

Indonesia

Equipment Supply for Pre and Post Harvest Services Project

Report Date: October, 2002
Field Survey: February, 2002

1. Project Profile and Japan's ODA Loan



Location Map of the Project



Rice Milling Unit

1.1. Background

Under Five-Year Development Plans (Repelita) from I (1969~73) through III (1979~83), the Government of Indonesia placed the highest priority on achieving self-sufficiency in staple food crops such as rice. In line with the policy, Indonesian government implemented the Promotion of Rice Production Projects, from 1969 through 1981, including the expansion of arable land through the construction/rehabilitation of irrigation facilities and the increase of the unit yield of rice by introducing bio-engineered crop species and chemical fertilizer. As a result, rice production in Indonesia increased steadily.

However, as production of rice increased, losses in the post-harvest process and the low quality of processed rice became serious factors constraining further increases in the rice supply. Losses in the post-harvest process were due to undeveloped processing activities and an inadequate distributing system. This problem was particularly acute in areas where the Promotion of Rice Production Projects had made steady progress.

Improvement of post-harvest processing activities and the distribution system became essential for promotion of rice production in Indonesia.

1.2. Objectives

To improve the quality of milled rice and to decrease losses incurred during post-harvest processing activities, by providing post-harvest equipment and facilities, and transportation facilities, to well-established Koperasi Unit Desa (KUD¹) in 7 provinces where Promotion of Rice Production Projects are in progress and rice production and productivity are high.

¹ KUD is rural, multipurpose village cooperatives with a higher level of involvement of the rural population, including farmers, farm workers, small traders, fisherman, and day-labor farmers. KUD was established under the supervision of Ministry of Cooperatives.

1.3. Project Scope

This project was to provide the following equipment/facilities to 243 KUDs in the Provinces of East Java, Central Java, West Java, D.I. Jogjakarta, South Sulawesi, Bali and West Nuasatenggara:

1. Procurement/Installation of Equipment:
 - (1) Paddy Thresher (0.5 ton/hour)
 - (2) Dryer (6 tons/day)
 - (3) Rice Milling Unit (RMU; 2 tons/hour)
 - (4) Rice Milling Unit (RMU; 1 ton/hour)
2. Construction of Related Facilities:
 - (1) Storage (2,000 tons capacity)
 - (2) Storage (1,000 tons capacity)
 - (3) Drying Floor and Kiosk
3. Procurement of Transportation Facilities (598 trucks)
4. Consulting Services
5. Training (369 persons)

Japan's ODA loan covered foreign currency cost, which comprised of 21% of the total project cost (27,004 million Yen), while the remaining 79% (the total cost in local currency) was to be financed by the Government of Indonesia.

1.4. Borrower/Executing Agency

The Government of the Republic of Indonesia / Directorate General of Cooperatives (DGC), Ministry of Cooperatives (Currently State Ministry of Cooperatives, Small and Medium Enterprises)

1.5. Outline of Loan Agreement

| | |
|-------------------------------------|--|
| Loan Amount / Loan Disbursed Amount | 5,800 million Yen / 2,696 million Yen |
| Exchange of Notes / Loan Agreement | April, 1983 / March, 1984 |
| Terms and Conditions | |
| Interest Rate | 3.0% p.a. |
| Repayment Period (Grace Period) | 30 years (10 years) |
| Procurement | General Untied (Partially Untied for Consulting Services) |
| Final Disbursement Date | March, 1992 |

2. Results and Evaluation

2.1. Relevance

Indonesia had been importing rice for a long time, and during the 1970s, its import amount accounted for 10% of total national consumption on average. This import quantity was equivalent to about 5% of the total national spending on imported goods in terms of monetary value. Therefore, Indonesian Government placed

the highest priority on achieving self-sufficiency in rice production, an aim that was supported in Repelita I through IV (1969-88). In line with this policy, the Government of Japan started, in 1981, to commit technical and financial cooperation to the Indonesian agricultural sector with the objective to help achieve self-sufficiency in rice, under a comprehensive program called the “Umbrella Cooperation²”. This project, Equipment Supply for Pre- and Post-Harvest Services, was implemented under the program, and therefore was consistent with Indonesian Government policy. At the time of this evaluation, the Government still places emphasis on achieving stable provision of rice, and the project objective remains relevant.

