is your role in the rice fortification program?
13.3 What ingredients do you supply for rice fortification? What are the sources?
13.4 Do you know of other suppliers of these ingredients? Are you the exclusive distributor?
13.5 Do you government permit to import these products? Do you have certificates of analysis?
13.6 Would you be willing to provide the amount you sold in 2021?
13.7 Do you have stock inventory? How long?
13.8 What are your issues and concerns related to the fortification program?
13.9 Do you have recommendations to address these?

14. Courier Services for delivery to BARMM

14.1 Do you have operations/warehouse in BARMM? Where in BARMM?
14.2 What is your delivery schedule? Land or Sea Freight?
14.3 What are your vehicle capacity? How many vehicles?
14.4 How much is freight cost depending on truck load/type of truck?
14.5 Do you have restrictions/permits for delivery to BARMM?

15. NFA-Central Office

15.1 What is the current status of NFA plan for rice fortification? When do you plan to install the new blenders and start pilot testing?
15.2 How much budget is currently available for the pilot testing?
15.3 Until when do you expect to finish the pilot testing and go full time in the production of iron fortified rice?
15.4 What technical assistance do you need in the implementation of your plans for rice fortification?
15.5 What are your issues and concerns on the rice fortification program?
15.6 What are your recommendations to address these?

16. National Nutrition Council

16.1 What are the current nutrition programs related to rice fortification?
16.2 What is the implementation plan for your dietary supplementation program? What are the issues and concerns in its implementation?
16.3 Given, the NNC-GB Resolution on rice fortification? What actions have been taken by the NNC-GB members as part of their commitment to rice fortification? What are their issues and concerns related to their implementation?
16.4 What are your plans following the assessment of the overall food fortification program including rice fortification?
16.5 What are your issues and concerns on the rice fortification program? What are your recommendations to address these?

17. National Center for Health Promotions

17.1 What are the previous promotional activities conducted for food fortification and specifically for rice fortification? Why were these not sustained?

17.2 What is the status on the proposed communications plan for food fortification specifically on rice fortification?

17.3 What would be the expected issues regarding its implementation?

17.4 What technical assistance is needed to address behavior change communications and social marketing of the food fortification program and rice fortification?

17. 5 What are your recommendations to address these issues and concerns?

18. Department of Science and Technology (DOST) and Food and Nutrition Research Institute (FNRI)

18.1 For DOST

18.1.1 What are the support mechanisms available from the DOST for rice fortification?

18.1.2 What are the requirements from the industry to avail of this support?

18.1.3 Currently, how many has availed of these DOST programs for rice fortification? What are the issues in their implementation and how were these addressed?

18.2 For FNRI

18.2.1 What are the current activities in support of rice fortification?

18.2.2 Are FNRI equipment for rice fortification still available for use? How to avail and how much? What are the requirements?

18.2.3 What is the status of the study on multiple micronutrient fortification of rice?

18.2.4 What are the issues and concerns in the implementation of rice fortification?

18.2.5 What are your recommendations to address these?

19. World Food Programme-Head Office

19.1 What are the expectations on this study of NFP on rice fortification? How to coordinate between NFP and WFP?

19.2 What were the issues and concerns in the conduct of the feeding programme in BARMM?

19.3 Recommendations to address the identified issues and concerns.

19.4 What are the future plans of WFP in support of rice fortification?