

ASIAN DEVELOPMENT BANK

JFPR:INO 38613

PROPOSED GRANT ASSISTANCE
(Financed by the Japan Fund for Poverty Reduction)

TO THE

REPUBLIC OF INDONESIA

FOR

**ENRICHING LIVES OF THE URBAN POOR THROUGH FOOD
FORTIFICATION**

February 2005

CURRENCY EQUIVALENTS

(as of 1 February 2005)

Currency Unit	-	rupiah (Rp)
Rp1.00	=	\$0.000109
\$1.00	=	Rp9,175.00

ABBREVIATIONS

ADB	-	Asian Development Bank
BAPPENAS	-	National Development Planning Agency
BKKBN	-	National Family Planning Board
DHS-2	-	Second Decentralized Health Services Project
HKI	-	Helen Keller International
IDA	-	iron deficiency anemia
IDD	-	iodine deficiency disorder
JFPR	-	Japan Fund for Poverty Reduction
KFI	-	Koalisi Fortifikasi Indonesia
MMF	-	multi-micronutrient fortificants
MOH	-	Ministry of Health
MOHA	-	Ministry of Home Affairs
MOIT	-	Ministry of Industry and Trade
NADFC	-	National Agency for Drug and Food Control
NFRDC	-	Nutrition and Food Research Development Center
NGO	-	nongovernment organization
PIU	-	project implementation unit
PMO	-	project management office
RDA	-	recommended daily allowance
UNICEF	-	United Nations Children's Fund
USI	-	universal salt iodization
VAD	-	vitamin A deficiency

NOTES

- (i) The fiscal year of the Government of Indonesia ends on 31 December.
- (ii) In this report, "\$" refers to US dollars.

INDONESIA

ENRICHING LIVES OF THE URBAN POOR THROUGH FOOD FORTIFICATION



JAPAN FUND FOR POVERTY REDUCTION (JFPR)

JFPR Grant Proposal

I. Basic Data	
Name of Proposed Activity	Enriching Lives of the Urban Poor through Food Fortification
Country	Indonesia
Grant Amount Requested	\$ 1,750,000
Project Duration	3 years
Regional Grant	No
Grant Type	<input checked="" type="radio"/> Project / <input type="radio"/> Capacity building

II. Grant Development Objective(s) and Expected Key Performance Indicators

<p>Grant Development Objectives (GDO):</p> <p>The goal of the Project is to contribute to the reduction of iron deficiency anemia (IDA), iodine deficiency disorder (IDD), and vitamin A deficiency (VAD), especially among low-income and at risk populations in Indonesia. The overall objective of the proposed Project is to ensure sustained access and increased consumption of fortified food through public-private-civic partnerships in selected cities. The specific objectives are to: (i) assess the effectiveness of palm oil fortification with vitamin A; (ii) assess the feasibility of local production of multi-micronutrient fortificants; (iii) build capacity of the public and private sectors to produce quality fortified food and strengthen monitoring systems; and (iv) raise awareness of consumers about prevention of VAD, IDD, and IDA, and the benefits of micronutrient-enriched food.</p>
<p>Expected Key Performance Indicators:</p> <p>(i) Feasibility of palm oil fortification with vitamin A assessed. (ii) Reduced prevalence of iodine deficiency disorder by 10% and improved nutritional status among at-risk groups in selected cities by 2008. (iii) Strengthened capacity for quality assurance including improved monitoring systems. (iv) Increased consumption of micronutrient-enriched salt and wheat flour, especially among poor urban households in selected cities.</p>

III. Grant Categories of Expenditure, Amounts, and Percentage of Expenditures

Category	Amount of Grant Allocated in \$	Percentage of Expenditures
1. Equipment and Supplies	249,000	14.2
2. Training, Public Campaigns, Workshops	655,000	37.4
3. Consulting Services	147,000	8.4
4. Monitoring, Evaluation, and Audit	94,400	5.4
5. Grant Management	193,100	11.0
6. Other Inputs	253,000	14.5
7. Contingencies	158,500	9.1
TOTAL	1,750,000	100.0
Incremental Costs	45,000	

JAPAN FUND FOR POVERTY REDUCTION

JFPR Grant Proposal Background Information

A. Other Data	
Date of Submission of Application	15 November 2004
Project Officer	Barbara Lochmann, Social Protection Specialist
Project Officer's Division, E-mail, Phone	Southeast Asia Department, Social Sectors Division blochmann@adb.org , tel:+632-632-5801
Other Staff Who Will Need Access to Edit/Review the Report	Margaret Anosan, Administrative Assistant
Sector	Social sector
Theme	Reduction of micronutrient deficiencies
Was JFPR Seed Money used to prepare this grant proposal?	Yes [X] No []
Have SRC comments been reflected in the proposal?	Yes [X] No []
Name of Associated ADB-Financed Operation(s)	Second Decentralized Health Services Project (DHS-2), ¹ proposed Urban Nutrition Project ²
Executing Agency	Directorate General of Community Health, Ministry of Health
Grant Implementing Agencies	<p>Prof. Dr. Azrul Azwar Director of Public Health Ministry of Health Tel No: (62-21) 520-1590 Fax No: (62-21) 520-3871</p> <p>Dra. Leila Retna Komala Deputy of Human Resources and Culture National Development Planning Agency Tel No: (62-21) 336-207 Fax No: (62-21) 334-379 / 315-6156</p> <p>Ir. Benny Wahyudi Director General of Agro Industry and Forestry Ministry of Industry and Trade Tel No.: (62-21) 525-2713 Fax No.: (62-21) 525-2450</p> <p>Dr. Kaman Nainggolan Director of Food Security Ministry of Agriculture Tel No.: (62-21) 780-4156 Fax No.: (62-21) 780-4156</p> <p>TBD Ministry of National Education Tel No.: (62-21) 570-9445 Fax No.: (62-21) 570-9445</p> <p>Dr. Seman Widjojo Director General of Regional Development Ministry of Home Affairs Tel No.: (62-21) 794-2631 Fax No.: (62-21) 794-2631</p>

¹ ADB. 2003. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Republic of Indonesia for the Second Decentralized Health Services Project*. Manila.

² ADB. 2004. *Technical Assistance to the Republic of Indonesia for Preparing the Urban Nutrition Project*. Manila.

B. Details of the Proposed Grant

1. Description of the Components, Monitorable Deliverables/Outcomes, and Implementation Timetable

Component A	
Component Name	New Approaches to Fortify Food for the Urban Poor
Cost (\$)	563,000 (excluding contingencies)
Component Description	<p>This component aims to pilot new interventions for micronutrient-enriched food and is composed of two activities. The first will operationalize “in-home” multi-micronutrient fortificants (MMF), which are also called “sprinkles”. The second will assess the effectiveness of palm oil fortification with vitamin A.</p> <p>A1 Multi-Micronutrient Fortificants (MMF) “Sprinkles” are added to home-prepared complementary food to reduce iron deficiency anemia in children 6–59 months. The effectiveness of “sprinkles” is known from Benin, People’s Republic of China, Ghana, India, Mongolia, and Nicaragua. Given the global goal of the United Nations Children’s Fund (UNICEF) to reduce the prevalence of anemia in children and women by 2010, “sprinkles” will significantly contribute to the achievement of this goal. This subcomponent will include the mobilization and training of community-based organizations and nongovernment organizations (NGOs) to market MMF and achieve sustainability of the intervention through gradually introducing the product to the market in poor neighborhoods in north Jakarta. The intervention will cover approximately 5,000 children. Activities under this subcomponent will include (i) training and empowerment of health workers (cadres) and NGOs in poor urban neighborhoods; (ii) a feasibility study to assess local production of a modified MMF appropriate for Indonesian children including an assessment of potential companies which could produce MMF in collaboration with the Nutrition and Food Research Development Center (NFRDC) in Bogor, local research centers or universities; (iii) marketing and education materials targeting mothers of children of 6–59 months of age as part of other nutrition programs, and (iv) operational research. The marketing of “in-home” MMF will include the free provision of the product for 3 months, a 50% subsidy for an additional 3 months, and a 25% subsidy for another 3 months. After an 18 month period, sustained sales will be measured and evaluated to design a marketing plan for product expansion to other cities and a nutritional assessment.</p> <p>A2 Vitamin A Fortification of Palm Oil Indonesia is one of the world’s largest producers of palm oil, which is widely consumed among the poor. With palm oil processing centralized, fortification is feasible and cost efficient. Data suggest that oils are the most suitable for carrying vitamin A, because marginal costs are increased the least. The ADB Country Investment Plan for Food Fortification (2003) recommends the fortification of palm oil with vitamin A as a cost-effective strategy in delivering additional vitamin A to children who are at a high risk of</p>

