CLASSIFICATION

PROJECT EVALUATION SUMMARY (PES) – PART I

Report Control Symbol U-447

1. PROJECT TITLE	2. PROJECT NUMBER	3. MISSION/AID/W OFFICE
Farm Handtool/Blacksmith	696-0103	OAR/R

4. EVALUATION NUMBER (Enter the number maintained by the reporting unit e.g., Country or AID/W Administrative Code, Fiscal Year, Serial No. beginning with No. 1 each FY) RWA-EVA 83-1

☒ REGULAR EVALUATION ☐ SPECIAL EVALUATION

5. KEY PROJECT IMPLEMENTATION DATES			6. ESTIMATED PROJECT FUNDING		7. PERIOD COVERED BY EVALUATION	
A. First PRO-AG or Equivalent	B. Final Obligation Expected	C. Final Input Delivery	A. Total	$ 303,500	From (month/yr.)	March 1978
FY 78	FY 82	FY 82	B. U.S.	$ 214,400	To (month/yr.)	December 1982
					Date of Evaluation Review	June 1983

8. ACTION DECISIONS APPROVED BY MISSION OR AID/W OFFICE DIRECTOR

A. List decisions and/or unresolved issues; cite those items needing further study. (NOTE: Mission decisions which anticipate AID/W or regional office action should specify type of document, e.g., airgram, SPAR, PIO, which will present detailed request.)	B. NAME OF OFFICER RESPONSIBLE FOR ACTION	C. DATE ACTION TO BE COMPLETED
Project completed. Remaining input items will be transferred to other CAR/R projects as needed.	M.B. Bennett	1/1/84

9. INVENTORY OF DOCUMENTS TO BE REVISED PER ABOVE DECISIONS

- ☐ Project Paper
- ☐ Financial Plan
- ☐ Logical Framework
- ☐ Project Agreement
- ☐ Implementation Plan e.g., CPI Network
- ☐ PIO/T
- ☐ PIO/C
- ☐ PIO/P
- ☒ Other (Specify) N/A
- ☐ Other (Specify) _____

10. ALTERNATIVE DECISIONS ON FUTURE OF PROJECT

- A. ☐ Continue Project Without Change
- B. ☐ Change Project Design and/or ☐ Change Implementation Plan
- C. ☒ Discontinue Project

11. PROJECT OFFICER AND HOST COUNTRY OR OTHER RANKING PARTICIPANTS AS APPROPRIATE (Names and Titles)

Eugene Chiavaroli, AID Affairs Officer

Balihuta Appolinaire, Le Directeur de la Forge Gouvernementale.

12. Mission/AID/W Office Director Approval

Signature: Norman L. Olsen

Typed Name: Norman L. Olsen

Date: 7/11/83

PDAAQ494

Executive Summary.

Farm Hand Tools Project

1. What constraints does this project attempt to overcome and who does it constrain?

This project improved certain technical and vocational skills appropriate to Rwanda's development needs. Specifically, it transferred blacksmithing skills to qualified individuals so that they could repair and manufacture implements and utensils used primarily by Rwanda's rural population.

2. What technology does the project promote to relieve this constraint?

This project provides for the transference of technical and vocational skill to apprentice blacksmiths by means of a nine month training course. During this blacksmithing course, apprentices are provided with food, lodging, tuition and per diem.

3. What technology does the project attempt to replace?

The present project upgraded current smithing techniques by introducing more recent ones.

4. Why do project planners believe that intended beneficiaries will adopt the proposed technology?

It was initially believed that the demand for farm hand tools was such that a significant market existed for locally made, smithed items. Because of the relatively low cost of new imported items the size of the hand tool market now appears significantly smaller than initially anticipated. There does appear to be a market for handmade household and decorative type items. It is uncertain if the trainees have adequate access to metal and the motivation to exploit the market.

5. What characteristics do intended beneficiaries exhibit that have relevance to their adopting the proposed technology?

The trained blacksmiths all presumably have an interest in smithing and the operation of small private businesses. Questionnaires were given to prospective students prior to their acceptance into the training course to determine their motivation level.

6. What adoption rate has this project or previous projects achieved in transferring the proposed technology?

The transference of improved technical and vocational skills has been slow largely due to a lack of markets for hand forged farming products. While the acquisition of forging skills by the blacksmiths was readily achieved, the marketing of these skills has been more difficult. Future project designs of this type should make provisions for organizational support activities.

7. Will the project set in motion forces that will induce further exploration of the constraint and improvements to the technical package to overcome it?

The Farm Hand Tools project has encountered unexpected project extension constraints which have caused AID/Rwanda to reappraise certain aspects of Rwanda's technical and vocational needs. While improvement in Rwanda's overall skill level is desirable, feasibility studies should be carried out prior to a project's implementation in order to ascertain market demand for the skills being transferred. In the instance of the Farm Hand Tools project, the transferred skills were inappropriate due to their lack of cost competitiveness; the high quality and low price of imported farm hand tools meant that imported products were superior to hand forged products. In contrast, a smithing project which stressed the production of non-import competing goods such as bedframes, metal safes, etc. might have resulted in the speedy adoption of project transferred skills. Finally, skill improvement projects should be accompanied by product promotion activities.

8. Do private input suppliers have an incentive to examine the constraint addressed by the project and come up with solutions?

Private input suppliers always have an incentive to improve their own skills or that of their staff, if these improvements will reduce production costs. This project, however, improved vocational skills that were not easily applied to the production of cost competitive products. The blacksmiths (i.e., the private input suppliers) should, therefore, be oriented to new smithing markets other than that of farm hand tools.