As for the relevance of the project scope, the Project was designed on the assumption that KUDs were well-formed for conducting rice milling, utilizing large-capacity equipment procured under the Project. However, the utilization rate of procured equipment has been far lower than what was expected at the time of appraisal. There were various factors that have constrained KUDs to conduct rice milling, but it is likely that KUDs’ quality and role in the rice milling activities and the distribution system were not relevant as an implementing body to attain the project objective (details are discussed in 2.3 *Effectiveness*).

2.2. Efficiency

2.2.1 Project Scope

The number of equipment supplied was modified. The number of paddy threshers and dryers was reduced, from 1,509 to 83 for the former, and 1,310 to 92 for the latter. The number of supplied RMUs more than doubled, from 243 to 481. The reasons modifying the project scope were as follows:

- (1) It took two years to conclude the loan agreement after project appraisal, while target KUDs were selected based on the list, prepared by provincial cooperatives. During the delay, some of the target KUDs already procured facilities with their own funds.
- (2) As part of the national policy of “achievement of self-sufficiency in rice,” Indonesian Government provided 1,400 paddy threshers and 1,100 dryers to KUDs under government special programs (including the Presidential Aid Program). Accordingly, the numerical targets for paddy threshers and dryers were reduced.
- (3) Since a similar project financed by the Asian Development Bank (ADB) was canceled, KUDs that were formerly subject to the ADB-assisted project were included in the Project. The number of target KUDs was reconsidered and finally approved in 1988, resulting in an increase from 243 to 481. Consequently, the number of supplied RMUs increased.

The construction of storage, drying floor, kiosk, and transportation facilities was originally to be financed by the Project, but most of the construction was implemented under a special program of the Government, and removed from the scope of this Project.

2.2.2 Implementation Schedule

The entire undertaking was originally scheduled for completion in June 1984, but was actually completed in July 1990, a 74-month delay, due to various factors. The loan conclusion delayed, and procurement process prolonged, owing to a change in national policy that placed priority on domestic procurement. Also

² This comprehensive program for agricultural cooperation was implemented in three stages, from 1981-1985, 1986-1990, and 1995-2000.

reselecting target KUDs was needed, as described earlier. Manufacturing and installation of equipment, which was originally scheduled to be completed in 9 months, took 30 months.

2.2.3 Project Cost

The actual total project cost was 2,993 million Yen, which represents a cost under-run of approximately 89% when compared to the original cost of 27,004 million Yen.

The foreign cost was originally estimated at 5,800 million Yen, but the actual cost was 2,696 million Yen, a cost reduction of approximately 46%. This was attributed to the drastic modification of the project scope, as described above, and to the depreciation of the Rupiah against the Yen³.

The local cost was also considerably reduced, from 59,925 million Rupiah to 3,667 million Rupiah. This was also due to the project scope reduction. The construction of storage, drying floor, kiosk, and transportation facilities was originally to be financed by local cost under the Project, but most of the construction was implemented under the Government's special program, as mentioned earlier.

2.3. Effectiveness

Upon this field survey, it was not possible to get information to update the present utilization of RMUs. The effectiveness, however, is assessed utilizing the previous information, mainly that of 1993 from Ministry of Cooperatives.

Table 1 shows the operating hours of RMUs over 3 years between 1990 and 1992 at all KUDs that received equipment under the project. On average, KUDs operated RMUs for 257 hours/year, which is about a quarter of the prescribed economic break-even point, 1,000 hours/year⁴. Approximately 70% of respondent KUDs reported less than 300 hours/year of operation, while only 3.4% (16 KUDs) reported more than 1,000 hours of operation. These figures indicate that the utilization of RMUs was far lower than expected.

The cause of RMUs low utilization was thought various factors such as the structure of the rice distribution system, lack of transportation, a weak relationship between KUD and farmers (rice growers), competition with private millers, and mechanical troubles with procured equipment. These factors are analyzed in the following section.