	<p>mortality due to VAD. To date, effectiveness trials have not been conducted in Indonesia. This activity will launch palm oil fortification with vitamin A to provide effectiveness data necessary for national policy making as well as for building district and provincial capacity for quality assurance and regulatory enforcement. The trial will cover a population of approximately 1 million people for 18 months in the city of Makassar. It specifically will (i) gather biochemical data on VAD in Makassar; (ii) develop a protocol for the effectiveness trial; (iii) establish public-private partnerships among provincial government and local palm oil producers; (iv) provide training and capacity building on vitamin A fortification of palm oil for oil producers; (v) provide equipment for oil plant modifications for two oil distributors including a cost analysis; (vi) provide vitamin A premix for 18 months; (vii) build city and provincial capacity for quality assurance and monitoring; (viii) conduct social mobilization campaigns; (ix) support baseline and postintervention evaluation for serum retinol status in poor urban neighborhoods; and (x) support policy, advocacy, and communication.</p>
Monitorable Deliverables/Outputs	<ul style="list-style-type: none"> (i) Affordability of MMF assessed; (ii) Feasibility of local production of MMF assessed; (iii) Production of fortified palm oil established; (iv) Provincial quality assurance system established; (v) Increased awareness and demand for fortified oil; and (vi) Effectiveness data for policy development available.
Implementation of Major Activities: Number of months for grant activities	36 months
Component B	
Component Name	Strategic Approaches to Enhance Access to Quality Fortified Food for the Urban Poor
Cost (\$)	540,000 (excluding contingencies)
Component Description	<p>Legislation is necessary but not sufficient for food fortification. A functional quality assurance/quality control monitoring system, with a clear definition of responsibility between the industry and government, is critical for maintaining quality and coverage of the program. This component aims to build capacity to enhance access to quality fortified food for the urban poor in north Jakarta and Makassar and is composed of two activities. The first will improve quality and quality assurance of salt and wheat fortification and reinforce fortification regulations. The second will raise public awareness of the benefits of micronutrient-enriched food and promotes the consumption of fortified food.</p> <p>Through activity 1, the implementation of food fortification legislation and regulations at central and local government levels will be strengthened, thus improving the Government's quality assurance system. It will specifically (i) identify suitable targeting mechanisms to reach the urban poor with micronutrient-enriched food; (ii) provide equipment for quality assurance of fortified food to food laboratories in north Jakarta and Makassar; (iii) train food laboratory technicians on food quality assessment; (iv) conduct a stakeholder analysis to expand public-private partnerships for food fortification in the cities; (v) identify and support innovative coordination mechanisms of and between national, provincial, and district agencies, and the private</p>

	<p>sector; (vi) enhance the technical capacity to develop and implement pro-poor food fortification strategies of the Ministry of Health (MOH), Ministry of Home Affairs (MOHA), Ministry of Agriculture (MOAG), Ministry of Industry and Trade (MOIT), and National Agency for Drug and Food Control (NADFC) at the provincial level in South Sulawesi and north Jakarta; and (vii) build capacity of technical personnel in monitoring and evaluation systems to manage and monitor targeted food fortification for the poor and in biological impact assessment of fortification programs at national and provincial levels in the two cities.</p> <p>Activity 2 aims to raise public awareness and promote increased consumption of micronutrient-enriched wheat flour, salt, and multi-micronutrient fortificants. It will focus on (i) advocacy with provincial governments in South Sulawesi and north Jakarta on the adverse impact of micronutrient deficiencies, especially affecting the most vulnerable groups such as poor children and women of reproductive age; (ii) health and economic benefits of food fortification; (iii) provincial media and promotional campaigns in South Sulawesi and north Jakarta on improving dietary quality and the benefits of fortified food consumption; (iv) partnerships with consumer groups and NGOs in Makassar and north Jakarta for enhanced social mobilization; (v) advocacy of the food industry; and (vi) upgrading the web site of the Directorate of Community Nutrition.</p>
Monitorable Deliverables/Outputs	<ul style="list-style-type: none"> (i) Increased demand for micronutrient-enriched food: assure that 30% of at-risk groups consume fortified wheat flour and 60% of at risk-groups consume fortified salt within 3 years; (ii) Increased percentage of fortified salt and flour that meets quality standards as mandated in national standards by 2008; (iii) Improved accessibility and consumption of micronutrient-enriched products, especially by at-risk groups and poor populations; (iv) Improved food fortification targeting and monitoring system established; and (v) Legislation and regulations for salt and wheat flour fortification adopted by central and local governments
Implementation of Major Activities: Number of months for grant activities	36 months
Component C	
Component Name	Grant Management, Monitoring, Evaluation, and Audit
Cost (\$)	488,500 (excluding contingencies)
Component Description	<p>This component will support the project management office (PMO), which will oversee project implementation of two project implementation units (PIUs) in Makassar and north Jakarta. The component will support inception and midterm workshops, in addition to a national roundtable meeting on food fortification, technical assistance for social marketing, food control, nutrition evaluation, legal and regulatory aspects, and annual auditing. Independent monitoring and impact evaluation of project interventions will be established. NGOs and the private sector will provide technical inputs for pilot interventions to the PIUs. Performance monitoring will fully involve the project beneficiaries.</p>

Monitorable Deliverables/Outputs	(i) Quarterly and comprehensive 6-month progress reports, (ii) Annual project review reports, (iii) Monthly financial reports, (iv) Annual audited financial reports, (v) Final project completion report, and (vi) Evaluation reports and baseline studies.
Implementation of Major Activities: Number of months for grant activities	36 months

2. Financing Plan for Proposed Grant to be Supported by JFPR

Financier	Amount (\$)
JFPR	1,750,000
Government	224,600 (in kind)
Total	1,974,600

3. Genesis

The population groups most in need of improved nutrition are the poor. The urban poor especially suffer from multiple micronutrient deficiencies due to a shift in dietary patterns, of which a large proportion can be addressed by fortified food. However, access to fortified food is often limited because of low purchasing power and underdeveloped distribution channels. Control of micronutrient deficiencies through food fortification has increasingly gained attention at international conferences³ and in various studies.⁴ Reducing micronutrient deficiencies, sometime called hidden hunger, through food fortification will help strengthen economies by lowering health care costs and increasing worker productivity. In addition, food fortification will improve the cognitive development of children, which in turn will expand and sustain economic development. Fortification is cost effective and reaches broad populations at minimal cost.⁵ Fortifying flour, salt, and oil is an effective way to get essential vitamins and minerals into the food of low-income and at-risk populations. The technology is simple, the product quality is unaffected, and the incremental price is low.⁶ To be successful, fortification programs must be sustainable and market driven. The public sector is responsible for regulations, standards, and public education that pave the way for private sector investment.

In combating malnutrition in the Asia and Pacific region, the Asian Development Bank (ADB) has provided technical assistance on nutrition and food fortification to 16 developing

³ Such as the Copenhagen Consensus in 2004 or the Global Alliance for Improved Nutrition (GAIN), which provides resources to fortification alliances of governments, industry, and civil society to implement large-scale food fortification programs that reach low-income and at-risk populations. GAIN is funded primarily by the Bill & Melinda Gates Foundation, bilateral donors, and the Micronutrient Initiative. (The Micronutrient Initiative is a not-for-profit organization specialized in addressing micronutrient malnutrition and supports food fortification and supplementation programs in Asia, Africa, and Latin America.)

⁴ The *Global Assessment Report on Vitamin and Mineral Deficiencies*, by UNICEF and the Micronutrient Initiative in 2003, revealed that a lack of basic vitamins and micronutrient deficiencies in the diet are damaging the health of one third of the world's population and hampering economic development.

⁵ Expressed in terms of disability-adjusted life years, salt iodization or staple fortification with vitamin A costs less than \$25/disability-adjusted life year saved.

⁶ For example, the cost for salt iodization is \$0.05 per person per year.

member countries since 1996. Two JFPR projects,⁷ which aim to promote sustainable food fortification programs in the Central Asian republics and Mongolia, have been launched.

