



Asian Development Bank  
Japan Fund for Poverty Reduction



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JFPR 9052 Regional Project  
Sustainable Food Fortification in Central Asia and Mongolia

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## **QUARTERLY PROGRESS REPORT**

**July - September 2006**

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## ABBREVIATIONS

ADB	–	Asian Development Bank
CIP	–	Country Investment Plan
CPO	–	Country Project Office
EA	–	Executing Agency
IDA	–	Iron Deficiency Anaemia
IDD	–	Iodine Deficiency Disorders
IMR	–	Infant Mortality Rate
JFPR	–	Japan Fund For Poverty Reduction
KAN	–	Kazakh Academy of Nutrition
MDG	–	Millennium Development Goal
MMR	–	Maternal Mortality Ratio
MOH	–	Ministry of Health
NGO	–	Nongovernmental Organization
PHC	–	Primary Health Care
RCAO	–	Regional Coordination And Administration Office
SC	–	Steering Committee
SES	–	Sanitary Epidemiological Services
UNICEF	–	United Nations Children’s Fund
USI	–	Universal Salt Iodization

## NOTE

In this report, “\$” refers to US dollars.



## A. Background

1. The aims of the governments of Kazakhstan, Kyrgyz Republic, Mongolia, Tajikistan, and Uzbekistan are to eliminate iodine deficiency disorders (IDD) and reduce iron deficiency anemia (IDA) and folic acid deficiency. These deficiencies are more common in Central Asia than in many other developing countries. Iodine deficiency has a negative impact on fetal brain development, while iron deficiency constrains cognitive development of the younger child, and hampers mental and work performance of the older child and adult. The negative effects of iodine and iron deficiency at a young age are irreversible and affect school achievement and later productivity. Iron deficiency is also a major factor that contributes for maternal mortality. Folate deficiency, also prevalent in these countries, causes neurotube defects in infants. These deficiencies have a major impact on the educability and productivity of large segments of the countries' populations, straining education and health systems, lowering productivity, and raising levels of sustained poverty.

2. The Japan Fund for Poverty Reduction (JFPR) 9005 Regional Project<sup>1</sup> (2001-2004) has focused support on six Central Asian countries in economic transition: Azerbaijan, Kazakhstan, Kyrgyz Republic, Mongolia, Tajikistan and Uzbekistan. JFPR 9005 aimed to mitigate IDD and IDA through salt and wheat flour fortification. Most of the activities were focused on a few pilot provinces in each country. Due to the direct and catalytic effects of JFPR 9005, these countries have moved toward universal salt iodization (USI) and begun fortifying wheat flour. After a decade of limited success in attempts to iodize salt, and reduce iron and folate deficiencies, JFPR 9005 created an environment of national commitment and focused its activities on these key nutritional issues. As a result, substantial increases in iodized salt production and the passage of supporting legislation were achieved in all participating countries. While only the Kyrgyz Republic and Azerbaijan had USI legislation at the beginning of JFPR 9005, Tajikistan enacted USI legislation in 2002, followed by Kazakhstan and Mongolia in 2003. Uzbekistan is drafting similar legislation. Today, the iodization level has been adjusted to the world standard, and most of the salt industries have made significant progress in making arrangements for self-procurement of potassium iodate. Each country was able to obtain the necessary regulations that allowed fortification equipment and fortificants to be brought in and for fortified flour to be produced and sold. While these considerable achievements have convinced the governments and private owners of salt industries and flour mills that USI and substantial wheat flour fortification are possible, the governments and private sector also realize that these achievements may be lost if it is not made firm and sustainable. The JFPR 9005 experience has helped the governments, and private sector identify steps required for sustainable food fortification, and clarify further developments/actions.

3. In July 2004, the Asian Development Bank (ADB) approved US\$2 million grant assistance under JFPR regional project<sup>2</sup> for five Asian Countries in Transition (ACT)<sup>3</sup>. The goal of the Project is to reinforce and sustain the reduction of IDD, IDA and folic acid deficiency among poor children and women in Central Asia through parallel attention to supply (production and distribution); demand (public awareness and demand creation); and regulation (quality control, implementation of regulations and legislation, and trade facilitation). The specific objectives are to (i) obtain and sustain use of iodized salt by 90% of households; (ii) sustain fortification of at least one third of wheat flour consumed domestically; (iii) enable the private and public sectors to produce quality fortified food; (iv) develop regulatory institutions or incentive schemes to facilitate fortification, and ensure the trade of quality fortified food among Central Asian countries; and (v) build awareness of consumers about IDD and IDA prevention, and the benefits of micronutrient-enriched food.

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<sup>1</sup> ADB, 2001. *Improving Nutrition for Poor mothers and Children in Asian Countries in Transition*.

<sup>2</sup> JFPR 9052 – *Sustainable Food Fortification in Central Asia and Mongolia*, approved on 22 July 2004.

<sup>3</sup> Republic of Kazakhstan, Kyrgyz Republic, Mongolia, Republic of Tajikistan, and the Republic of Uzbekistan.

4. The JFPR Project has four major components:

- (i) Strengthening of salt industry and flour mill capacities;
- (ii) Strengthening of Government capacities;
- (iii) Social mobilization and poverty targeting;
- (iv) Project management, monitoring, and evaluation.

5. In contrast to the pilot nature of JFPR 9005, the Project will primarily build the capacity of the public and private sectors in sustaining food fortification. The Project will (i) focus on sustaining salt and flour fortification, which JFPR 9005 has proven technically feasible; (ii) work with the private sector and government agencies nationwide rather than in a few pilot districts; (iii) help the private salt enterprises and flour mills access information, and tender and procure fortificants and equipment on their own; (iv) deal with the difficult issue of premix procurement by establishing links between the global producers of premix and by encouraging premix production within the region; and (v) strengthen and upgrade the quality assurance system of the public and private sectors to ensure that consumers receive fortified food that meets quality standards.

6. An enhanced and expanded social-marketing campaign, joining millers with civil-society groups and the media, will greatly increase demand for the new fortified wheat flour and its products, especially among poor families who are at the greatest risk from IDA. The Project will also help consumers monitor the quality of iodized salt. Universal salt iodization will ensure that the poor have access to quality-iodized salt. Fortified flour has been sold at the same prices as unfortified flour. To increase the access of poor and rural households to fortified flour, the Project will review flour distribution methods, and support the testing of various cost-effective fortification means, including flour fortification in smaller mills and the use of fortification packets at home.

## **B. Technical/Project Components**

### **B.1 Regional Meetings, Conferences and Workshops**

7. The project has organized the regional information meeting on communication strategy and project management<sup>4</sup> (Bishkek, Kyrgyz Republic, 22-24 August 2005); second conference of salt producers on sustainable quality iodization in Central Asia and Mongolia (Tashkent, Uzbekistan, 22-24 November 2005); the regional conference on quality wheat flour fortification in Central Asia and Mongolia (Almaty, Kazakhstan, 7-9 February 2006).

8. The regional Mid-Term Review Workshop (footnote 4) was held from 11 to 14 September 2006 in Cholpon-Ata, Kyrgyz Republic. The purpose of the MTR Workshop was to jointly examine the progress and analyze the obstacles toward achieving the JFPR 9052 project, with the view to identify and discuss key strategic actions to be undertaken in each country and by RCAO and KAN during the remaining project period. As preparation for the Workshop, the CPO of each country was requested to prepare a draft of the Country Investment Plan, outlining a summary of achievements and lessons learned during the previous JFPR9052 period, and outlining the proposed actions and their expected outcomes to achieve the country-specific JFPR objectives. In addition, each CPO prepared summaries of the national progress in salt iodization, wheat flour fortification and public policy development, as well as the utilization of consultant services and conducting conferences, seminars and trainings, against a background summary of the baseline micronutrient deficiency situation in the country.

9. The MTR Workshop brought together officials and staff from public institutions and private food industries of each participating country, joined by staff members and experts from the RCAO, international agencies and a collaborating partner (ADB, UNICEF and

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<sup>4</sup> The meeting reports can be obtained from ADB/RCAO on request.

GAIN) and scientific advisors (KAN, Emory University). The Workshop Agenda and the List of Participants are attached as Annexes IV-V. The core element in the agenda were the countries presentations, each consisting of a focused explanation on the progress made in the project implementation, followed by an analysis of the constraints encountered and the barriers foreseen for the remaining project period, and ending with a short outline of the major elements and/or revisions of the CIP agreed upon at the start of the project. Each country's presentation was followed by a discussion addressing specific questions and providing clarification of details upon request from the audience.

10. The countries' presentations were intermingled with several plenary presentations and round table discussions about the issues of major interest, such as product quality assurance/control, monitoring of progress, and communication strategies to support the overall project objectives. Also, the facilitators and resource persons allocated by the country team worked in the interim and during the evening hours with the countries' teams on the elaboration of CIP revisions. During the final day, bilateral discussion sessions were held to present, discuss and review the CIP revised proposals, and to assemble the consolidated opinions and recommendations of the resource persons.