2.3.1 Structure of Rice Distribution System

Of the factors noted above, problems associated with the rice distribution system were considered to

**Table 1: Annual Operation Hours of RMUs
(Average during 1990-92)**

| Distribution (hour/year) | Operating Hours of RMUs | |
|-----------------------------|----------------------------|------|
| | KUD | % |
| 0 | 144 | 30.6 |
| 1-50 | 36 | 7.7 |
| 51-100 | 31 | 6.6 |
| 101-200 | 65 | 13.8 |
| 201-300 | 53 | 11.3 |
| 301-400 | 31 | 6.6 |
| 401-500 | 22 | 4.7 |
| 501-600 | 24 | 5.1 |
| 601-700 | 8 | 1.7 |
| 701-800 | 19 | 4 |
| 801-900 | 12 | 2.6 |
| 901-1,000 | 9 | 1.9 |
| 1,001-1,500 | 11 | 2.3 |
| 1,501-2,000 | 5 | 1.1 |
| 2,001-3,000 | 0 | 0 |
| 3,001-5,000 | 0 | 0 |
| 5,000- | 0 | 0 |
| Total Samples | 470 | 100 |
| Total Average | 257 hours/year | |

Source: Ministry of Cooperatives, 1993

³ The cost of local-procured agricultural equipment significantly decreased in Yen terms.

⁴ From the amount of paddy expected to be processed by target KUDs at the time of project appraisal, the planned annual operating hours can be estimated at 1500 hour/year.

be the prime cause of the low utilization of RMUs. The structure of the rice distribution system, though it differs according to the cultivation sites or areas, is represented in Figure 1.

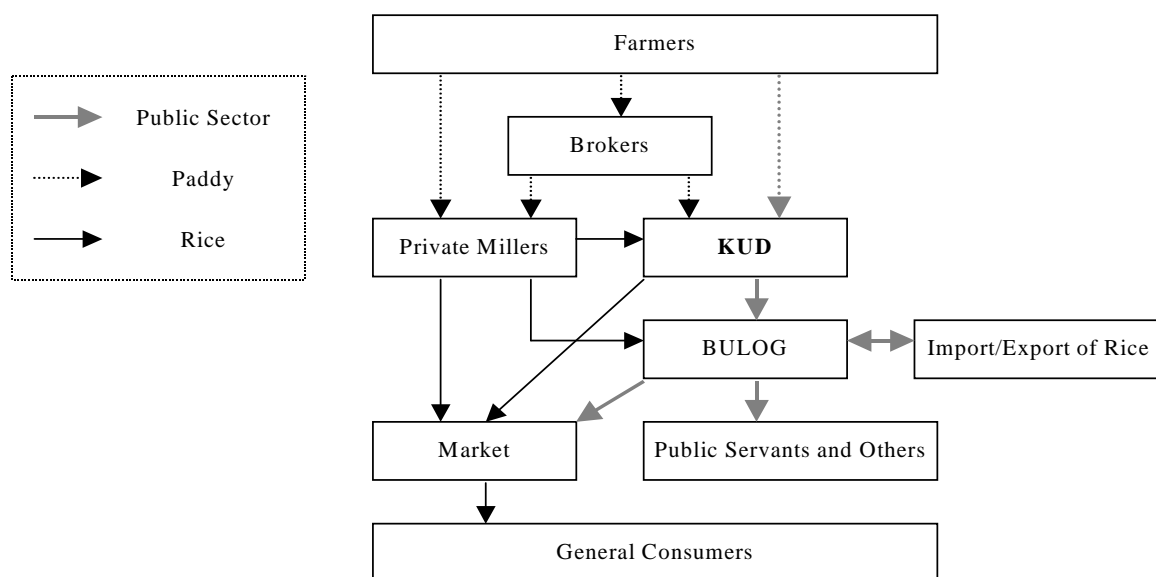


Figure 1: General Rice Distribution System of Indonesia

KUDs were expected to run commercial rice milling, which includes collecting paddy (rice in the hush) from farmers, drying and milling the rice and selling to BULOG (*Badan Urusan Logistik: the Food Procurement Agency*) through the public distribution system. The role of BULOG is i) to provide rice to public servants and military personnel, and ii) to stabilize market price of rice by releasing its stocked rice to the market when the market price is high.

However, most of the rice milling operation of target KUDs was involved into fee rice milling, which is small-scale (less than 50kg/operation) rice milling for the purpose of self-consumption of farmers. The annual average amount of fee rice milling was 258 tons/year (Table 2), which is quite large compared to the annual average operating hours of RMUs. Considering that 28% of supplied RMUs had a capacity of 2 tons/hour (2 TPH), the annual average operating hours of RMUs devoted to fee rice milling were calculated to be 221 hours/year, approximately 86% of the total annual average operating hours (257 hours/year). That number suggests that most of the operation was devoted to fee rice milling rather than to commercial rice milling.