Micronutrient deficiencies substantially affect the health and nutritional status of a significant percentage of the population in many regions in Indonesia. The UNICEF/Micronutrient Initiative report (footnote 4) estimates that for Indonesia, 0.5% of gross domestic product is lost due to iron deficiency, or US\$485 million in lost productivity. VAD, IDD, and IDA are common problems in Indonesia that contribute to morbidity, mortality, growth retardation, brain damage, and reduced cognitive and working capacities among children and adults.⁸ These deficiencies have a major impact on the educability and productivity of large segments of the population, straining education and health systems, lowering productivity, and raising levels of sustained poverty.

Urbanization⁹ can exacerbate and concentrate poverty and lead to an increased risk of malnutrition. Urbanization can also exacerbate the transition toward sedentary lifestyles and high-fat diets that carry potential risk factors for diet-related diseases. Unlike in rural areas, where food is prepared at home, the urban poor have to purchase food, usually from food vendors, which is of inferior dietary quality. Nutritional deficiencies of poor urban dwellers can be addressed through fortification of processed food with vitamins and minerals. Indonesia's Food Law of 1996 mandates food fortification programs to improve nutritional status. The Government's National Nutrition Strategy outlines specific goals for the reduction of vitamin and mineral deficiencies, which aims to meet the Millennium Development Goals, especially Goal 1: Eradicate Extreme Poverty and Hunger.

From the perspective of enhancing the efficiency and effectiveness of delivering nutrition improvement programs, fortification is the least-cost method, and first public policy choice, for reducing clinical malnutrition deficiencies in the population.¹⁰ For long-term sustainable control of vitamin and mineral deficiencies, the Government is committed to promoting integrated program management of food control, health monitoring, and public education to enable a sustainable environment for food fortification. Indonesia has two ongoing fortification programs: salt fortification with iodine and wheat flour fortification with iron, zinc, folic acid, vitamin B1, and B2. In the last decade, Indonesia has made some progress in implementing the national strategy of universal salt iodization (USI) but there are still over a third of households that do not consume adequately iodized salt because of a lack of consumer information and access to iodized salt. It will be essential to reinforce advocacy, demand creation for the consumption of quality iodized salt, capacity building of salt producers, and enforcement of legislation to achieve the USI goal, which aims for at least 90% of households to consume adequately iodized salt by end-2005. While fortification of wheat flour is mandatory, the program faces several constraints such as a lack of capacity to determine the effectiveness of the flour fortificants, and weak monitoring and quality control systems.

⁷ ADB. 2001. *Proposed Grant Assistance to Asian Countries in Transition for Improving Nutrition for Poor Mothers and Children*. Manila (JFPR 9005-REG, \$6 million); and ADB. 2004. *Proposed Grant Assistance for Sustainable Food Fortification*. Manila (JFPR 9052-REG, \$2 million).

⁸ Findings of the Government of Indonesia/Helen Keller International (HKI) Nutrition and Health Surveillance Survey from 1999 to 2003 show that (i) children aged 12–23 months in urban slum areas appear to have an increasing prevalence of anemia; (ii) the prevalence of anemia among mothers remains high at 20–30%; (iii) underweight among children aged 12–23 months is still high; (iv) wasting among children aged 12–23 months remains at high levels, especially in urban areas; (v) stunting among children under 5 years of age in urban areas remains; and (vi) vitamin A intake among both mothers and children is extremely low.

⁹ Urbanization in Indonesia increased from 22% in 1980 to 39% in 2000.

¹⁰ With food fortification strategies supported and maintained through the market system, governments can focus on supplementing delivery of nutrition services and dietary education to disadvantaged populations with limited access to fortified food.

Although rice remains the main staple food, the consumption of wheat-based processed food, especially noodles, has increased among the urban population. Given the Government's commitment to reaching the poor with fortified food, the National Round Table Meeting on Food Fortification¹¹ identified several needs, which included (i) improved quality assurance of flour; (ii) strengthening provincial and local coordinating mechanisms, such as the Food Security Council, the Food Security Board, and the Food and Nutrition Surveillance Teams; (iii) broadening public-private partnerships to include producers of flour products, such as noodle manufacturers; (iv) a consumption study for the urban poor; (v) an effectiveness trial of fortified flour; and (vi) new strategies to make various flour products more accessible and affordable for the poor.

While salt iodization reaches up to 73% (2003) of the total population, the quality of fortified salt varies among and within provinces. An estimated 20,000 salt farmers, who sell non-iodized or not fully iodized salt to the markets, limit progress and sustainability of salt fortification in the country. Recommendations of the National Round Table Meeting included strengthening the coordination of (i) government agencies, including MOH, MOHA, MOAG, MOIT, NADFC; and (ii) the IDD teams at national, provincial, and district levels. There is also a need to identify approaches to strengthen law reinforcement and social mobilization at community level. Double fortification of salt with both iodine and iron would be an ideal way to eliminate endemic goiter, and iodine and iron deficiency. In Indonesia, double fortification of salt is an option given the technology already developed. Any proposed new activities on salt fortification should be closely coordinated with IDD teams as well as UNICEF and should consider the recommendations of the World Bank's completed Iodine Deficiency Control Project.

More than half of children under 5 years of age were vitamin A deficient in 2001. According to a recent study by the Koalisi Fortifikasi Indonesia (KFI) and the Micronutrient Initiative, unbranded oil consumption by poor families was sufficient to deliver 30% or more of the recommended daily allowance for vitamin A. The National Round Table Meeting considered a range of potential food vehicles for vitamin A fortification and concluded that the fortification of palm oil¹² presented a promising opportunity. Prior to undertaking a full-scale market trial for palm oil fortification, several small-scale activities were identified as essential, including updating prevalence of vitamin A status, consumer and industry acceptability assessment, and an efficacy trial.¹³ The meeting noted that much of these data are available internationally and some of the surveys may not have to be carried out in Indonesia. Based on the above, the opportunity for a large-scale, market-based effectiveness trial¹⁴ can be considered. Such a trial would provide the necessary background and evidence to establish standards for national oil fortification with vitamin A.

While iron supplementation is widely implemented to treat and prevent IDA in adults, realistic options for young children remain very limited. "In-home" fortification with MMF is a new option to address IDA in young children. MMF can be added to complementary food to reduce VAD and IDA in children 6–59 months of age. MMF consists of microencapsulated iron and other essential micronutrients to treat and prevent iron and other deficiencies in infants and

¹¹ National Round Table Meeting on Food Fortification, which was financed through ADB's Regional Technical Assistance (RETA) 5944 (ADB. 2000. *Technical Assistance for the Regional Initiative to Eliminate Micronutrient Malnutrition in Asia through Public-Private Partnerships*. Manila, approved in 2000), discussed priorities for food fortification in Indonesia and identified key interventions for the JFPR proposal. The meeting was held on 27–28 July 2004 in Jakarta with representatives from the public and private sectors and from NGOs.

¹² Retinol palmitate is the vitamin A fortificant compound used in oil fortification.

¹³ An efficacy trial is defined as the assessment of the scientific feasibility of an intervention.

¹⁴ An effectiveness trial is defined as a scientifically proven intervention, which is tested at the community level.

young children.¹⁵ The formulation gives the flexibility to mix any other micronutrient with the encapsulated iron granulates including vitamins, folic acid, zinc, and others.¹⁶ Based on the results of a Helen Keller International (HKI) efficacy trial¹⁷ on “sprinkles” in north Jakarta, a public-private partnership to distribute and market “sprinkles” on a sustainable basis could be explored for low-income urban neighborhoods. In order to implement MMF on a large scale, an effectiveness study should be carried out as a follow-up of the efficacy study. Recommendations of the National Round Table Meeting included technology transfer and formulation of “sprinkles” or any other formulation suitable for Indonesia to reduce production costs and to address specific nutritional needs of Indonesian children. The development of MMF formula should be explored with NFRDC in Bogor.