## **B.2. Strengthening the Capacities of Salt Industries and Flour Mills**

11. From 2001, and within the framework of the JFPR 9005 Project (footnote 1), each multisectoral Country Teams from the participating countries have been designing their own Country Investment Plans (CIPs). The CIPs were founded on a regional consensus regarding the need for regulatory and trade structures to support investment in the fortification of food staples, and proposed national food fortification programs to reduce the high prevalence of IDA and IDD. The activities of the country were developed through a collaborative process amongst cross-sector information sharing, priority and recommended investment identification, capacity building, advocacy, and public health analysis. The specific fortification projects outlined in the CIPs were identified on the basis of a feasibility analysis assessing the industrial capacity and commercial potential in each country. The JFPR made the initial investment on the establishment of production (feeders and fortificants purchase, food producers training on fortification technology and quality assurance and control issues) and the building of critical public systems, including regulation, monitoring, and public education and advocacy on the benefits of fortified food products.

### **a) Fortified Wheat Flour Production**

12. The Project strategy in wheat flour fortification resulted in the following outputs:

In 2001-2003

- design of common premix formulation for all participating countries;
- selection of beneficiary flour mills and the establishment of regular wheat flour fortification and distribution;
- design and adoption of standards on fortified wheat flour;
- establishment of common quality assurance and control systems to be applied at the production sites and markets.

In 2004-2006

- design of legislation on wheat flour fortification in all participating countries;
- design and adoption of fiscal incentives for flour millers;
- enlargement of flour mills' types to introduce regular wheat flour fortification;
- establishment of self-sustainable procedures on premix procurement;
- introduction of adequate spectrophotometer methods in addition to the spot-tests.

13. The KAN, with the help of nutritionists from participating countries and JFPR consultants formulated the unique premix (KAP Komplex-1). Electrolytic elemental iron was specified as the iron source. The JFPR Project provided to all countries on a co-shared basis an adequate amount of KAP Premix to be processed within 2002-2004 except Tajikistan. However, the production of fortified wheat flour was lower than expected, and stocks of the KAP Premix allowed countries to continue fortification programs until 2005-2006. In 2005 KAN started research on additional premix formulations. Uzbekistan and Mongolia were the only countries to use the granted premix by the beginning of 2006. The purchase of an additional amount in Uzbekistan was made within the World Bank/GAIN Project. In Mongolia the Country Team procured 4.1 metric tons of premix from co-shared funds, and a leading flour milling company procured an additional 4 metric tons. The League of Grain Processors and Bakers of Kazakhstan (LGBK) and Association of Fortified Food Producers of Tajikistan negotiated the contracts on premix supplies with the international vendors.

14. The Country Teams started planning for the largest mills. Thinking that the larger mills would be more technically advanced and capable of producing a quality product, and in order to optimize the amount of flour that would be fortified with the limited resources for equipment, only mills with milling capacities greater than 200 MT/day were preferred. Unfortunately for the program, most of the old "soviet" mills in many CIS countries (not just Central Asia) were barely operational and in very poor condition. Problems included wheat shortages, lack of electricity, equipment in poor maintenance state, and a lack of spare parts. Since these larger mills required a large amount of wheat to start up, smaller and more efficient mills with newer equipment were gradually replacing them. Many of these smaller mills were well suited for fortification, but because of their smaller size many were omitted from the first phase of the project. In 2004-2005, the ADB agreed to support the procurement and installation of micro feeders at 17 mills in the Kyrgyz Republic, 20 mills in Mongolia and 15 mills in Tajikistan. The selection involved mills with 20 MT/day capacities, as wheat flour fortification seems to be uncertain at lower-scale flour mills.

**Table1. Activity of the Participating Flour Mills in 2005-2006**

Country (Flour Mills)	2005		January-June 2006		July-September 2006	
	Active industries	Fortified Flour Production(MT)	Active industries	Fortified Flour Production(MT)	Active industries	Fortified Flour Production(MT)
Kazakhstan (16)	13	86,570	11	128,967	9	41,634
Kyrgyz Republic (21)	11	13,513	13	7,690	7	4,380
<i>large-scale</i> (5)	4	9,621	4	5,600	1	1,500
<i>medium/small</i> (16)	7	3,892	9	2,090	6	2,780
Mongolia (28)	6	33,118	10	19,033	6	10,295
<i>large-scale</i> (3)	2	30,218	2	15,849	1	8,144
<i>medium/small</i> (25)	4	2,900	8	3,184	5	2,151
Tajikistan (18)	15	72,773	17	45,912	17	24,572
<i>large-scale</i> (6)	5	54,326	6	38,515	6	21,973
<i>medium/small</i> (12)	10	18,447	11	7,414	11	2,599
Uzbekistan (48)	14	36,859		n/a	n/a	n/a
<b>Total (131):</b>	<b>59</b>	<b>246,665</b>	<b>51</b>	<b>201,592</b>	<b>39</b>	<b>80,881</b>

MT = metric ton

Source: League of Grain Processors and Bakers of Kazakhstan; Association of Fortified Wheat Flour and Bakery Producers of Kyrgyz Republic; Association of Food Producers of Mongolia; Association of Salt Producers and Flour Millers of Tajikistan; Uzbekistan National Flour Fortification Program

**Table 2. Consolidated Data on the Production of Fortified Wheat Flour in 2004-2006**

Country	2004	2005	January-September 2006		
			Planned annual production (MT)*	Consolidated production (MT)	Consolidated production (%)
Kazakhstan	120,877	86,570	274,000	170,591	62.3
Kyrgyz Republic	30,609	13,513	69,000	12,070	17.5
Mongolia	11,904	33,118	79,200	29,328	37.0
Tajikistan	58,063	72,773	145,000	70,484	48.6
Uzbekistan	336,260	36,859	250,000	n/a	-
<b>Total</b>	<b>557,713</b>	<b>242,833</b>	<b>817,200</b>	<b>282,473</b>	<b>34.6</b>

MT = metric ton

\* The planned amount was discussed between CPOs and the food industry on the basis of agreed ratio between the desired amount (33% of consumption amount) and the production capacity of the given flour mill (in metric tons).

Source: Country Project Progress Reports, 2004-2006

**Table 3. Domestic Production, Import and Export of Wheat Grain/Wheat Flour in 2004-2006 (metric tons)**

Country	2004		2005		January-September 2006	
	Wheat Grain	Wheat Flour	Wheat Grain	Wheat Flour	Wheat Grain	Wheat Flour
<b>Kazakhstan</b>						
Domestic production (MT)	9,950,000	2,123,000	11,198,000	2,050,000	11,500,000	1,933,000
Export (MT)	2,588,000	532,000	1,899,000	932,000	1,403,000	760,000
Import (MT)						
<b>Kyrgyz Republic</b>						
Domestic production (MT)	998,200		950,100			
Export (MT)						
Import (MT)	80,000	50,000	140,400	47,500		
<b>Mongolia</b>						
Domestic production (MT)	136,000	11,904	76,000			
Export (MT)						
Import (MT)	114,803		75,000			
<b>Tajikistan</b>						
Domestic production (MT)	734,000	375,900	935,000	389,210		
Export (MT)						
Import (MT)	125,472	216,000	288,577	346,000	196,433	
<b>Uzbekistan</b>						
Domestic production (MT)	5,378,000		5,978,000			
Export (MT)						
Import (MT)						

MT = metric ton

Source: Agency of Statistics of Kazakhstan; League of Grain Processors and Bakers of Kazakhstan; National Statistical Committee of Kyrgyz Republic; Association of Fortified Wheat Flour and Bakery Producers of Kyrgyz Republic; Association of Food Producers of Mongolia; State Statistical Committee of Tajikistan; Association of Salt Producers and Flour Millers of Tajikistan; Uzbekistan National Flour Fortification Program

15. The Project agreements ensured the design and adoption of the quality assurance and control procedures. The internal control procedures include measuring of the iron content in wheat flour samples by: spot tests; spectrophotometer's method and use of HPLC tests. While the adopted methods vary from country to country, the use of spot test for qualitative analysis was proved by the flour millers. Conducting HPLC tests on micronutrient complete content in premix and wheat flour samples at least once in three months was recommended for each participating flour mill. **Table 4** provides an overview of the internal quality monitoring at industrial sites.

**Table 4. Internal Quality Control on Fortified Wheat Flour at Industrial Sites in 2004-2006**

Country (years)	HPLC tests			Spectrophotometers' Tests			Spot tests**		
	Amount of samples		Percentage of adequate samples (%)	Amount of samples		Percentage of adequate samples(%)	Amount of samples		Percentage of adequate samples(%)
	Total	Iron content 50 ppm		Total	Iron content 50 ppm		Total	Iron content 50 ppm	
Kazakhstan									
2004	30	30	100	-	-		8,850	8,850	100
2005	1	1	100	-	-		10,473	10,473	100
Jan-Sep 2006	3	3	100	3	3	100	8,432	8,432	100
Kyrgyz Republic									
2004	24	24	100	92	92	100	2,400	2,400	100
2005	-	-		23	23	100	262	262	100
Jan-Sep 2006				38	38	100	227	227	100
Mongolia									
2004	11	11	100				425	425	100
2005	4	4	100				1,341	1,341	100
Jan-Sep 2006	18	18	100				2,904	2,904	100
Tajikistan									
2004	32	32	100				789	647	82.0
2005	-	-		55	39	70.9	336	256	76.2
Jan-Sep 2006				131	102	77.9	430	313	72.8
Uzbekistan									
2004	36	36	100				3,025	3,025	100
2005	n/a	-	-	n/a	-	-	n/a	-	-
Jan-Sep 2006	n/a	-	-	n/a	-	-	n/a	-	-

\* Measurement of iron content only

\*\* qualitative test of iron content

Source: League of Grain Processors and Bakers of Kazakhstan; Association of Fortified Wheat Flour and Bakery Producers of Kyrgyz Republic; Association of Food Producers of Mongolia; Association of Salt Producers and Flour Millers of Tajikistan; Uzbekistan National Flour Fortification Program

16. The project agreements stipulated that, in 2003-2005, the beneficiary enterprises would share one-third of the premix costs in order to develop self-procurement capacity. Flour millers in Kazakhstan and Mongolia fully completed their commitments. In Uzbekistan the launch of the GAIN project delayed the payment of the reimbursement amount from the flour mills, while in the Kyrgyz Republic the flour millers did not effectuate payments despite continual appeals from the Government and the Project Team.