Table 2: Fee Rice Milling at Target KUDs (Average during 1990-92)

| Distribution (ton/year) | Amount of Milled Rice for Fee Rice Milling | |
|-------------------------|--|------------|
| | KUD | % |
| 0 | 152 | 32.3 |
| 1-50 | 36 | 7.7 |
| 51-100 | 34 | 7.2 |
| 101-200 | 64 | 13.6 |
| 201-300 | 58 | 12.3 |
| 301-400 | 31 | 6.6 |
| 401-500 | 31 | 6.6 |
| 501-600 | 18 | 3.8 |
| 601-700 | 9 | 1.9 |
| 701-800 | 8 | 1.7 |
| 801-900 | 4 | 0.9 |
| 901-1,000 | 5 | 1.1 |
| 1,001-1,500 | 9 | 1.9 |
| 1,501-2,000 | 4 | 0.9 |
| 2,001-3,000 | 4 | 0.9 |
| 3,001-5,000 | 3 | 0.6 |
| 5,000- | 0 | 0 |
| Total Samples | 470 | 100 |
| Total Average | 258 tons/year | |

Source: Ministry of Cooperatives, 1993

Between 1990 and 1999, the national rice production was 32.2 million tons annually, on average, of which two-thirds (21.5 million tons) was thought to be consumed by farmers and the remaining one-third (10.7 million tons) distributed to general consumers. Of the distributed rice, BULOG purchased annually an average of 1,517 thousand tons.

BULOG sets the floor price for paddy in order to guarantee the minimum income of farmers, and obligates KUDs to purchase paddy from farmers at the floor price. In return, when purchasing rice, BULOG gives priority to KUDs over other millers, and purchases rice from KUDs at a higher price than it pays to non-KUDs. As a consequence of this system, approximately 80% of rice purchased by BULOG came from KUDs (Table 3).

Table 3: Purchase of Rice by BULOG, 1990-1999

Unit: Thousand Tons

| | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 |
|---------|-------|-------|-------|-------|------|------|-------|-------|------|-------|
| KUD | 987 | 1,165 | 2,065 | 1,668 | 710 | 510 | 1,243 | 1,738 | 189 | 2,151 |
| Non-KUD | 283 | 265 | 500 | 295 | 228 | 413 | 188 | 210 | 60 | 295 |
| Total | 1,270 | 1,430 | 2,565 | 1,963 | 938 | 923 | 1,431 | 1,948 | 249 | 2,446 |

Source: BULOG

While BULOG's purchase system was intended to encourage the commercial rice-milling activities of KUDs, it actually had adverse effects. BULOG's high price for KUDs' rice was attractive to private millers when it was above the market price, and BULOG usually set the purchase price higher than the market price in order to secure the required rice procurement. Under those conditions, private millers had a strong incentive to sell their rice to BULOG through KUDs in order to reap the benefits of the BULOG's purchase system. At the same time, KUDs could avoid business risk by purchasing already milled rice from private millers instead of milling rice by themselves. When KUDs' milled rice doesn't meet the quality standard, KUDs have to sell the low-quality rice on the market at a much lower price. Under these conditions, KUDs and private millers shared mutual interest and benefits.

The annual average amount of purchased paddy (313 tons; Table 4) yields about 203 tons of milled rice. On the other hand, the annual average amount of rice sold by KUDs was 771 tons. The difference of 568 tons was filled by rice purchased from private millers. It can be assumed that most of the KUD's major business was resale of rice rather than rice milling. Under the rice distribution system, economic incentives for KUDs to engage in commercial rice-milling activities were limited.