Within the new framework of decentralization, program implementation and resource allocations for nutrition interventions, including food fortification, are left to the discretion of district authorities. In this environment, national and local regulations for the control of quality fortified food, and monitoring of nutritional status, are difficult to achieve given the districts’ limited awareness and financial and technical capacity. At the national and provincial levels, MOIT monitors production facilities and NADFC monitors market and retail outlets. MOH monitors food and nutritional status at the household level; MOAG is responsible for the development of nutritionally rich food production, and MOHA for coordination of these interventions. Sustaining progress of the past decade will involve capacity building, technical assistance, and establishing mechanisms of coordination that will reach the district and subdistrict levels. Identifying and reinforcing mechanisms of intersector and public-private coordination is a crosscutting issue critical to the success of all fortification programs.

International experience indicates that government policy, standards, and regulations are critical to establishing an environment that enables the private food sector to invest in, produce, and distribute quality, fortified products. Government is key to creating producer awareness, building consumer demand, and shaping the marketplace with clear regulations and transparent regulatory enforcement procedures. Food control and monitoring systems for fortified flour, salt, and other food require technical and managerial capacity as well as coordination among a number of government agencies charged with regulating domestic and imported food. Further, there is a need to strengthen food control and monitoring systems for fortified food at the market and household levels.

ADB’s recent Special Evaluation Study of Selected ADB Interventions on Nutrition and Food Fortification¹⁸ highlighted the need to strengthen national food fortification as the most cost-effective intervention to reduce micronutrient deficiencies. The proposed JFPR Project is a follow-up on ADB’s Regional Technical Assistance (RETA) 5944,¹⁹ which carried out a technical and economic analysis on the suitable supply of micronutrient fortificants and appropriate food vehicles, and which developed among other outputs a Country Investment Plan (CIP) for Food Fortification for Indonesia. The next stage of a successful fortification strategy is to test those supply mechanisms in a community-based setting. The proposed Project will operationalize some of the recommendations of the CIP, which includes a pilot for palm oil fortification with

¹⁵ The encapsulation is a thin lipid (vegetable fat) coating that prevents the iron from dissolving into the weaning food, thus preventing any change in color, flavor, and taste of food.

¹⁶ The efficacy of “sprinkles” has been proven in Benin, People’s Republic of China, Ghana, India, Mongolia, and Nicaragua.

¹⁷ Efficacy trial was launched in selected poor urban communities in Jakarta to assess the acceptability of MMF. The product was accepted by mothers who observed improvements in the health status of their 6-59 months old children.

¹⁸ SST: REG 2004-19, circulated on 11 January 2005.

¹⁹ ADB. 2000. *Technical Assistance for the Regional Initiative to Eliminate Micronutrient Malnutrition in Asia through Public-Private Partnership*. Manila.

vitamin A. Complementarily, the Project will build upon the recommendations of ADTA 4094-INO,²⁰ which highlights the need for providing access to affordable micronutrient-enriched food for the urban poor. The Project will pilot several activities, aiming to reinforce and expand access to fortified food to poor and vulnerable urban populations. Sites for these pilot interventions include Makassar and north Jakarta.²¹ Makassar had been selected because there are only two oil processors, unlike in Java, where many refineries distribute oil to multiple producers and leakage of non-fortified oil would be a problem in conducting the oil effectiveness trial. The MMF pilot will be conducted in north Jakarta to build on the results of the recent HKI MMF efficacy trial in poor urban communities of north Jakarta. The Project is expected to commence in March 2005 and end in February 2008.

4. Innovation

The CIP on Food Fortification for Indonesia recommended cooking oil as a potential vitamin A vehicle for VAD eradication, since cooking oil is widely consumed by many poor households. Although vitamin A supplementation programs remain important, food fortification with vitamin A will play a key role in Indonesia's VAD eradication program. If palm oil fortification were implemented, it is estimated that about 70% of the population, particularly the poor, could be reached. Technology for the fortification of oil products is uncomplicated and widespread. A large-scale effectiveness trial for vitamin A fortification of cooking oil has not yet been implemented. In establishing the foundation for a new national policy on vitamin A fortification of cooking oil, this Project will be a pioneer in conducting and evaluating the effectiveness trial for vitamin A fortification of palm oil, which will cover more than 1 million consumers initially.

"In-home" MMF has been proven to reduce the prevalence of micronutrient deficiencies among children aged 6–59 months in small-scale trials. However, this new technology has not been commercially tested, and therefore questions regarding the commercial feasibility and affordability of the product for the poor remain unanswered. The Project aims to create innovative public-private partnerships for marketing and distribution of the product. Incentive mechanisms will be developed for community-based NGOs that aim to support distribution and marketing of the product, and help reduce costs and improve access to multi-micronutrient fortificants in low-income areas. As most MMF is still produced overseas, the proposed Project will assess the feasibility of locally producing MMF. In addition, selected food companies' new strategies for low-cost micronutrient-enriched food products will be explored.

Government commitment to nutrition for the poor in Indonesia has resulted in a number of nutrition and food programs benefiting vulnerable populations. As a consequence of decentralization, regulatory responsibility and public education, which are critical elements to sustain nutrition and food programs are now the responsibility of local governments. However, local decision makers are often unaware of the importance of such programs or do not have sufficient technical capacity to support such activities. The proposed Project aims to develop new communication channels between the sectors, and public-private partnership strategies to coordinate regulatory responsibilities and social mobilization activities at provincial, district, and community levels.

²⁰ ADB. 2003. *Technical Assistance to the Republic of Indonesia for Public Health and Nutrition*. Manila.

²¹ Based on the findings of the Government/HKI Nutrition and Health Surveillance Survey 2003, in these selected cities, intake of vitamin A in poor children under 5 years of age is 20% of the recommended daily allowance (RDA) for vitamin A in Makassar and 64% of RDA in Jakarta. For poor nonpregnant women of reproductive age, vitamin A intake is 26% of RDA in Makassar and 33% of RDA in Jakarta. In Makassar, 83% of children and 42% of nonpregnant mothers are anemic. In Jakarta, 76% of children 12–23 months of age and 35% of nonpregnant mothers are anemic.

5. Sustainability

Food fortification will become sustainable, if reinforced by adequate regulatory policies and accepted by consumers. Political sustainability is achieved from satisfaction of consumer demand of the fortified food product. Operational sustainability is related to good management and the supervision of delivery systems, particularly the health system and the food industry. Indonesia's Food Law of 1996 mandates food fortification programs to improve nutritional status. The Government's National Nutrition Strategy outlines specific goals for the reduction of vitamin and mineral deficiencies, and aims to meet the Millennium Development Goals, especially Goal 1: Eradicate Extreme Poverty and Hunger. Behavioral sustainability is related to consumers' nutrition habits such as buying fortified food. Economic sustainability is a function of national and household ability to pay. Given the fact that micronutrients are so inexpensive, fortified palm oil should be affordable by the intended beneficiaries.

Given the large intake of oil among nutritionally at-risk populations, especially poor women and children, ADB's Country Investment Plan for Food Fortification²² recommends the fortification of palm oil with vitamin A and projects to reduce VAD prevalence by 13%, which could avert more than 44,000 deaths and save more than \$555 million in health care costs over the next 10 years. The results of the financial analysis for vitamin A fortification show that the additional cost of the fortification program would be estimated at 0.05% of the total production costs or \$0.012 per person per year. The industry is willing to fortify cooking oil since it is consumed by all socioeconomic groups.

Initial results from the HKI survey in poor urban communities in Jakarta revealed that mothers are willing to pay for MMF if commercially available, because they have been made aware of an improvement of physical activities in children 6–59 months. The feasibility study for local production of a modified MMF product will also assess commercial sustainability of the product. However, it can be assumed that the production of MMF with a lower content of vitamins and minerals will be not more costly than the current MMF sachet, which is costed at US\$0.04.

All project pilot interventions will be supported by extensive social marketing campaigns conducted cooperatively with the Ministry of Health, Ministry of Industry and Trade, and palm oil producers.

Considerations on operational, financial, and technical sustainability have been included in the project design. Each project component will pilot interventions and identify strategies to achieve long-term commercial sustainability of fortification programs. Component A will demonstrate sustainable strategies for the marketing of "in-home" MMF to low-income mothers and assess the feasibility of local production of a modified MMF product and palm oil fortification with vitamin A. Component B will raise public awareness of the benefits of micronutrient-enriched food through social marketing thus increasing the demand for fortified food.

6. Participatory Approach

The Project will be implemented through public-private-civic partnerships. These aim to increase demand for micronutrient fortificants by poor households and institutions serving the poor. Matching increased demand with an adequate supply of fortified food will help reduce poverty and hidden hunger among the most vulnerable groups, such as women and children.