17. The Country Project Teams continued supporting the establishment of regulatory norms and requirements needed to follow through on proposed or agreed-upon mandatory laws for fortification of all premium and 1st grade flour consumed in the countries. Each country has been able to obtain an agreement on the appropriate regulations for importation of equipment and premix, as well as for fortified flour production and sales. The work started reducing tariffs and taxes on input requirements for flour fortification in all countries, and in Kazakhstan and Kyrgyz Republic, the import tax on premix and feeders was reduced or eliminated. During the previous period the JFPR had assigned an input procurement, including premix, and during the JFPR 9052, the project countries started moving with great urgency toward developing self-reliance in production and/or import procurements of the vitamin-mineral premix. KAN continued its support in promoting and quality assurance of premix production and usage, and it started developing diversified special premix formulations. Before the start of the Project, Kazakhstan had already established an association of flour millers. In 2003-2005, associations of grain processors and fortified food producers were established in Tajikistan, Kyrgyz Republic and Mongolia.

### **Kazakhstan**

18. Kazakhstan is the largest producer and exporter of wheat grain and flour in Central Asia: 14 million hectares is sown annually producing 12-13.8 million tons of grain. Gross production of wheat flour ranges from 1.8-2.2 million tons, and 1.6 million tons is sold domestically. In 2005, the exportation of wheat flour reached 931.9 thousand tons (43% of total wheat flour production).

19. The production of fortified wheat flour resumed at 11 of the 16 participating wheat flour mills, and reached 41,634 tons during the reporting period (nine flour mills were active). CPO and LGBK conducted negotiations with 15 new flour mills on production of fortified wheat flour, three of these flour mills informed on the intention to start production from November 2006. LGBK informed 150 flour mills, which are under the clauses of the Government Decree on mandatory wheat flour fortification, on the preparatory work needed to start wheat flour fortification in accordance with the Government's schedule.

20. The LGBK provided selection of the feeders, which were proposed by different suppliers and recommended the feeders from Ana Food Machinery (Turkey) to the flour millers, which demonstrated the adequate performance both with KAP Premix and diluted premix. The flour millers have already purchased 20 feeders from industries funds and informed about intention to purchase 16 more feeders. However, the test revealed the difficulties with KAP Premix utilization in most of the non-expensive feeders' models and proposed designing the formulation of premix dilution to KAN.

21. The internal quality control is provided by the spot tests (but only few of the internal laboratories have the authorization to use the hydrochloric acid (precursor)). Still, 2,282 spot tests were made within the reporting period, as the flour millers consider the spot test the most suitable for the production process. The HPLC tests are rather costly, and not all participating flour mills were planning to purchase spectrophotometers, that's why the Project Team agreed on the 64 comprehensive tests within a year (one per flour mill per three months), in order to justify the adequacy of production. The LGBK proposed to use feeders with the volumetric flour flow control, which can be calibrated based on the data of flour flow intensity, and designed the terms of reference for such pilot testing. The first shipment of such feeders was purchased in September 2006 and provided to the flour mills with 200-250 tons capacity.

22. The retained amount of KAP Premix is 31.7 tons and would be utilized by November 2006. The League of Grain Processors (LGBK) conducted negotiations with international suppliers (India and Germany) on premix delivery in November-December 2006. The feasibility study at Stepnogorsk enterprise showed that the industrial production of premix could be sustainable only in 2010. LGBK also continued the feasibility study on the use of

KAP Premix at the flour mills without adequate technical facilities for premix adding to flour. This also can be achieved with KAP Premix dilution or by two-stage milling process.

23. The LGBK addressed the wheat flour fortification issues at its annual conference on 13-14 July 2006. In accordance with the partnership plans, the LGBK conducted preparations for the local workshops of flour millers (scheduled for 2006/2007).

### ***Kyrgyz Republic***

24. The Government, on the proposal of the Country team, has adopted the standards on premix, fortified wheat flour and bakery from the fortified wheat flour.

25. The importation of wheat grain and wheat flour is increasing despite the small capacity of the domestic grain processing industry to meet the demands of the country (420,000 tons): 90,000 tons of wheat grain was imported in 2003 and 140,400 tons was imported in 2005. While the gross domestic production of wheat flour in 2005 was 221,700 tons, only 40-50% of the capacity of large-scale flour mills was utilized. The production of fortified wheat flour increased slightly during the second quarter of 2006 at both large-scale flour mills (1,600 tons from 1,200 tons) and small-scale flour mills (2,780 tons from 580 tons). At the small-scale flour mills, the low production was due to the poor technical performance of the Techno Might feeders, which were not adequately adapted to work with KAP Premix and at the mid-scale flour milling lines. The Techno Might Company provided consultancy, but the technical recommendations did not result in feasible improvement.

26. The flour millers at large-scale and medium-scale flour mills linked the low amount of fortified wheat flour production to a lack of quality wheat grain, the large trading of imported wheat flour at local markets, and a lack of demand for fortified wheat flour by consumers. The need for adopting some incentives for flour millers was also discussed, as the VAT implied on domestic flour millers was 20%, while the same tax in Kazakhstan was only 14%. Although the fortification equipment had been installed in 21 mills, only 7 mills were producing fortified wheat flour at the reporting period.

27. The marketing study, which was conducted by UNICEF in 2005-2006, confirmed that the fortified wheat flour was on sale at 59% of the interviewed shops at all geographical areas. Most of the sales were noted in Naryn, Talas and Chyi Provinces and also Bishkek city.

28. Despite continuous discussions between the Ministry of Health, CPO, and the participating flour mills, the reimbursement of the one-third of premix costs did not begin in the Kyrgyz Republic during the reporting period.

### ***Mongolia***

29. In Mongolia, wheat flour production is heavily import dependant, as domestic wheat grain production covers only one-third of the demand. The shortage of wheat grain and the negative impact of transition to the market economy affected the production of wheat flour at a majority of the flour mills. The Mongolian Flour Mills Association (MFMA) estimates the import of wheat flour as 60-70% of annual demand. The lack of turnover funds at small-scale flour mills contributes to lower wheat flour production. The Food Producers Association continued its attempts to reduce the VAT on wheat flour production.

30. Six flour mills (from 26 beneficiary industries) produced 10,295 tons of fortified wheat flour during the reporting period (37% of the planned amount was produced for January-September 2006). The majority of the participating flour mills became members of MFMA. The 'Healthy Food' logo is applied by 16 out of 26 flour mills captured by the Project.

31. Two domestic consultants on wheat flour fortification technologies, who were contracted by the Project, and Peter Ranum, JFPR Consultant, have considered the introduction of wheat flour fortification technology and provided the findings and recommendations to the National Workshop on Quality assurance on Fortified Flour (Ulaanbaatar, 22 August 2006).

### **Tajikistan**

32. In Tajikistan wheat flour production is also dependant on import, as domestic wheat grain production covers only 50% of demand. To ensure fortified wheat flour production, the Project supported the procurement and installation of 12 micro feeders at medium-scale flour mills and three small-scale flour mills. The lack of turnover funds at flour mills and inadequate reporting results in lower wheat flour production. The Project supported the printing of the 'Healthy Food' logo for 200,000 bags, and this initiative was followed-up by two flour mills. A domestic consultant on wheat flour fortification technology was contracted by the Project through the Association and provided a valuable contribution in the installation and calibration of the micro feeders.

33. During the reporting period, Tajikistan's 17 flour mills produced 24,572 tons of fortified wheat flour (48.6% of the planned amount since January). Leading flour mills include Kholkhozabad Flour Mill, Jascom Invest Company and Kairakum Flour Mill.

34. In order to facilitate the quality assurance at medium and small mills, the Association designed and piloted the mobile spot test laboratory on iron content. The results of these piloting tests were presented to the Steering Committee.

### **Uzbekistan**

35. The National Wheat Flour Fortification Program (sponsored by GAIN/World Bank) relies on the 14 flour mills which have already gained experience from ADB/JFPR 9005 Project. The Program plans to extend the amount of involved enterprises by including 48 public and ten private mills. Twenty flour mills were equipped with micro feeders (60 units were purchased) and received iron-based premix similar to KAP Komplex-1. Due to delays with feeders and premix procurement and installation, the production of fortified wheat flour was irregular. The Project Team also continued collecting funds from flour mills to ensure the regular procurement of premix starting from October-November 2006.