Table 4: Amount of Purchased Paddy and Rice Sold by Target KUDs

**Table 4: Amount of Purchased Paddy and Rice Sold by Target KUDs
(Average between 1990-92)**

| Distribution (ton/year) | Amount of Paddy Purchased | | Amount of Rice Sold | |
|----------------------------|---------------------------|------|---------------------|------|
| | KUD | % | KUD | % |
| 0 | 121 | 25.7 | 82 | 17.4 |
| 1-50 | 46 | 9.8 | 18 | 3.8 |
| 51-100 | 41 | 8.7 | 18 | 3.8 |
| 101-200 | 78 | 16.6 | 46 | 9.8 |
| 201-300 | 48 | 10.2 | 42 | 8.9 |
| 301-400 | 36 | 7.7 | 48 | 10.2 |
| 401-500 | 21 | 4.5 | 18 | 3.8 |
| 501-600 | 17 | 3.6 | 30 | 6.4 |
| 601-700 | 14 | 3 | 16 | 3.4 |
| 701-800 | 8 | 1.7 | 13 | 2.8 |
| 801-900 | 5 | 1.1 | 15 | 3.2 |
| 901-1,000 | 7 | 1.5 | 10 | 2.1 |
| 1,001-1,500 | 10 | 2.1 | 46 | 9.8 |
| 1,501-2,000 | 7 | 1.5 | 22 | 4.7 |
| 2,001-3,000 | 3 | 0.6 | 18 | 3.8 |
| 3,001-5,000 | 8 | 1.7 | 18 | 3.8 |
| 5,000- | 0 | 0 | 10 | 2.1 |
| Total Samples | 470 | 100 | 470 | 100 |
| Total Average | 313 tons/year | | 771 tons/year | |

Source: Ministry of Cooperatives, 1993

2.3.2 Weak Connection Between KUD and Farmers

Another constraint to the low utilization of RMUs was difficulty in collecting paddy from farmers (rice growers). In 1993, approximately one-third of the respondent KUDs did not have any transportation facilities necessary for paddy collection. Even if KUDs owned transportation facilities, they still encountered difficulties in collecting paddy from farmers, because private millers, who usually run their commercial rice-milling businesses over an extended period, had already established strong connections with farmers in the area. KUDs had developed limited connection with the farmers relative to private millers. The majority of respondent KUDs answered that strengthening connections with farmers was indispensable to improving commercial rice milling. Nowadays also, this weak connection is observed in collecting adequate amounts of paddy from farmers.

The difficulty of collecting sufficient paddy from farmers also resulted in the low utilization of procured dryers. The operating costs for small amount of paddy collected by KUDs were too high for the efficient operation of the dryers. It was found during this field survey that the majority of KUDs use dryers on a limited basis, for example during peak times, like the harvest period.

2.3.3 Competition with Existing Private Millers

In general, private millers had been in business for a long time before KUDs started rice milling, and the private millers were thought to have better experience and knowledge in all operational and management processes. Commercial rice milling involves not only rice milling but also paddy collection network, quality management, marketing, and analysis of market trends. However, KUDs were not considered competitive in terms of personnel experience and knowledge and lower rice-milling efficiency in terms of scale economy.

2.3.4 Mechanical Malfunction of Procured Equipment

The malfunctioning of procured equipment also caused the low utilization of RMUs. Ministry of Cooperatives,⁵ the executing agency, conducted an inventory survey of equipment in 1990, covering all 481 KUDs that received equipment⁶ under the project. The results are presented in Table 5.

Table 5: Conditions of Equipment Procured Under the Project in 1990

| Province | 1TPH RMU | | | 2 TPH RMU | | | Paddy Thresher | | | Dryer | | |
|--------------------------|------------|------------|------------|------------|------------|----------|----------------|-----------|-----------|-----------|-----------|-----------|
| | Total | Condition | | Total | Condition | | Total | Condition | | Total | Condition | |
| | | *Op. | *N-Op. | | Op. | N-Op. | | Op. | N-Op. | | Op. | N-Op. |
| West Java | 51 | 46 | 5 | 53 | 51 | 2 | 35 | 33 | 2 | 46 | 42 | 4 |
| Central Java | 28 | 28 | 0 | 0 | - | - | 0 | - | - | - | - | - |
| East Java | 7 | 4 | 3 | 0 | - | - | 0 | - | - | - | - | - |
| Jogjakarta | 72 | 30 | 42 | 75 | 75 | 2 | 24 | 18 | 6 | 20 | 18 | 2 |
| South Sulawesi | 112 | 111 | 1 | 7 | 7 | 0 | 22 | 0 | 22 | 25 | 2 | 23 |
| Bali | 30 | 0 | 30 | 0 | - | - | 0 | - | - | - | - | - |
| West Nuasatenggara | 44 | 3 | 41 | 0 | - | - | 2 | 2 | 0 | 1 | 1 | 0 |
| Total 7 Provinces | 344 | 222 | 122 | 137 | 133 | 4 | 83 | 53 | 30 | 92 | 63 | 29 |

*Op. = Operational, N-Op. = Not Operational

Source: Ministry of Cooperatives, 1990

Approximately 35% of the equipment, except for the 2 TPH RMU, was not operational one year after installation. It was reported that the mechanical design of some RMUs procured under the project had defects, and that the RMUs were initially inoperable. Some KUDs repaired their malfunctioning RMUs afterward, purchasing spare parts, and started to operate them.