²² ADB 2004. *Food Fortification in Asia: Improving Health and Building Economies. An Investor's Primer, Summarizing Investment Plans for Five Asian Countries*. Manila.

Nutrition education activities to promote dietary quality and inform the public of the benefits of micronutrient-enriched food will be conducted at the community level and in schools, involving teachers, parent-teacher associations, food vendors, NGOs, and beneficiaries.

Primary Beneficiaries and Other Affected Groups and Relevant Description	Other Key Stakeholders and Brief Description
The Project will benefit vulnerable groups, especially women and children in low-income areas of north Jakarta and Makassar	<p>The Project will strengthen the cooperation among stakeholders, which include MOH, MOHA, MOAG, MOIT, Ministry of National Development Planning (BAPPENAS), Ministry of Education, NADFC, KFI, food industry, producers and distributors of palm oil, NGOs, research institutes, consumer groups, and civil society.</p> <p>The Project will cooperate with (i) NFRDC on the technology transfer for MMF; (ii) HKI in piloting "in-home" MMF in poor urban neighborhoods; (iii) the Micronutrient Initiative on all aspects of palm oil fortification with vitamin A; and (iv) UNICEF and other aid agencies such as the World Food Programme and Save the Children Fund to reinforce social mobilization for food fortification.</p>

7. Coordination

MOH, BAPPENAS, KFI, and NFRDC will be the key agencies to collaborate with ADB throughout project implementation. Universities and research institutes will be involved to conduct baseline surveys and a project impact assessment. The World Bank at present has no nutrition project but has expressed interest in integrating a nutrition component as part of its planned Provincial Health Sector Program IV, and possible cooperation is being explored. There is little presence of Japanese aid agencies in the nutrition sector.

8. Detailed Cost Table

Please refer to Appendix 1 for the detailed cost estimates.

C. Linkage to ADB Strategy and ADB-Financed Operations

1. Linkage to ADB Strategy

Document	Document Number	Date of Last Discussion	Objective(s)
ADB Policy for the Health Sector	R28-99	1999	Food fortification is one of the key priority health interventions.
ADB Nutrition and Development Series, especially last edition on food fortification		2004	Food fortification is key to reducing most effectively micronutrient deficiencies in the region.
Indonesia Country Strategy and Program (2003–2005)	SEC. M117-02	2002	In the health sector, an important focus is nutrition to reduce the maternal mortality ratio.

2. Linkage to Specific ADB-Financed Operation

Project Name	Second Decentralized Health Services Project (DHS-2)
Project Number	Loan 2074/75-INO
Date of Board Approval	19 December 2003
Loan Amount (\$ million)	100.0 million

3. Development Objective of the Associated ADB-Financed Operation:

The Second Decentralized Health Services Project (DHS-2) supports comprehensive reform and capacity-building efforts of MOH and the National Family Planning Board (BKKBN) in the context of decentralized health service delivery. DHS-2 focuses on the needs of the poor, especially women and children in eight provinces in Indonesia (including Makassar in Sulawesi province). The purpose of the Project is to increase the quality and effectiveness of health and family planning services by improving clinical and managerial skills of health personnel, upgrading health facilities and equipment, and involving civil society in planning and monitoring of service provision.

4. List the Main Components of the Associated ADB-Financed Operation:

No.	Component Name	Brief Description
1.	Human, Physical, and Organizational Capacity	1.1 Managerial and clinical training 1.2 Upgrading of health facilities, purchase of equipment, and essential medical supplies
2.	Sector and Organizational Reform	2.1 Health sector reform at provincial level 2.2 Improve referral to regional hospital and training facilities
3.	Technical Capacity Development of MOH and BKKBN	3.1 Review of major technical curative and preventive approaches 3.2 Development of generic information, education, and training materials

5. Rationale for Grant Funding versus ADB Lending

DHS-2 has no specific component addressing micronutrient deficiencies. Innovative approaches proposed under the JFPR need to be tested and adjusted under grant financing conditions before expansion to a project, such as the proposed Urban Nutrition Project, is feasible. Participatory approaches, linking the public and private sectors including the food industry, require new strategies and operational modalities, which need to be explored prior to scaling up in the context of a project like DHS-2 that covers 98 local governments.

It is unlikely that the Government will finance investments to pilot food fortification interventions in the private sector by taking a loan. In addition, the investment needs of the private sector to fortify palm oil with vitamin A or to produce multi-micronutrient fortificants at this pilot stage are rather marginal. JFPR will facilitate a process of linking public and private sector investments for piloting fortification interventions.

D. Implementation of the Proposed Grant

Implementing Agencies	National Development Planning Agency Ministry of Industry and Trade Ministry of Agriculture Ministry of National Education Ministry of Home Affairs
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All procurement under the JFPR grant will be in accordance with ADB's *Guidelines for Procurement*. Goods and related services below \$100,000 will be procured using ADB's direct purchase procedure. Goods and related services above \$100,000 will be procured using ADB's international shopping procedure. International consultants will be recruited by ADB, and NGOs will be recruited by the Executing Agency In accordance with ADB's *Guidelines on the Use of Consultants* and other arrangements satisfactory to ADB to provide the services for implementation, management, and progress monitoring of the JFPR grant.

The PMO is responsible for consolidating quarterly progress reports received from the implementing agencies and for submitting a comprehensive 6-monthly progress report to ADB. The PMO will prepare and submit an annual project review report, which will include the impact assessment and reporting monitoring and evaluation activities. A final report will be submitted by the PMO within 2 months of project completion and audited project accounts will be submitted within 6 months of project completion. In addition, reports on the biological impact evaluation of vitamin A fortification in palm oil and MMF will be prepared by the PMO in cooperation with KFI.

2. Risks Affecting Grant Implementation

Type of Risk	Brief Description	Measure to Mitigate the Risk
Affordability	Consumer demand, especially among the poor, is insufficient due to the higher price of fortified food	Provide initial incentives for the private sector to produce affordable micronutrient-enriched food and create demand for fortified food through public information campaigns
Sustainability	Consumer demand may not be sufficient for the private sector to invest in fortification	Increase awareness among consumers of micronutrient-enriched food through public information campaigns

3. Incremental ADB Costs

Component	Incremental Bank Cost
Amount requested	\$45,000
Justification	Recruitment of consultants to prepare background data for the JFPR midterm review, the Second National Roundtable Meeting on Food Fortification, and publications (in English and Bahasa Indonesia) of project pilot intervention results
Type of work to be rendered by ADB	Midterm review and roundtable meeting

4. Monitoring and Evaluation

Key Performance Indicator	Reporting Mechanism	Plan and Timetable for M&E
Palm oil fortification with vitamin A: Reduced prevalence of vitamin A serum in children < 5years	Baseline study and rapid assessments funded by the Project; demographic and health surveys	Baseline study, final evaluation, and biological impact evaluation including serum retinol in women of reproductive age
Increased percentage of households utilizing iodized salt, fortified wheat, and multi-micronutrients	Household and food consumption surveys	Rapid assessments
Salt iodization: reduced prevalence of IDD-related goiter; reduced prevalence of iodine in urine and improved school performance in school children	Baseline study and rapid assessments funded by the Project; demographic and health surveys	Baseline study, 6- monthly control, and final evaluation
Iron and folic acid fortification of wheat flour: reduced prevalence of iron deficiency as measured through blood samples and ferritin deficiency in children < 5 years and folate serum in pregnant women and women of reproductive age	Baseline study and rapid assessments funded by the Project; demographic and health surveys	Baseline study and final evaluation

5. Estimated Disbursement Schedule

Fiscal Year (FY)	Amount (\$)
FY2005	500,000
FY2006	800,000
FY2007	450,000
Total Disbursements	1,750,000



Appendixes

1. Detailed Cost Estimates
2. Fund Flow Arrangements
3. Implementation Arrangements

SUMMARY COST TABLE

(\$)