#### **b) Salt Iodization**

36. Contrary to wheat flour fortification, all participating countries have implemented universal salt iodization since the 1970s. The collapse of the former USSR created an unpredicted gap in supplies of potassium iodate and the adequate functioning of the salt industry. Joint assistance campaigns launched by UNICEF in cooperation with other international agencies since 1994 have resulted in a significant improvement in the production of iodized salt and its supply among poor populations of the JFPR Project participating countries. At the beginning of the Project, the home use of iodized salt varied from 19-30%. In 2006, consumption levels reached 90% in Kazakhstan and the Kyrgyz Republic, 75% in Mongolia, and Tajikistan, and 67% in Uzbekistan (national data sources).

37. The Project strategy in quality salt iodization resulted in the following outputs:

In 2001-2003

- design and adoption of the USI laws and adequate standards on quality iodized salt;
- selection of the leading salt industries and the establishment of regular quality salt iodization and distribution;
- establishment of common quality assurance and control systems to be applied at production sites and markets.

In 2004-2006

- design and adoption of fiscal incentives for salt producers;
- establishment of self-sustainable procedures on potassium iodate procurement;
- introduction of adequate quality control methods in addition to the spot-tests and titration to be followed by producers and control agencies.

38. The Project has supported for establishing and enacting legal and regulatory framework. Universal salt iodization legislation has been adopted in all participating countries except Uzbekistan. In the Kyrgyz Republic and Kazakhstan attendant regulations on taxes and tariffs were enacted, and iodized salt standards of 40±15ppm iodine were promulgated in all countries (Mongolia has adopted the national standard at 30±5ppm iodine). Chemical supplies, and equipment were provided for salt and urine measurement, and numerous rapid salt iodine field tests were performed at salt enterprises, retail outlets, and in households. JFPR Project financed a series of capacity building events and workshops, and supported the design, development, and printing of numerous communication and media materials, targeted at a wide variety of beneficiary groups, learner audiences, and stakeholders. National and international expert advice and travel were fielded on explicit need, and a strong admin-finance support was maintained throughout.

39. According to UNICEF studies, by the start of JFPR9052, on average 62% of households in JFPR countries used adequately iodized salt. In the course of the 1<sup>st</sup> JFPR 9052 period, MICS surveys conducted with UNICEF support showed that this indicator has increased to 66% across all countries, due to substantial increases obtained in Kyrgyz Republic and Tajikistan, while Kazakhstan as first country obtained evidence in early 2006 that it surpassed the 90% benchmark, indicating universal salt iodization.

40. In July-September 2006 quality salt iodization continued in all the participating countries. The amount of iodized salt produced by each country also increased, ranging from 44.3% to 94.1% of the total desired amount. Consolidated data on the activities of salt industries and the production of quality-iodized salt can be found in **Tables 5 and 6** below.

**Table 5. Activity of the Participating Salt Industries in 2004-2006**

Country (Salt Industries)	2005		January-June 2006		July-September 2006	
	Active industries	Iodized Salt Production(MT)	Active industries	Iodized Salt Production(MT)	Active industries	Iodized Salt Production(MT)
Kazakhstan (2)	2	67,391	2	26,839	2	16,846
Kyrgyz Republic (6)	6	12,051	6	4,160	6	1,580
Mongolia (25)	21	5,694	21	2,519	17	3,073
Tajikistan (5)	4	30,475	5	19,380	5	11,815
Uzbekistan (13)	13	66,595	13	31,355	13	20,070
<b>Total (51):</b>	<b>46</b>	<b>182,206</b>	<b>47</b>	<b>84,253</b>	<b>43</b>	<b>54,384</b>

MT = metric ton

Source: Associations of Salt producers of Kazakhstan, Kyrgyz Republic, Mongolia; Association of Salt Producers and Flour Millers of Tajikistan; Uzbekistan Country Project Office

**Table 6. Consolidated Data on the Production of Iodized Salt in 2004-2006**

Country	2004	2005	January-September 2006		
			Planned annual production (MT)*	Consolidated production (MT)	Consolidated production (%)
Kazakhstan	65,658	67,391	70,000	43,685	62.4
Kyrgyz Republic	13,705	12,051	15,200	6,740	44.3
Mongolia	5,430	5,694	5,940	5,592	94.1
Tajikistan	22,588	30,475	39,850	31,195	78.3
Uzbekistan	43,004	66,595	69,300	51,425	74.2
<b>Total</b>	<b>150,385</b>	<b>182,206</b>	<b>200,290</b>	<b>138,637</b>	<b>69.2</b>

MT = metric ton

\* The planned amount was discussed between CPOs and the food industry on the basis of agreed ratio between the desired amount (90% of consumption amount) and the production capacity of the given salt industry.

Source: Country Project Progress Reports, 2004-2006

**Table 7. Data on Quality Control of Iodized Salt at Industrial Sites in 2004-2006**

Country (years)	Titration Method			WYD Checkers			Salt Test Indicators**		
	Amount of samples			Amount of samples			Amount of samples		
	Total	Iodine content 40±15 ppm*	Percentage of Adequate samples (%)	Total	Iodine content 40±15 ppm*	Percentage of Adequate samples (%)	Total	Iodine content 40±15 ppm*	Percentage of Adequate samples (%)
Kazakhstan									
2004	13,280	11,155	84.0	-	-	-	206,531	181,747	88.0
2005	2,082	2,082	100	-	-	-	-	-	-
Jan-Sep 2006	1,715	1,712	99.8	-	-	-	-	-	-
Kyrgyz Republic									
2004	79	77	97.5	56	52	92.2	500	500	100
2005				30	30	100	1,600	1,600	100
Jan-Sep 2006				137	137	100	2,500	2,500	100
Mongolia									
2004	211	158	74.9	-	-	-	3,997	3,697	92.5
2005	1,128	1,126	99.8	5	5	100			
Jan-Sep 2006	7,755	7,567	97.6	53	50	94.3			
Tajikistan									
2004	9,143	6,125	67.0	560	397	70.9	35,600	29,370	82.5
2005	2,566	2,432	94.8	193	187	96.9	156	139	89.1
Jan-Sep 2006	3,159	3,030	95.9	204	197	96.6	506	506	100
Uzbekistan									
2004	2,945	2,945	100				13,595	13,595	100
2005	2,039	2,039	100	190	190	100	6,969	6,969	100
Jan-Sep 2006	1,517	1,517	100	137	137	100	5,695	5,695	100

\* The adopted iodine content in Mongolia is 30±10 ppm

\*\* The appropriate iodine content was ≥ 15 ppm

Source: League of Grain Processors and Bakers of Kazakhstan; Association of Fortified Wheat Flour and Bakery Producers of Kyrgyz Republic; Association of Food Producers of Mongolia; Association of Salt Producers and Flour Millers of Tajikistan; Uzbekistan National Flour Fortification Program

41. To support attainment of the USI goal in each country, the CIPs are generally focused on efforts to improve and ascertain self-reliance in salt producers and their Associations for input procurement, adequate quality assurance procedures at production, and appropriate roles by Associations in the National Fortification Alliances to reach sustained performance. The CIPs are also extending assistance to food inspection authorities for transparent conduct of quality checks, and collaborate with NGOs in community-based activities to strengthen the consumers' insistence on exclusive iodized salt supplies.

42. Project agreements stipulated that in 2003-2005 the beneficiary enterprises would share one-third of premix costs in order to develop self-procurement capacity. In Kazakhstan and Mongolia, the participating salt companies fully completed their commitments; however, in the Kyrgyz Republic and Uzbekistan the salt producers delayed payments.

### **Kazakhstan**

43. Salt iodization in Kazakhstan is based on the Law on IDD Prevention and the national standard on iodized salt, which has been adopted in October 2003. A set of the President's Decrees, Government Decrees and Regulations, and a National Program on IDD Prevention also supports the law. In order to facilitate quality salt iodization, the Government adopted several measures that include eliminating taxes and tariffs on potassium iodate and salt iodization equipment, and mandating procurement of iodized salt by the health and children institutions from the public funds. Procedures for the self-procurement of potassium iodate, fortification equipment and packaging supplies were established and successfully implemented by the salt producers within the last two years.

During the reporting period, the AralTuz Company purchased 1.41 metric tons of potassium iodate from local suppliers. Three salt companies use the 'Healthy Food' logo.

44. The annual demand for iodized salt is about 85,000 tons. For a period of 9 months two main salt companies in Kazakhstan (AralTuz Company and Pavlodar Salt Company) produced 43,685 tons (51,4% of annual demand), also 15,700 tons were imported.

45. SES repeatedly informed the Pavlodar Salt Company on the low quality of produced table salt which appeared due to the continuous management problems.

### **Kyrgyz Republic**

46. The salt iodization law was adopted in 2000 and is supported by a set of the President's Decrees, Government Decrees and Regulations, and national programs on IDD prevention. The annual demand for iodized salt is 18,000 tons. There are 19 salt companies in the Kyrgyz Republic, and 14 of them have joined the Association of Salt Producers. The domestic production of iodized salt rose from 10,450 tons (including non-iodized salt) in 2002 to 12,051 tons in 2005, and the importation of iodized salt reached 7,000 tons (36.7% of total amount). The consolidated production during the reporting period was 2,580 tons (44.3% of the annual demand was produced from January).