On the other hand, there is a possibility that the rate of utilization of paddy threshers and dryers was lower in reality than the figures shown in Table 5. According to the executing agency and KUDs interviewed in this field survey, paddy threshers were not really accepted from the beginning by the farmers in some regions. Farmers usually thresh paddy in the same field where they harvest, and subsequently carry it to KUD or private millers by bicycle or walking. Since transportation was not always available in some regions, paddy with ear is too bulky to carry, and it makes more sense to thresh it in the field. Therefore, they preferred using traditional equipment in field to using thresher in KUD Office.

Procured dryers were also not utilized effectively by KUDs because of their limited ability to collect sufficient amount of paddy from farmers as mentioned earlier. In addition, some KUDs reported that they leased out RMUs to private millers in order to utilize the equipment effectively.

2.4. Impact

The expected impact of the project, i.e. improving rice self-sufficiency, organizational capacity of KUDs and income for the farmers is presumed limited, since utilization of project facilities and function of KUDs have been less than the expectation.

No negative environmental impact caused by the Project has been reported so far.

2.5. Sustainability

⁵ After the administrative reform in 1999, the Ministry of Cooperatives reformed to the State Ministry of Cooperatives, Small and Medium Enterprises.

⁶ Installation of equipment was started in 1989 and was completed in 1990.

2.5.1 Organization for Operation and Maintenance

Each KUD is responsible for operation and maintenance (O&M) of the agricultural equipment supplied to it under the project. KUDs conduct not only rice milling, but also various other businesses, such as distribution of chemical fertilizers, small banking for farmers, and collection of electricity bill payments at the community level. The majority of KUDs, however, are thought to have failed in developing those business activities because they are financially weak. According to the executing agency, the equity capital of KUDs is limited because capital investment from members is quite low. The Government has supported KUDs by providing a concessionary loan, but the majority of small-scale KUDs have difficulties in accessing the loan program owing to their low or non-existent credit rating.

2.5.2 Sustainability of the project

It is assumed that most of the supplied equipment is no longer operational, because their service life has been exceeded.⁷ In this site survey, approximately 90% of respondent KUDs stopped⁸ the operation of RMUs. Many targeted KUDs tried to replace worn-out RMUs with more flexible, small-capacity RMUs, but are facing difficulty because of the lack of financing.

However, it should be noted that some KUDs are still operating the supplied RMUs by maintaining and repairing them effectively. Some KUDs successfully replaced the supplied RMUs with more flexible small-capacity RMUs in order to provide rice-milling service to the community.

Relatively well-organized KUDs succeeded and are still engaged in the commercial rice-milling, while less-organized KUDs are either conducting fee-based rice milling or have completely moved out of the rice-milling business. It can be concluded that the majority of KUDs belongs to the latter category. Furthermore, the current government policy drastically changed the nature of government-reliant KUDs.

In 1998, the Government invalidated Presidential Instruction No. 4⁹ (enacted in 1984) and enacted Presidential Instruction No. 18¹⁰ in order to provide rural communities with broad opportunities to establish their own cooperatives without regional limitations. This deregulation reflected the transition from a producer-oriented to a consumer-oriented government policy, and was intended as a response to increasing demands from communities for their own cooperatives. It is assumed that approximately 20,000 cooperatives (Koperasi Tani) were newly established between 1998 and 2000.

In accordance with the new policy, the Government also established a regulation, "Inpress 8," in year 2000, which abolished BULOG's special rice purchase price for KUDs in order to equalize prices for both KUDs and non-KUDs. This regulation practically put an end to the KUDs benefit in rice-rice trading activity. As result, in 2001, BULOG in East Java Province, for example, procured 67% of rice from non-KUDs and 33% from KUDs. Some other major businesses -- such as the distribution of chemical fertilizer, which was once monopolized by KUDs -- were also deregulated, allowing other non-KUDs to participate. Under these rapidly changing circumstances, KUDs are now facing stiff competition to survive.