Inputs/Expenditure Category	Component A New Approaches to Fortify Food for the Urban Poor	Component B Strategies to Enhance Access to Fortified Food for the Poor	Component C Grant Management, Monitoring, and Audit	Total (Input)	Percent
1. Equipment and Supplies	179,000	70,000	0	249,000	13
2. Training, Workshops, Seminars, Public Campaigns	205,000	370,000	80,000	655,000	33
3. Consulting Services	70,000	5,000	72,000	147,000	7
4. Monitoring, Evaluation, and Audit	0	0	94,400	94,400	5
5. Grant Management	0	0	193,100	193,100	10
6. Other Inputs	109,000	95,000	49,000	253,000	13
7. Contingencies (0-10% of total estimated grant fund)				158,500	8
Subtotal JFPR Grant Financed	563,000	540,000	488,500	1,750,000	
Government contribution	0	0	224,600	224,600	11
Other Donor(s) Contributions					
Community's Contributions					
Total Estimated Costs	563,000	540,000	713,100	1,974,600	100
Incremental Costs			45,000	45,000	

JFPR=Japan Fund for Poverty Reduction

**DETAILED COST ESTIMATES
(\$)**

Code	Supplies and Services Rendered	COSTS				CONTRIBUTIONS				
		Unit	Quantity Units	Cost Per Unit	TOTAL \$	JFPR		Govern- ment	Other Donors	Commu- nities
						Amount	Method of Procure- ment			
Component A. New Approaches to Fortify Food for the Urban Poor				Subtotal:	563,000	563,000		0	0	0
1.1	Equipment and Supplies			Subtotal:	179,000	179,000				
1.1.1	Multi-Micronutrient Fortificants (MMF) [A1] ¹	Per activity	2	31,500	63,000	63,000	IS			
1.1.2	Production of Social Marketing Materials for MMF [A1]	Per year	2	30,000	60,000	60,000	DP			
1.1.3	Vitamin A Premix (18 months) [A2]	Per distributor	2	23,000	46,000	46,000	IS			
1.1.4	Plant Modification (oil distributors) [A2]	Per distributor	2	5,000	10,000	10,000	DP			
1.2	Training, Workshops, Seminars, and Public Campaigns			Subtotal:	205,000	205,000				
1.2.1	Technology Transfer Feasibility Training for MMF [A1]	Per workshop	5	6,000	30,000	30,000				
1.2.2	Social Mobilization Training for NGOs and Consumer Groups [A1+A2]	Per workshop	4	30,000	120,000	120,000				
1.2.3	Capacity Building for Oil Distributors [A2]	Per workshop	2	20,000	40,000	40,000				
1.2.4	Marketing Plan for MMF City-wide Expansion [A1]	Marketing plan including flyers	1	15,000	15,000	15,000				
1.3	Consulting Services			Subtotal:	70,000	70,000				
1.3.1	Oil Technology Specialist (international) [A2]	Per person month	1	20,000	20,000	20,000				
1.3.2	Social Marketing Specialist (international) [A1+A2]	Per person month	2	20,000	40,000	40,000				
1.3.3	Food Control Assurance Adviser (domestic) [A2]	Per person month	2	5,000	10,000	10,000				

Continued on next page.

Code	Supplies and Services Rendered	COSTS				CONTRIBUTIONS				
		Unit	Quantity Units	Cost Per Unit	TOTAL \$	JFPR		Govern- ment	Other Donors	Commu- nities
						Amount	Method of Procure- ment			
1.4	Other Project Inputs			Subtotal:	109,000	109,000				
1.4.1	Market Research and Consumer Surveys [A1+A2]	Per activity	2	15,000	30,000	30,000				
1.4.2	Operational Studies (cluster survey, biological impact evaluation) [A1+A2]	Lump sum	1	70,000	70,000	70,000				
1.4.3	Provincial District Q/A (oil distributors) [A2]	Per activity	2	4,500	9,000	9,000				
Component B. Strategic Approaches to Enhance Access to Quality Fortified Food for the Urban Poor					Subtotal:	540,000	540,000	0	0	0
2.1	Equipment and Supplies			Subtotal:	70,000	70,000				
2.1.1	Quality Assurance Testing Equipment for Food Laboratories	Per food lab	4	10,000	40,000	40,000	DP			
2.1.2	Communication Materials	Lump sum for development and printing of information and training materials on food fortification	1	30,000	30,000	30,000	DP			
2.2	Training, Workshops, Seminars, and Public Campaigns			Subtotal:	370,000	370,000				
2.2.1	Provincial and National Training on Food Fortification Policy and Standard Setting for MOH and MOIT Officials	Per workshop	4	15,000	60,000	60,000				
2.2.2	Training for Laboratory Technicians (2 cities)	Per workshop	2	15,000	30,000	30,000				
2.2.3	Provincial Training on Legal Enforcement	Per workshop	2	20,000	40,000	40,000				
2.2.4	NGO and Consumer Groups Training	Per workshop	4	20,000	80,000	80,000				
2.2.5	Provincial and National Media Campaigns and Social Mobilization (TV and radio spots)	Per broadcasting	4	40,000	160,000	160,000				
2.3	Consulting Services			Subtotal:	5,000	5,000				
2.3.1	Legislative Consultant (domestic)	Per person month	1	5,000	5,000	5,000				

Continued on next page.

Code	Supplies and Services Rendered	COSTS				CONTRIBUTIONS				
		Unit	Quantity Units	Cost Per Unit	TOTAL \$	JFPR		Govern- ment	Other Donors	Commu- nities
						Amount	Method of Procure- ment			
2.4	Other Project Inputs			Subtotal:	95,000	95,000				
2.4.1	Rapid Assessment Survey on Quality Assurance of Fortified Food (salt, wheat)	Lump sum		25,000	25,000	25,000				
2.4.2	Operational Studies	Lump sum		30,000	30,000	30,000				
2.4.3	Pilot Activities for Poverty Targeting	Per activity	2	20,000	40,000	40,000				
Component C - Grant Management, Monitoring, Evaluation, and Audit				Subtotal:	713,100	488,500		224,600	0	
3.1	Workshops and Seminars			Subtotal:	135,000	80,000				
3.1.1	Inception Workshop	Per workshop	1	25,000	45,000	25,000		20,000		
3.1.2	Midterm Review Workshop	Per workshop	1	25,000	40,000	25,000		15,000		
3.1.3	Second National Roundtable Meeting on Food Fortification	Per workshop	1	30,000	50,000	30,000		20,000		
3.2	Consulting Services			Subtotal:	72,000	72,000				
3.2.1	Health Economist (international)	Monthly	1	18,000	18,000	18,000				
3.2.2	Program Development Specialist (international)	Monthly	2	18,000	36,000	36,000				
3.2.3	Nutrition Adviser (international)	Monthly	1	18,000	18,000	18,000				
3.3	Monitoring, Evaluation, and Audit			Subtotal:	134,400	94,400				
3.3.1	Audit Services (bi-annual external audits)	Audits	6	7,000	82,000	42,000		40,000		
3.3.2	Quarterly Coordination Meetings with Local Governments	Meetings	12	200	2,400	2,400				
3.3.3	Midterm and Final Evaluations	Evaluations	2	5,000	10,000	10,000				
3.3.4	Baseline Survey and Impact Assessment	Per survey for each pilot activity	2	20,000	40,000	40,000				

Continued on next page.

Code	Supplies and Services Rendered	COSTS				CONTRIBUTIONS				
		Unit	Quantity Units	Cost Per Unit	TOTAL \$	JFPR		Govern- ment	Other Donors	Commu- nities
						Amount	Method of Procure- ment			
3.4	Management and Coordination of this Component			Subtotal:	322,700	193,100				
3.4.1	Component 1 - Staff (project coordinator, financial analyst, administrative officer)	Monthly	36	2,000	144,000	72,000		72,000		
3.4.2	Travel (domestic)	Tickets	1	20,000	20,000	20,000				
	Operational Costs - PMO (office rental)	Monthly	36	1,000	36,000	36,000				
	Operational Costs - PIUs (office rental, coordinators in two cities)	Monthly	72	800	115,200	57,600		57,600		
3.4.3	Government's Administration (treasury, steering committee members)	Meetings	15	500	7,500	7,500				
3.5	Other Project Inputs			Subtotal:	49,000	49,000				
3.5.1	Upgrading Nutrition Directorate Web site	Per month	36	250	9,000	9,000				
3.5.2	Preparation of Final Report	Lumpsum	1	10,000	10,000	10,000				
3.5.3	Bilingual Publication on Food Fortification Pilots	Lumpsum for preparing, editing, translation, and printing	1	30,000	30,000	30,000				
	Components A to C = Subtotal			Subtotal:	1,816,100	1,591,500		224,600		
	Contingency (Maximum 10% of total JFPR Contribution)				158,500	158,500				
	TOTAL Grant Costs			Total:	1,974,600	1,750,000		0	0	
4	Incremental Cost Details:									
4.1	Food Fortification Adviser (background research publication on roundtable meeting)	Per person month	1.5	20,000	30,000	30,000				
4.2	Roundtable Coordinator	Per person month	1	15,000	15,000	15,000				
	TOTAL Incremental Costs			35,000	45,000	45,000				