47. Thirteen salt companies have been using the 'Healthy Food' logo and three more are preparing to adopt it. The Salt Producers Association was established in 2003 and consists of the 12 salt production companies, and trading companies which iodize, pack, and sell imported non-iodized salt. The procedures for the self-procurement of potassium iodate, fortification equipment and packaging supplies were established and implemented by the salt producers within the last year. In 2006 the salt companies purchased 470 kilograms of potassium iodate (about 50% of the annual demand) for \$14,100 from its own funds. The mechanism of purchase through the local pharmaceutical companies is still not sustainable.

### **Mongolia**

48. The Mongolian salt industry consists of ten small salt companies in remote areas, and two medium-sized companies which process domestic salt from salt deposits. This production yields 835.3 tons (8.9% of annual demand) per year. The four companies in Ulaanbaatar process imported salt from China, and have produced 8,380 tons (88.8% of annual demand). About 217.7 tons (2.3% of annual demand) of the salt is non-iodized and used for technical purposes in various industries. In addition, each central hospital in remote areas was equipped (with JICA support) with simple iodization equipment to process small amounts of domestic salt. The Salt Association presented the positive results achieved at the Uvs and Zavkhan salt enterprises, which demonstrated that cost-effective solutions could significantly improve the quality of iodized salt.

49. While the annual demand in Mongolia is about 9,430 tons, the project beneficiary enterprises produced 3,073 tons of iodized salt during the reporting period (94.1% of the planned amount since January). Procedures for the self-procurement of potassium iodate and fortification equipment were not established, as the stocks of potassium iodate needed are adequate for meeting the 2006-2007 demands (provided by UNICEF). The 'Healthy Food' logo is used by most of the salt companies. However, the quality of domestic salt produced in most other local sites did not comply with the national standard, and iodine content was reduced due to high humidity. The Salt Producers Association conducted activities in establishing adequate quality control and assurance at industrial sites. No mechanisms to ensure withdrawing of inadequate salt from the market have been designed yet.

### **Tajikistan**

50. The salt industry consists of three main enterprises and a newly established company in the Vose area, which collects salt from small individual salt producers (more than one hundred independent miners) and processes its iodization and packaging. The annual demand for iodized salt is 32,000 tons, and the three established salt enterprises produce 30,000 tons accordingly. The production of iodized salt was 11,815 tons during the reporting period (78.3% of annual demand since January).

51. Findings of the MICS Survey (2005) have revealed that 47% of households used adequately iodized salt (28% in 2003). Household use of adequately iodized salt rated highest in the Sogd Province (75%), and lowest (27%) in the Khatlon Province. While the national legislation on salt iodization was in place, no further amendments were made in strengthening the implementation of the law and no penalties were adopted for the distribution of non-iodized salt. This led to a high proportion of non-iodized salt at the market, especially in the Khatlon Province where the open salt deposits are located. The CPO and Consultant on Salt Iodization continued work with the local authorities and salt producers in the Khatlon Province on elimination of the non-iodized salt from the market.

52. The Association negotiated the contract on supply of 800 kilograms of potassium iodate from Russia.

### **Uzbekistan**

53. During the reporting period, the 13 participating salt companies produced 20,070 tons of iodized salt (74.2% of planned annual amount). However, only two or three industries produce iodized salt that meets the national standard, and in most of the cases, the iodine content was decreased due to the high humidity of the salt or the inadequate technology of iodization. Some new salt enterprises were recently established and adequately equipped with modern technology and equipment. These recent innovations together with the expected adoption of the USI Law can positively change the situation in Uzbekistan.

54. SES and the Association of Salt Producers reported on cases involving false salt packaging (non-iodized salt labeled as properly iodized). However, the absence of legislative mechanisms does not allow SES to withdraw the non-iodized salt from the markets. Also, the legal provisions established for the Salt Producers Association does not authorize it to arrange for supplies of potassium iodate and/or other forms of procurement.

55. Procedures for the self-procurement of potassium iodate and fortification equipment have not been established, and UNICEF and MOH have agreed to use the existing government agency Uzmedexport, which has a general license on import/export operations, and established procedures, and expertise in procurement and distribution. The Salt Association and CPO assisted in the distribution of 2.9 tones of potassium iodate (supplied from UNICEF funds) to willing salt producers, and the revolving funds were combined in a special Uzmedexport account. However, the collected funds from a few companies were not sufficient to procure the adequate amount of potassium iodate. Hence, Uzmedexport and the Association are currently discussing with the salt producers the procedures for additional

purchase. The mission indicated that the Uzbekistan Government had still not adopted the elimination of taxes and tariffs on potassium iodate and other fortificants, which could also impact the final price of iodized salt.

### **B.3 Strengthening of the Capacities of the Government**

#### **a) Legislation and Regulations on Fortified Food**

56. *Kazakhstan* adopted the Universal Salt Iodization Law and the national standard on quality iodized table salt in 2003. Wheat flour fortification is based on an article of the Food Safety Law (enacted in April 2004), which mandates the fortification of premium and first grade wheat flour. The Government has adopted a schedule for introducing wheat flour fortification. It stipulates that the mass production of fortified wheat flour would start from 1 July 2006 at large flour mills, from 2007 at medium-size flour mills and from 2008 at other types of flour mills. The certification of fortified wheat flour can be made in one of two ways: (i) in case of occasional wheat flour fortification, the flour mill should certify each production consignment; (ii) in case of mass wheat flour fortification, the enterprise may be certified as a whole annually. KAN and the LGBK have designed and adopted intermediate standards on KAP premix and fortified wheat flour. Also, a national standard framework on wheat flour has been adopted, which incorporates the provisions on wheat flour fortification. In the reporting period, the draft standards on the bakery and premix were submitted for adoption by the Ministry of Industry and Trade; the revised draft standard on the fortified wheat flour was distributed for reviewing by the competent government agencies.

57. The Parliament's Committee of Agriculture continued consideration of the revised draft Food Safety Law, which plans to shift from mandatory wheat flour fortification to voluntary fortification. The KAN and LGBK submitted the professional view to the Committee. The consideration was postponed until December 2006.

58. The *Kyrgyz Republic* adopted the Universal salt Iodization Law in 2000. The Government has adopted the National Program on IDD Reduction for 2003-2007 and taken several measures to strengthen control of the importation and trade of non-iodized salt. The national standard on quality-iodized table salt, which stipulates the adequate iodine content ( $40\pm 15$  ppm), and the special sanitary regulation (SanPIN) on the production, shipment, and trade of iodized table salt have been enacted. The Parliament of the Kyrgyz Republic had already adopted the law on mandatory wheat flour fortification in 2004, but it was rejected by the President of the Kyrgyz Republic in view of possible concurrence to World Trade Organization (WTO) procedures (the Kyrgyz Republic is a WTO member country). The revised draft was submitted to the Parliament in May 2005, and it is scheduled for consideration in 2006. The Government, on the proposal of the Country team, has adopted the standards on premix, fortified wheat flour and bakery from the fortified wheat flour. The Government also adopted several regulations in order to promote a demand for fortified wheat flour: the preferential procurement of fortified wheat flour from public funds, and the mandatory fortification of flour is to be processed from the State Reserve Fund. The Ministry of Education instructed all educational institutions on the mandatory use of fortified wheat flour and iodized salt for school breakfasts and lunches. However, there is no visible progress or impact of these regulations.

59. The Technical Regulation Law, which was adopted in 2004 in view of the WTO requirements, has changed the national legislative framework on standards and technical requirements. The Ministry of Industry, Trade and Tourism has authorized the harmonization of the legislation with the WTO procedures. It presented positive comments on the revised draft of the wheat flour fortification law.

60. *Mongolia* adopted the Universal Salt Iodization Law and the national standard on quality iodized table salt in 2003. Adequate standards on iodine content in salt had already been adopted in 2001. Wheat flour fortification is based on article 5.1.6 of the Food Law (enacted in October 1999), which requires the sustained use and fortification of food staples

through adequate internationally recognized technologies to prevent micronutrient deficiency. The Government has adopted essential standards to ensure the adequate fortification, and quality control of fortified food products.

61. The Country team conducted revision of the national IDD Prevention program (which was scheduled up to December 2006) and also drafted the regulation on monitoring of the quality of fortified wheat flour.

62. *Tajikistan* adopted the Universal Salt Iodization Law in 2002 and the national standard on quality iodized table salt in 2004. However, there were no further amendments made in strengthening the implementation of the law and no penalties were adopted for the distribution of non-iodized salt. Considering the need of consolidated efforts, the Ministry of Health has proposed to the Government to conduct the Civil Society Forum at Khatlon.

63. The Project Team indicated the development of mandatory wheat flour fortification legislation as a crucial prerequisite for the future success of IDA prevention. The Association of Fortified Food Producers designed the draft law on mandatory wheat flour fortification in December 2005 and submitted it to the Ministry of Health. Following the regional workshop in Almaty in February 2006, the Project Team designed a draft law on "Fortification of Bakery Wheat Flour," a draft intergovernmental agreement on "Iron Deficiency Anemia Prevention in the Commonwealth of Independent States" and revised a draft Governmental Decree on "Fortification of Bakery Wheat Flour." These drafts were discussed with the Governmental Agencies and parliamentarians. The Ministry of Justice and the Ministry of State Revenues made comments and revised the drafts on the basis of the Food and Safety Law. In September, the revised draft of the Law was sent by the Parliament to the ministries and related governmental agencies for comments.