⁷ According to the executing agency, average service life of paddy threshers and dryers was 5 years, while that of RMU was 5-7 years.

⁸ Average operating years of RMU was 7 years, according to 2000 Survey.

⁹ Instruction No. 4 requires a community to establish one KUD, which covers approximately 9~10 villages.

¹⁰ Instruction No. 18 allows a community to establish cooperatives if there are more than 20 promoters.

3. Lessons Learned

For equipment supply projects, it is important to carefully assess the recipients' needs and capacity to operate and sustain the equipment.

When designing the project scope, the social and economic factors that may promote or constrain the achievement of project objectives -- such as potential competitors, industrial policies and farmers' behavior -- should be analyzed.

Comparison of Original and Actual Scope

| Items/Activities | Plan | Actual |
|---|---|--|
| I. Project Scope | | |
| Target number of KUD | - 243 | - 481 |
| A. Foreign Cost Portion | | |
| 1. Paddy Thresher (0.5 ton/hour) | - 1,509 units | - 83 units |
| 2. Dryer (6 tons/day) | - 1,310 units | - 92 units |
| 3. Rice Milling Unit (2 tons/hour) | - 112 units | - 137 units |
| 4. Rice Milling Unit (1ton/hour) | - 131 unit | - 344 units |
| 5. Consulting Services | n.a. | n.a. |
| B. Local Cost Portion | | |
| 1. Storage (2,000 tons capacity) | - 112 units | - 0 units |
| 2. Storage (1,000 tons capacity) | - 131 units | - 0 units |
| 3. Drying Floor and Kiosk | - 243 units | - 0 units |
| 4. Transportation Facilities | - 598 units | - 0 units |
| 5. Training | - 369 persons | - 961 persons |
| II. Implementation Schedule | | |
| 1. Consultant Contract | Dec. 1982 | Oct. 1985 |
| 2. Consulting Services | Dec. 1982 to Sep. 1983 | Oct. 1985 to Aug. 1990 |
| 3. Equipment Contract and Manufacturing of Equipment | Sep. 1983 to Feb. 1984 | Feb. 1988 to Apr. 1989 |
| 4. Installation of Equipment | Dec. 1983 to June 1984 | Jan. 1989 to July 1990 |
| III. Project Cost | | |
| Foreign currency | 5,800 mil. Yen | 2,696 mil. Yen |
| Local currency | 21,204 mil. Yen | 297 mil. Yen |
| Total | (59,925 mil. Rp) | (3,667 mil. Rp) |
| ODA loan portion | 27,004 mil. Yen | 2,993 mil. Yen |
| Exchange Rate | 5,800 mil. Yen 1 Rp. = ¥ 0.354 (1982) | 2,696 mil. Yen 1 Rp. = ¥ 0.081 (Weighted average rate) |

Independent Evaluator's Opinion on Equipment Supply for Pre and Post Harvest Services Project

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This project is very relevant for several reasons. First, even though the paddy productivity - particularly in Java - is one of the highest among the Asian countries – the post harvest efficiency is still quite low. This implies any improvement in paddy's production (and productivity) is not necessarily translated on the expansion of rice production.

Second, this inefficiency is also translated to a significant gap between rice and paddy prices where in term of monetary value no one – either farmer or trader or rice millers – gets benefit from it.

Thus this project is intended to boost rice production given paddy production (and productivity) and at the same time to improve the welfare of farmers (through some increases in paddy prices) or rice millers or traders or consumers (through reduction of rice prices without hurting the farmers). The former is also important for Indonesia in order to meet food security objectives particularly of the poor. The experiences during the crisis period at the end of 1997/98 shows that the rice price plays important roles in ensuring food security of the poor.

As stated in the report, this project has failed to meet its intended objectives. I agree with the evaluator that institutional factors play important role in explaining the failures. First, the Bulog's intervention and purchase system is one important discouraging factor. Second, heavy intervention to KUDs may also affect the effectiveness of the project.

In order to improve the effectiveness; this project should be managed in more transparent way and with broader and open participation. In the sense that this project should be opened for all rice millers not only for the KUDs but also private rice millers.

Institutional reform is also needed to remove all distortions in paddy and rice markets. The areas of reform comprise of Bulog's purchase system and the reduction of government intervention in the KUDs operation.