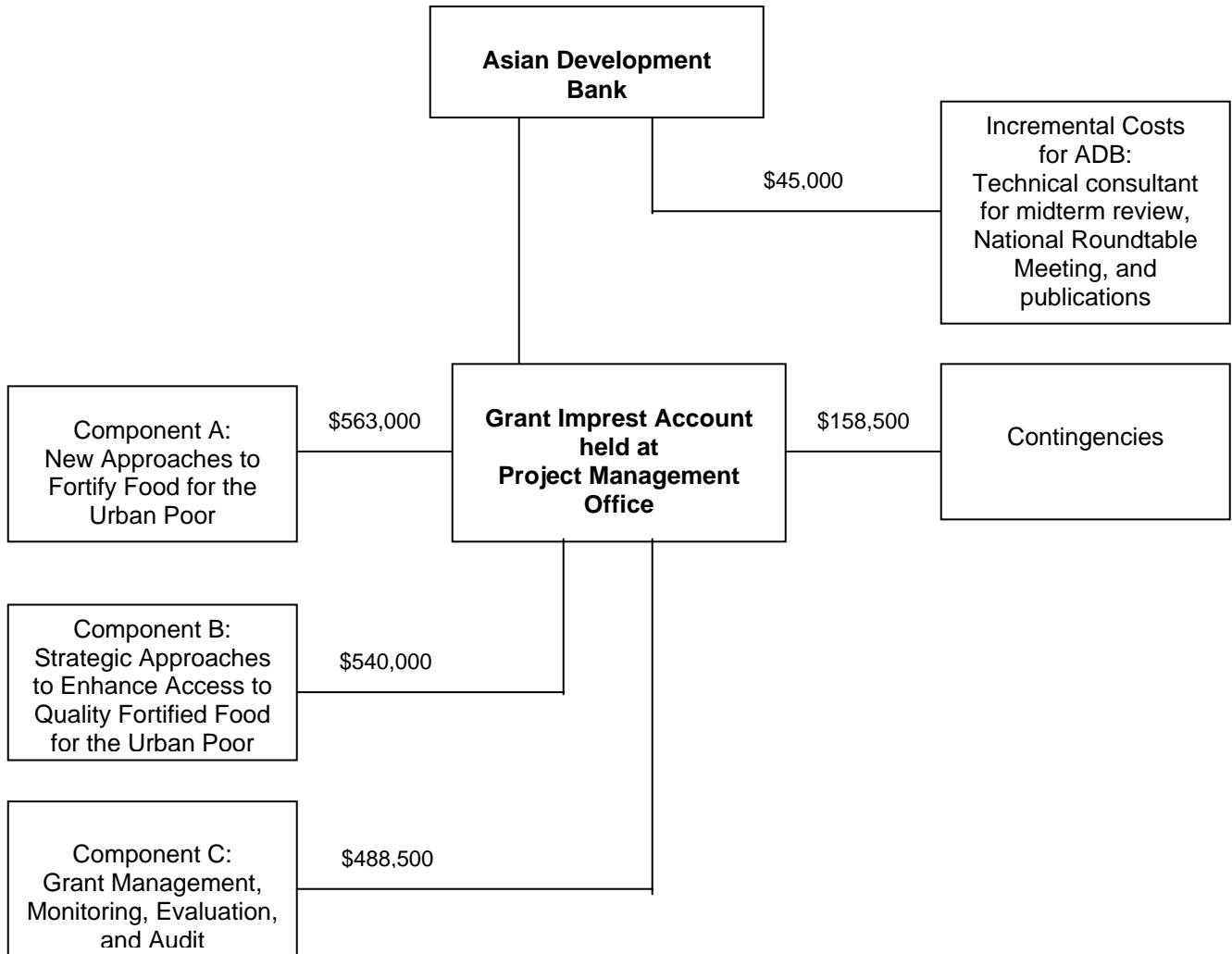
JFPR=Japan Fund for Poverty Reduction; MMF=multi-micronutrient fortificants; MOH=Ministry of Health; MOIT=Ministry of Industry and Trade; PIU=project implementation unit; PMO=project management office.

¹ See A1 and A2 Component A on pages 3-4.

FUND FLOW ARRANGEMENTS

1. Funds will be disbursed under the terms of a contractual arrangement with a government-approved party acceptable to the Asian Development Bank (ADB), through the project management office (PMO), which will maintain a separate Japan Fund for Poverty Reduction (JFPR) imprest account at a bank acceptable to ADB. The PMO will channel funds to the two project implementation units (PIUs), which will each maintain a separate subaccount. The JFPR imprest account will be established, managed, replenished, and liquidated in accordance with ADB's *Loan and Disbursement Handbook* and detailed arrangements agreed on between the Government and ADB. The initial amount to be deposited into the JFPR imprest account will be based on estimated expenditures for the first 6 months or 10% of the grant amount, whichever is lower, but not exceeding the equivalent of \$50,000. The statement of expenditures (SOE) procedure will be used to liquidate/replenish the imprest account. The use of the JFPR account, imprest account, and SOE procedure will be audited annually by auditors acceptable to ADB. A separate audit opinion on the use of the JFPR account, imprest account, and SOE procedure should be included in the annual audit report.
2. Replenishment will be subject to the liquidation of expenditures. The accounts should be replenished regularly to ensure that sufficient funds are always available. All withdrawal applications will be monitored by PMO and approved by the Executing Agency. The designated commercial bank will provide monthly statements of the imprest account to the Executing Agency and PMO, which will claim liquidation on the basis of the statement and other supporting documents.
3. As confirmed by the Government of Japan, the interest earned on JFPR imprest account should be returned to the JFPR fund. That is, at the end of the Project, such interest should be remitted to the JFPR fund account maintained at ADB.

Figure A2: Fund Flow Arrangements for JFPR Project



IMPLEMENTATION ARRANGEMENTS

1. The Executing Agency (EA) is the Directorate General of Community Health, Ministry of Health (MOH), as it is responsible for the development and implementation of the national policy on food fortification. The EA will: (i) oversee project activities and facilitate coordination with local governments; (ii) ensure the linkage of Japan Fund for Poverty Reduction (JFPR) activities with the Second Decentralized Health Services (DHS-2) Project, the proposed Urban Nutrition Project, and other health and nutrition projects, which especially support poor women and children financed by other aid agencies; (iii) coordinate with Ministry of National Development Planning (BAPPENAS), Ministry of Home Affairs (MOHA), Ministry of Agriculture (MOAG), Ministry of Industry and Trade (MOIT), Ministry of Education (MONE), National Agency for Drug and Food Control (NADFC), Koalisi Fortifikasi Indonesia (KFI), nongovernment organizations (NGOs), and the food industry; and (iv) ensure compliance in procurement in accordance with Asian Development Bank (ADB) guidelines.
2. A central steering committee will be constituted by the end of the third month of project implementation, comprising main stakeholders such as MOH, BAPPENAS, Ministry of Finance, MOIT, MOAG, MONE, KFI and research institutes including the National Institute for Health Research and Development. The steering committee will meet at least twice a year to discuss progress of the Project. The steering committee will monitor the work plan and budget allocations.
3. The EA will be supported by an independent project management office (PMO), which will be based in the Directorate General of Public Health in MOH. A project coordinator, a financial analyst, and an administrative assistant to be recruited by ADB and financed under the Project will staff the PMO. The PMO will act as the central project implementation unit (PIU) and will coordinate project planning, reporting, monitoring of implementation progress, international procurement, and organizing of workshops and the National Roundtable Meeting. The PMO will not sign withdrawal applications, which will be the responsibility of the EA.
4. PIUs will be established in the district health offices in north Jakarta and Makassar. In Makassar and north Jakarta, the local technical team, which was established for ADTA 4094-INO,²³ will work with the Local Development Planning Agency (BAPPEDA), NADFC, United Nations Children's Fund, NGOs, and consumer groups. The PMO and PIUs will prepare a monitoring and evaluation framework with selected key performance indicators and produce quarterly monitoring reports. Project monitoring will focus on the effectiveness, appropriateness, and replicability of pilot interventions. A baseline and final project survey will assess the prevalence of nutrition deficiencies. Performance monitoring will fully involve the project beneficiaries. NGOs and the private sector will provide inputs for the pilot interventions to the PIUs. Based on the monitoring reports, an annual project review will be conducted to adjust project inputs and the use of project resources.
5. KFI will act as the technical advisor to the Project in providing leadership for pilot interventions, and identifying strategies for public-private-civic collaboration. The Nutrition and Food Research Development Center (NFRDC) in collaboration with HKI and the Food and Drink Producers Association, will provide technical support to assess the feasibility of product development of in-home multivitamin fortificants. In collaboration with NFRDC, the University of Hassanuddin in Makassar will be responsible for independent technical monitoring and evaluation of the pilot intervention for palm oil fortification.