64. The draft of the Government's decree on fortification of wheat flour was still under the review of the Ministry of Justice.

65. In *Uzbekistan* the Parliament has adopted the draft USI Law as of 'first hearings'. Now the working group and the Ministry of Health should revise the draft law in accordance with the comments and submit it for the second consideration in October 2006. The national standard on quality-iodized table salt, which stipulates the adequate iodine content ( $40\pm 15$  ppm), and the special sanitary regulation (SanPIN) on the production, shipment, and trade of iodized table salt have been enacted. The national standards on the requirements for fortified wheat flour and the formulation of Premix for wheat flour fortification were adopted.

#### **b) Quality Control on Fortified Food**

66. In accordance with the standards and regulations, there is a system for the quality control of fortified food products by food industries, government control agencies, and provisions for consumers' control. The JFPR Project provided one-wave spectrophotometers (WYD Iodine checkers) and mini-titration laboratories for the salt enterprises; provided spectrophotometers for the SES Central Laboratories, and the reference laboratories associated with the Food Producers Associations; and ensured the possibilities for tests of iron and micronutrient content in flour samples at the highly equipped laboratories of the KAN. UNICEF provided salt test kits for social mobilization campaigns and for consumers' control at markets and households.

67. An overview of internal/external monitoring on quality iodized salt at local markets in the participating countries is presented in **Table 8** below.

68. In *Kazakhstan*, the MOH instructed all provincial SES on the establishment of the reference laboratories for food quality, included the iodized salt and fortified wheat flour. Over 200 inspections of food industries and wholesale markets were conducted. The inspections found the 1,420 kilograms of non-iodized salt which had been withdrawn from the market. The 2,282 tests of iron content justified the adequacy of wheat flour fortification at the participating flour mills.

**Table 8. Data on Quality Control of Iodized Salt at Local Markets in 2005-2006**

Country (years)	Titration Method			WYD Checkers			Salt Test Indicators**		
	Amount of samples			Amount of samples			Amount of samples		
	Total	Iodine content 40±15 ppm*	Percentage of Adequate samples (%)	Total	Iodine content 40±15 ppm*	Percentage of Adequate samples (%)	Total	Iodine content 40±15 ppm*	Percentage of Adequate samples (%)
Kazakhstan									
2005	9,839	9,544	97.0	n/a			n/a		
Jan-Sep 2006	7,681	7,504	97.7	n/a			n/a		
Kyrgyz Republic									
2005	9,068	8,424	92.9	930	755	81.2	5,700	5,700	100
Jan-Sep 2006	640	526	82.2	176	143	81.3	600	600	100
Mongolia									
2005	1,128	1,126	99.8	5	5	100	1,789	1,764	98.6
Jan-Sep 2006	7,755	7,567	97.6	53	50	94.3	1,599	1,584	99.1
Tajikistan									
2005	648	530	81.8	526	431	81.9	22,249	17,212	77.4
Jan-Sep 2006	507	409	80.7	482	397	82.4	21,056	18,157	86.2
Uzbekistan									
2005	21,675	15,960	73.6	1,631	1,275	78.2	n/a		
Jan-Sep 2006	n/a			n/a			n/a		

\* The adopted iodine content in Mongolia is 30±10 ppm

\*\* The appropriate iodine content was ≥ 15 ppm

Source: Ministry of health of Kazakhstan; Confederation of NGOs of Kazakhstan; Association of Salt Producers of Kyrgyz Republic; Association of Food Producers of Mongolia; Association of Salt Producers and Flour Millers of Tajikistan; Ministry of Health of Uzbekistan

69. In the *Kyrgyz Republic*, the JFPR Project (in cooperation with the Associations of Food producers and Swiss Red Cross) provided one-wave spectrophotometers (WYD Iodine checkers) and mini-titration laboratories for the salt enterprises; two spectrophotometers for the SES Central Laboratory and Reference Laboratory. The Project provided salt test kits for social mobilization campaigns and for consumers' control at markets and households.

70. The Association of Producers of Fortified Wheat Flour and Bakery facilitated spot-tests at industrial sites (227 tests were made during the reporting period). The content of the tested iron was adequate. Also 38 tests were made by spectrophotometers.

71. The National Statistical Committee conducted a survey on quality of the iodized salt in 2006 (supported by UNICEF) which noted that only 79% of samples were adequately iodized. The Department of SES reported that, for the first six months of the 2006, 26.6% of samples had low iodine content; also the majority of inadequate salt samples was noted at Issykkul and Naryn provinces.

72. In *Mongolia*, the requirements and methods for quality control were adopted in a number of standards and regulations. However, this legal basis needs to be introduced to the food industries, as most of them do not have facilities and capabilities to ensure an adequate control system. At salt industries, the use of test indicators remains the main method for

checking iodine content, while only a small number of salt industries use WYD-checkers. During the reporting period, 2,824 samples were tested at industrial sites, and 48 samples were tested by control agencies.

73. The quality control of fortified flour is still a challenge for the flour milling industries. Only medium-sized flour mills have internal laboratories and have established spot-test control. At nine flour mills, 1,017 samples were checked by spot-test method, and the Control Agency tested 3 samples on iron content and 2 samples – on zinc content.

74. In *Tajikistan* the requirements and methods of quality control were adopted in related standards and regulations. According to SES and CPO data, in July-September 2006, the rate of adequate salt samples at industrial sites was 95-96% , and at the markets – 84-86%.

75. In order to assist the control agencies, the Association of Fortified Food Producers proposed to use mobile spot test laboratory by SES and Customs Inspection.

### c) Affordability of Fortified Food

76. The Project Teams from all participating countries continued price monitoring of fortified food at production sites, and wholesale and retail markets to ensure its affordability to poor families. The Project saw no evidence that the production of quality fortified food would increase prices dramatically, thus allowing target beneficiaries to use the advantages of the fortification program. Consolidated data on fortified food products in 2004-2006 can be found in **Table 9**:

**Table 9. Affordability of the Fortified Food Products in 2004-2006 (wholesale and retail prices on the selected fortified food products)**

Country	Kazakhstan	Kyrgyz Republic	Mongolia	Tajikistan	Uzbekistan
<b>I. Prices on the Iodized Salt (\$ per kilogram)</b>					
I.a Wholesale prices					
2004	0.19	0.10-0.12	0.15-0.25	0.02-0.03	0.10
2005	0.12	0.07-0.12	0.20-0.35	0.10-0.25	0.12
January-June 2006	0.10-0.12	0.07-0.10	0.12-0.19	0.10-0.25	0.10
I.b Average prices					
2004	0.19	0.12	0.20-0.35	0.03-0.05	0.07-0.14
2005	0.13	0.10-0.15	0.20-0.35	0.10-0.25	0.08-0.15
January-June 2006	0.13	0.10-0.15	0.12-0.19	0.10-0.25	0.08-0.15
<b>II. Prices on the fortified wheat flour (\$ per kilogram)</b>					
II.a Wholesale prices					
2004	0.34-0.35	0.33-0.34	0.25-0.40	0.13-0.33	0.14
2005	0.21-0.26	0.30-0.40	0.20-0.40	0.20-0.40	0.15
January-June 2006	0.25-0.40	0.30-0.40	0.26-0.32	0.20-0.40	n/a
II.b Average prices					
2004	0.34-0.38	0.34-0.36	0.25-0.45	0.20-0.34	0.14-0.15
2005	0.17-0.29	0.33-0.43	0.42-0.45	0.20-0.40	0.15
January-June 2006	0.27-0.30	0.30-0.40	0.26-0.32	0.20-0.40	n/a

Source: Country Project Progress Reports, 2004-2006

#### **B.4 Social mobilization and poverty targeting**

77. In *Kazakhstan*, the Confederation of the Nongovernmental Organizations of Kazakhstan (CNOK) arranged local activities on food fortification advocacy through its provincial branches. In Akmola province, the youth conference (8-12 September) designed and considered several project proposals to promote demand on fortified wheat flour. In Actobe Province, NGOs conducted a workshop on business, health care and gender issues to the local authorities from 12 districts, which included the special topic on micronutrients deficiency and use of the fortified food products. In Kyzylorda Province, KAN and CPO facilitated a workshop for school teachers and health workers on IDA and IDD prevention. In Southern Kazakhstan the local Commission on Family and Gender Issues conducted information sessions at local administration centers of 6 districts. The Commission also conducted the competition among the journalists and considered 23 publications. The NGOs conducted inspections and tests of the quality of fortified food products in Akmola Province (5 spot-checks) and Pavlodar province (4 spot-checks). The increase of awareness on fortified food products and 'Healthy Food' logo was increased to 65-75% from initial 35%.

78. The Project Team conducted a 5-days workshop in Akmola Province on poverty targeting and use of fortified food products (9-12 September). The food producers, wholesale traders, NGOs and nutritionists considered the affordability and price policy of the fortified food products; and outlined the plan of action for local authorities on the access of poor families to the fortified food products.

79. The local Communication Team produced the multilingual issue of the Country Project Newsletter and regularly renewed the Country Project Web-Page.

80. In the *Kyrgyz Republic*, the CPO finalized the workplan for NGOs and selected 8 NGOs for implementing the communication and social mobilization activities. NGOs continued information and social mobilization work in the Tchai Province and at the wholesale and retail markets in Bishkek. Project stakeholders have established the Working Communication Group to supervise the implementation of communication activities. Also, the Ministry of Health has established a Working Group to revise the communication materials on IDD and IDA prevention. The CPO also issued the first Newsletter on Project implementation.

81. In *Mongolia*, the Country Team took active part in celebrating the National IDD Prevention day on the first week of September. The CPO, local project teams and Salt Producers' Association conducted the local events at Santmargaz soum (Zavkhan Aymag) and Bayankhongor Aymag. The fortified wheat flour and iodized salt brands were demonstrated at the exhibition 'Autumn Green Day – 2006', which was attended by the Prime Minister and Minister of Food and Agriculture of Mongolia. The iodized salt from Zavkhan salt Factory was nominated by the Ministry of Food and Agriculture as the 'Best Functional Food'.

82. In *Tajikistan*, the Country Team, in cooperation with Surush Company, has produced 4 TV/audio spots to be demonstrated on TV on a regular basis.

83. The CPO conducted a workshop to the mass media in Dushanbe on 18-19 August 2006 which involved the chief editors from national and local newspapers and TV/Broadcasting. The workshop discussed the food fortification advocacy and promotion of the fortified food products.

84. The National TV broadcasted a special TV-shot on the situation in the Khatlon Province on 16 September 2006, and prepared the thematic issues of the TV-casts for women (*Koshona* and *Lyazzat*) on the advantages of the fortified food. Special analytic and information TV casts *Paivand* and *The Time of Changes* were devoted to the issues of micronutrient deficiency elimination and food fortification.

### C. Financial Performance

85. The Project, funded by the Government of Japan and financed on a grant basis by JFPR, received US\$2 million or its equivalent for the estimated total costs of project. JFPR funds are spent within the framework of CIPs (Appendix I). A consolidated Statement of Expenditure from the beginning of the Project until 30 September 2006 (Appendixes II and III) shows the progress in funds utilization. Of the total grant amount, an estimated 23.04% had been used by the end of the reporting period. The consumption of JFPR funds by 30 September 2006 had been \$476,710 (see **Table 10**).

**Table 10. Utilization of JFPR Funds in July-September 2006**

Project Expenditures Category	Cost Estimates	Beginning to date (US\$)	This period		Accumulated expenditures	
			US\$	%	US\$	%
Equipment and Supplies	414,000	77,109.00	1,538.07	0.37%	78,647.07	19.00%
Training, Workshops, Seminars	424,000	65,288.48	35,521.27	8.38%	100,809.75	23.78%
Advocacy and Communication Activity	125,000	13,438.32	0.00	0.00%	13,438.32	10.75%
Consulting Services	52,500	24,316.67	15,928.01	30.34%	40,244.68	76.66%
Social Mobilization by NGOs	250,000	48,629.28	0.00	0.00%	48,629.28	19.45%
Project Management	225,000	126,805.42	24,783.49	11.01%	151,588.91	67.37%
Operational Studies and Impact Assessment	50,000	20,577.97	4,264.58	8.53%	24,842.54	49.69%
Other Project Inputs	377,200	350.67	2,150.00	0.57%	2,500.67	0.66%
<b>Total</b>	<b>2,000,000</b>	<b>376,516</b>	<b>84,185.42</b>	<b>4.21%</b>	<b>460,701</b>	<b>23.04%</b>

Source: Country Project SOE Forms, 2006

86. The use of JFPR funds was substantially low in Kazakhstan (due to the external problems with the Project Imprest Account) and in the Kyrgyz Republic (\$16,009); it was also noted that most of CPOs limited project implementation to training and workshops, the production of communication materials, and routine project management activities. The details of JFPR fund utilization at each country level until 30 September 2006 can be found in **Table 11**.

87. During the Mid Term Review Workshop, the country Teams discussed with ADB the revised CIP plans and country strategies with ADB, RCAO and international experts. It was agreed that the revised CIP Plans would be submitted for ADB's approval within October 2006.

88. Contrary to the JFPR 9005 Project, the implementation of JFPR 9052 was based on regular co-sharing by the Project stakeholders in the participating countries. The agreements between ADB and the participating Governments estimate contributions of \$2,881,000; and during the reporting period the CPOs reported actual contributions of \$3,705,308 (including contribution-in-kind). The details can be found in **Table 12** below.

**Table 11. Utilization of JFPR Funds by the Project Components in 2005-2006 (May 2005 – September 2006)**

Country	Component 1 Strengthening the capacity of salt industries and flour mills	Component 2 Strengthening the Government capacity	Component 3 Social mobilization and poverty Targeting	Component 4 Project management, monitoring and evaluation	Other Project Inputs	Total
<b>Kazakhstan</b>						
Cost Estimates	32,820	12,900	135,100	76,580	42,600	300,000
Utilized amount, US\$	22,552	1,361	89,496	54,273	16,316	183,997
Percentage %	68.7%	10.5%	66.2%	70.9%	38.3%	61.3%
<b>Kyrgyz Republic</b>						
Cost Estimates	27,125	36,300	138,200	55,100	43,275	300,000
Utilized amount, US\$	12,888	1,129	11,689	37,109	1,203	64,018
Percentage %	47.5%	3.1%	8.5%	67.3%	2.8%	21.3%
<b>Mongolia</b>						
Cost Estimates	45,500	49,500	80,200	72,000	52,800	300,000
Utilized amount, US\$	33,550	2,308	24,484	24,456	8,953	93,751
Percentage %	73.7%	4.7%	30.5%	34.0%	17.0%	31.3%
<b>Tajikistan</b>						
Cost Estimates	40,000	34,400	131,000	58,500	36,100	300,000
Utilized amount, US\$	6,109	0	49,274	40,448	871	96,703
Percentage %	15.3%	0.0%	37.6%	69.1%	2.4%	32.2%
<b>Uzbekistan*</b>						
Cost Estimates	49,700	27,900	110,000	60,200	52,200	300,000
Utilized amount, US\$	830	4,184	0	17,218	0	22,232
Percentage %	1.7%	15.0%	0.0%	28.6%	0.0%	7.4%

Source: Country Project Progress Reports, 2006

Note: Uzbekistan's CPO utilized the reimbursement funds

**Table 12. Co-Sharing of Project Funds in 2005-2006 (May 2005 – September 2006)**

Country	Component 1 Strengthening the capacity of salt industries and flour mills	Component 2 Strengthening the Government capacity	Component 3 Social mobilization and poverty Targeting	Component 4 Project management, monitoring and evaluation	Other Project Inputs	Total
<b>Kazakhstan</b>						
Utilized JFPR Funds	22,552	1,361	89,496	54,273	16,316	183,997
Co-shared Funds (plan)	1,014,620	64,900	933,800	65,000		2,0783,20
Actual Co-Sharing	2,667,667		421,165	15,665	323,385	5,318,476
Percentage (%)	100		45.1	24.1		

Country	Component 1 Strengthening the capacity of salt industries and flour mills	Component 2 Strengthening the Government capacity	Component 3 Social mobilization and poverty Targeting	Component 4 Project management, monitoring and evaluation	Other Project Inputs	Total
<b>Kyrgyz Republic</b>						
Utilized JFPR Funds	12,888	1,129	11,689	37,109	1,203	64,018
Co-shared Funds (plan)	185,829	60,570	239,950	91,386		577,735
Actual Co-Sharing	377,976	2,452	77,133	53,616		511,177
Percentage (%)	100	4.0	32.1	58.7		
<b>Mongolia</b>						
Utilized JFPR Funds	27,543	2,090	17,855	19,254	6,861	73,603
Co-shared Funds (plan)	24,604	20,311	37,213	43,216		125,344
Actual Co-Sharing	25,854		5,818			31,673
Percentage (%)	100	0.0	15.6	0.0		
<b>Tajikistan</b>						
Utilized JFPR Funds	6,109	0	49,274	40,448	871	96,703
Co-shared Funds (plan)	869,410	13,300	11,200	30,000		923,910
Actual Co-Sharing	206,747	3,900		6,698		217,345
Percentage (%)	23.8	29.3	0.0	22.3		
<b>Uzbekistan*</b>						
Utilized JFPR Funds	830	4,184		17,218		22,232
Co-shared Funds (plan)						
Actual Co-Sharing	28,914		300			29,214
Percentage (%)						

Source: Country Project Progress Reports, 2005

Note: Uzbekistan's CPO utilized the reimbursement funds

#### D. Management and Operations

89. The arrangements for the implementation of the JFPR Project are as follows: ADB coordinates overall implementation in all five countries through the RCO set up in Almaty, Kazakhstan. RCO is also responsible for the centralized procurement of equipment and fortificants. The participating countries set up Country Steering Committees for project oversight, comprising of representatives from the finance, economic development, and health ministries; the private food industry; and the NGO community. The MOH of each participating country was functioning as the EA of the JFPR project and established the CPO. The EA in each participating country is responsible for the overall coordination of the Project activities in its country, including the following: (i) coordination with other ministries, agencies and NGOs; (ii) approval of annual work plans and disbursement plans; and (iii) ensuring compliance with ADB rules for procurement and disbursement. A Country Project Coordinator (medical doctor), a Financial Specialist and an Administrative Assistant (optional) staffed the CPO in

each participating country. The CPO staff has formal contract arrangements with the EA based on the terms of reference approved by ADB. The RCAO staff is recruited by ADB and financed under the Project. The RCAO acts as the central project implementation unit and coordinates Project planning, reporting, monitoring of implementation progress, international procurement, and the organizing of workshops and round table meetings. RCAO's responsibilities also include: (i) detailed project planning and management; (ii) assistance to EAs on local procurement and contract administration; (iii) review of withdrawal applications for CPOs imprest accounts; (iv) monitoring the disbursement of funds, including timely submission of withdrawal applications to ADB; (v) preparation of consolidated quarterly progress and completion reports; (vi) coordination of annual audits; (vii) design and support of the project website; and (viii) assistance to ADB/JFPR staff and consultants' missions. KAN acts as a technical advisor to the RCAO and facilitates exchanges with nutritional institutes in the other Project countries.