²³ ADB. 2003. *Technical Assistance to the Republic of Indonesia for Public Health and Nutrition*. Manila.

6. The Project will commence in March 2005 and be completed by February 2008. During the first 6 to 9 months, the Project will focus on reaching formal agreements on project management and implementation among central and local governments, NGOs, and the private sector, including capacity-building requirements, procurement of equipment, and other segments of the inception process. The following 18 to 24 months will include the provision and monitoring of fortified food products as listed in the components. During the final 6 months the Project will mainly focus on biological and operational evaluations, production of communications tools, and advocacy activities for bringing the Project up to scale.

7. All procurement under the Project will be conducted in accordance with ADB's *Guidelines for Procurement*. A project administration manual will be prepared before project implementation commences, which will describe implementation details and procurement arrangements.

8. The PMO may propose to ADB the engagement of consultants. When ADB approves the consultants' terms of reference, the EA will select consultants in accordance with ADB's *Guidelines on the Use of Consultants* or other arrangements acceptable to ADB. ADB will engage a group of international and domestic consultants who will provide technical assistance in different technical areas. An estimated 7 person-months of international and 3 person-months of domestic consulting services are required. The proposed consultants are the following:

A. International Consultants

9. The proposed international consultants will undertake the following:

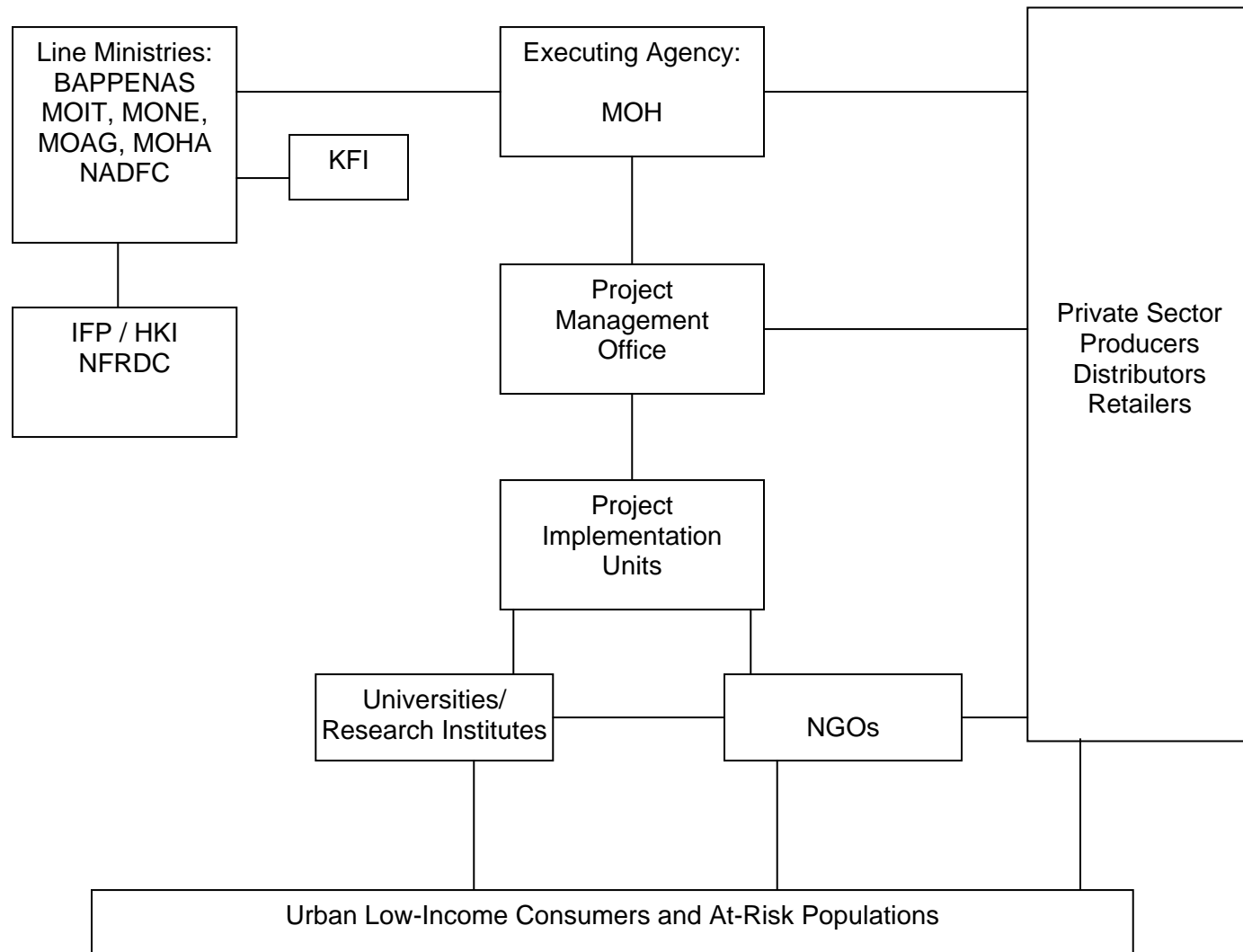
- (i) An oil technology specialist (1 person-month) will ensure that industrial practices are effective; assure that the addition process for vitamin A will achieve optimal homogeneity in oil; ensure that the design of internal quality control is accurate; identify food laboratories and develop protocols for the testing that they will perform; and undertake advocacy to oil producers and distributors.
- (ii) A social marketing and communications specialist (2 person-months) will prepare communications strategies in consultation with NGOs; prepare and test various approaches; and provide an overview of social marketing and public education campaigns to build community awareness of the benefits of micronutrient-enriched food and stimulate demand for it from the poor.
- (iii) A nutrition advisor (1 person-month) will advise in matters related to nutrition policies, micronutrient deficiency, and nutrition surveillance.
- (iv) A program development specialist (2 person-months) will assist in the preparation of the project administration manual; assist in the selection of project staff; and support the establishment of PMO and PIUs, assisting in the preparation of the work plan with time-bound outputs.
- (v) An economist (1 person-month) will conduct an assessment about the ability and willingness of poor urban communities to pay for fortified food in the Project target area and review supply side economics in light of emerging data on demand.

B. Domestic Consultants

10. The proposed domestic consultants will undertake the following:
 - (i) A food control assurance adviser (2 person-months) will assist in reviewing and elaborating new strategies for quality assurance.
 - (ii) A legal advisor (1 person-month) will advise in matters related to food fortification laws and regulations.

11. NGOs and community-based organizations will be selected by the EA in accordance with ADB's *Guidelines on the Use of Consultants* and other arrangement satisfactory to ADB for the engagement of NGOs and other community-based organizations, which will be engaged in project activities based on the work plan agreed on by the EA and ADB.

Figure A3: JFPR Implementation Arrangements



HKI = Helen Keller International; IFP = Bogor Agricultural University; KFI = Koalisi Fortifikasi Indonesia; MOAG = Ministry of Agriculture; MOH = Ministry of Health; MOHA = Ministry of Home Affairs; MOIT = Ministry of Industry and Trade; MONE = Ministry of Education; NADFC=National Agency for Drug and Food Control; NFRDC = Nutrition and Food Research Development Center; NGO = nongovernment organization