90. Meetings of the Steering Committees were conducted in Mongolia and Kazakhstan. In the Kyrgyz Republic and Uzbekistan, the revised membership of the Steering Committees was under adoption by the Government.

91. During the reporting period, the Executing Agencies completed audit for the final year of JFPR 9005 Project and first year of the JFPR 9052 Project.

92. In *Kazakhstan*, the auditors recommended improving the quality of reports by the contracting NGOs, and weak internal control on the routine translation works for the CPO. The auditors also noted that the CPO was not granted the VAT elimination although this was stated in the agreement between the Government of Kazakhstan and ADB.

93. In *The Kyrgyz Republic* the auditors took note that the Financial Analyst works as cashier and recommended improving the inventory on petty cash fund. The auditors also mentioned that the application of the ADB daily subsistence allowance (if higher than the actual government allowance) should be indicated properly for taxation purposes. The auditors also recommended following CIP categories in financial statements.

94. In *Mongolia* the auditors recommended improving the indication of expenditures in accordance with CIP (for example, consulting services were indicated under training) and also improving calculations on co-sharing due.

95. In *Tajikistan*, the auditors recommended following the CIP categories in financial statements and improving the software used for computation of financial statements and reports.

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Table A.1 Project Cost Estimates and Funding Sources (\$)

Inputs and Expenditure Category	<u>Component 1</u>	<u>Component 2</u>	<u>Component 3</u>	<u>Component 4</u>	Total (Input)	Percent
	Strengthening the capacity of salt industries and flour mills	Strengthening of the Government capacity	Social mobilization and poverty Targeting	Project management, monitoring and evaluation		
1. Equipment and Supplies	21,000	20,000	373,000		414,000	8.5
2. Training, Workshops, Seminars, Public Campaigns	175,000	194,000	125,000	55,000	549,000	11.2
3. Consulting Services	5,000	56,000	42,500	199,000	302,500	6.2
4. Project Management			0	225,000	225,000	4.6
5. Other Project Inputs	85,000	0	275,000	67,200	427,200	8.8
6. Contingencies				82,300	82,300	1.7
<b>Total Project Costs</b>	<b>2,832,000</b>	<b>405,000</b>	<b>915,500</b>	<b>646,200</b>	<b>4,881,000</b>	<b>100.0</b>
JFPR Financed	286,000	270,000	815,500	546,200	2,000,000	41.0
Government Contribution	0	135,000	100,000	100,000	335,000	6.9
Private Sector	2,546,000	0	0	0	2,546,000	52.1

Table A.II JFPR Cost Estimates in (US\$)

	KAZ		KGS		MON		TAJ		UZB	
	JFPR	Other sources	JFPR	Other sources	JFPR	Other sources	JFPR	Other sources	JFPR	Other sources
<b>Component 1. Strengthening the capacity of salt industries and flour mills</b>										
1.1		649,000	2,625	128,715	7,100	215,000	5,000	857,510	17,500	262,500
1.2	21,820	24,320	23,000	4,500	36,000		34,000	7,000	31,000	12,100
1.3	11,000	8,500	1,500		2,400		1,000	4,900	1,200	1,200
1.4	19,900	332,800	14,000	9,000	6,600	23,000	18,100		32,000	15,300
<b>Component 2. Strengthening the capacity of the Governments</b>										
2.1		22,400	9,200	4,000	16,500	10,000	8,000		14,600	5,200
2.2	2,000	22,500	20,500	500	21,000		24,200	1,000	12,100	4,800
2.3	10,900		6,600		12,000		2,200		1,200	500
2.4		20,000		17,520	5,000	15,000		2,000		6,000
2.5									14,500	10,200
<b>Component 3. Social mobilization/poverty targeting</b>										
3.1	34,100	40,000	64,500	28,000	28,500		50,000		45,000	10,000
3.2	26,000	553,000	23,000	32,000	34,500	10,000	22,000		45,750	21,600
3.3										
	20,000	31,400	7,700	500	4,200		7,000	1,000	4,750	300
3.4	55,000	289,400	43,000	30,000	13,000	35,000	52,000		5,000	4,200
3.5		20,000		9,000		40,000				1,800
3.6					14,000					
<b>Component 4. Project management, monitoring, and evaluation</b>										
4.1	5,000		6,500		12,000		6,500		5,200	2,000
4.2										
	12,000		12,600		19,000		16,000		16,000	1,000
4.3										
	59,580	20,000	36,000	14,000	36,000	36,000	36,000		39,000	4,500
4.4	14,000	45,000	20,275		17,200		10,000		6,200	2,000
Contingency	8,700		9,000		15,000		8,000		9,000	
<b>Total</b>	<b>300,000</b>	<b>2,078,320</b>	<b>300,000</b>	<b>277,735</b>	<b>300,000</b>	<b>384,000</b>	<b>300,000</b>	<b>873,410</b>	<b>300,000</b>	<b>365,200</b>

Table A.III Statement of Expenditures per Country for July-September 2006

		Amount per country (in \$US)				
		KAZ	KGS	MON	TAJ	UZB
1	Equipment and Supplies					
	a Quality assurance equipment and supplies for salt industries	-	-	-	-	-
	b Quality Assurance Equipment and Supplies for Flour Mills	-	-	-	-	-
	c Fortification Equipment and Fortificants	-	-	-	297.26	-
	d Laboratory Equipment for SES or reference laboratory and accessories	-	-	-	-	-
	e Reagents	-	-	-	-	-
	f Laboratory supplies	-	-	-	-	-
	g Fortification equipment for pilot studies	-	-	-	-	-
	h Table fortificant packets	-	-	-	-	-
	i Portable salt test kits for communities and retailers	-	-	-	-	-
	j Communication materials	-	668.36	-	572.45	-
2	Training, Workshops, Seminars, Public Campaigns					
	a Regional workshops and seminars for salt enterprise and flour mills	-	-	-	-	-
	b Training fortification technology	-	-	-	-	-
	c Training for laboraroty technicians	-	1,099.56	2,884.95	-	-
	d Seminars on marketing and business management	-	-	-	-	-
	e Workshops for customs officers	-	-	-	-	-
	f Workshops on legal enforcement	-	-	873.19	-	2,861.60
	g Training for SES laboratory staff	-	-	-	-	-
	h Regional round table on trade regulations	-	-	-	-	-
	i Advocacy and communication workshops	-	-	-	-	-
	j TV spots and other mass media campaigns	-	-	5,234.26	5,990.00	-
	k Annual review workshop in countries	-	-	-	-	-
	l Midterm review workshop	3,750.41	1,820.00	-	4,179.33	-
3	Consulting Services					
	a Salt industry specialist (domestic)	-	-	-	299.93	-
	b Flour mill specialist (domestic)	-	-	-	399.96	-
	c Domestic legal specialist	-	-	-	-	-
	d Kazakhstan Academy of Nutrition (KAN)	-	-	-	-	-
	e Domestic communication consultant	-	400.00	800.00	1,423.05	-
	f Other consulting services	-	-	1,200.00	-	-
	g Regional communication specialist(KAN)	-	-	-	-	-
	h External audit	-	5,317.15	2,000.00	3,500.47	-
	n Social mobilization by NGOs and households	-	-	-	-	-
	o Pilot activities for poverty targeting	-	-	-	-	-
4	Project Management					
	a Country project office	4,993.15	5,223.07	3,001.32	6,676.16	2,922.50
	b Office space	-	-	-	-	-
	c Government's administration	-	277.00	-	-	-
	f Central and local government staff time	-	-	-	-	-
5	Other Project Inputs					
	a Market research and consumers survey	-	-	2,000.00	-	-
	b Operational studies	-	1,203.37	-	-	-
	c Impact assessment	-	-	2,109.49	-	-
	d Website	-	-	-	-	-
	e Final reports	-	-	-	-	-
7	Contingencies					
	<b>Total</b>	<b>8,743.56</b>	<b>16,008.51</b>	<b>20,103.21</b>	<b>23,526.06</b>	<b>5,784.10</b>