9. What delivery system does the project employ to transfer the new technology to intended beneficiaries?

The project improved the technical and vocational skills of apprentice blacksmiths by means of three nine-month smithing courses. Each course successfully transferred smithing skills to a group of students and the training was more than adequate from a technical point of view.

10. What training techniques does the project use to develop the delivery system?

The training of the blacksmiths involves a nine-month course in which smithing materials, food, lodging, per diem, and tuition are provided to the students. All financial obstacles which might have inhibited a student's successful completion of the course were removed. The training was done in a formal school situation in which a wide range of smithing techniques, including the most advanced, were transferred to the students.

Farm Hand Tools Project (690-0103) - Evaluation Report

Introduction

This evaluation was undertaken in June 1983, approximately six months after the third and final group of blacksmiths had completed their training course at Nyabisindu. Because of the limited time available, and the difficulty of contacting the former students, who had returned to their communes, it was not possible to interview a representative sample. The following report is based on interviews with some of the students, as well as staff of the Nyabisindu Training Center, and Government officials. It describes the major problems faced by the blacksmiths and proposes actions to help them become established in their trade. The final section of the report mades recommendations for consideration in the design of future projects of this type.

Background

The Project Agreement for the Farm Hand Tools Project was signed in March 1978. According to this document, the goal of the Project was "the improvement of technical and vocational skills appropriate to Rwanda's development needs", a goal which was to be achieved by "training blacksmiths in skills necessary to repair and manufacture implements and utensils used primarily by Rwanda's rural population"

The blacksmith training courses were held at Nyabisindu, in a training center which had been established with the assistance of Swiss aid in 1970. The Swiss Project which ended in 1976, had trained 66 blacksmiths, a number of whom continued to work at the forge producing farm implements and decorative items. Under the Farm Hand Tools Project, the center was renovated and extended, and three 9-month training courses were held to teach prospective blacksmiths "more recent smithing techniques". The duration of the project was to have been four years, but due to construction delays, it was extended to December 1982. Funding for this project was more than adequate with the illustrative budget and actual expenses (both AID and GOR) as follows:

	Illustrative	Actual	Balance
Technical Assistance	$ 48,955	$ 46,000	$ 2,955
Participants Support Costs	45,500	38,500	7,000
Commodities	49,600	53,600	(4,000)
Construction Costs	50,000	45,000	5,000
Additional Training Costs	109,445	94,800	14,645
Total	$303,500	$277,900	$25,600

Commodity overruns were caused by the need to replace one Toyota pick-up towards the end of the project. GOR contributions were forthcoming on a timely basis.

Summary of Findings

Sixty-six students have graduated from the training courses (24 in 1980, 22 in 1983, and 20 in 1982), and all those interviewed-ex-students, staff of the Nyabisindu center, and Government officials-felt that the training was more than adequate from a technical point of view. Nonetheless, this Project has had limited success in achieving its stated objectives.

The major problems arose when the students set out on their own to find employment. It was envisioned that they would ultimately establish forges, if not in their own communes, at least in a rural area. However, at the time of this evaluation only 23 of the Nyabisindu graduates traced had found employment using the skills acquired during their course, and only two of these were working in a forge in a rural area. Fourteen of the 23 were teaching, rather than practicing, their trade. The following list illustrates the sources of employment found by the blacksmiths that were traced:

Employment	# of Students
Teaching in CERAIs	9
Teaching in other schools	5
MINITRAP, Ponts et Chaussees	1
MINISANTE	1
UNR (soldaring and maintenance)	1
INR (accounting - Learnt at Nyabisindu)	1
ELECTROGAZ	1
Jewellry store in Kigali (working gold and silver)	1
Local forge near Gitarama	1
Own forge near Butare (Part time)	1
Own forge in Kigali	1

There may in fact be other students who have established forges in their communes, but it seems unlikely that this phenomenon is widespread, since none of those interviewed were aware of it. This assumption is supported by an evaluation carried out nine months after the graduation of the first class, which found that only two of the 24 students were practicing their trade. Thus it seems quite likely that the 23 students traced during this evaluation comprise the majority, if not the total, of the Nyabisindu blacksmiths who actually found employment.

Thus, while the Project purpose of training blacksmiths was clearly achieved, there has been only limited success in attaining the goal of improving technical and vocational skills appropriate to Rwanda's development needs, since, for reasons discussed below the majority of the blacksmiths have not been able to apply the skills they acquired.

Constraints on the Achievement of the Project Goal

Probably the major weakness in the design of this Project was the assumption that once the blacksmiths were trained they could go back to their commune and, given a place to work by the Bourgmestre, could set up shop repairing, producing and selling tools. Several factors which invalidate this assumption are discussed below.

A. Lack of Raw Materials

This reason has been cited by several of the students. But it does not seem to be the only, or in fact the major reason for lack of success in establishing a forge. In the first place, the traditional blacksmiths have found sources of supply, mainly using broken tools, and given that some 1.3 million tools are imported annually, there must be a significant number of old tools available. Secondly, the number of vehicles in circulation, and thus presumably of wrecks, is increasing annually, providing a fair supply of metal. Thus while the absolute shortage of metal may not be the overriding constraint, temporary and regional shortages do occur, particularly in isolated rural areas. Difficulties related to the cost and logistics of collecting the metal and transporting it to rural areas are undoubtedly a constraint, especially for those blacksmiths who work on their own.

B. Lack of Motivation

Apparently no provisions were made to ensure that only well motivated candidates would be accepted in the project. Traditionally Rwandan apprentices (in carpentry, sewing or other occupations) pay a fee to learn their trade, an approach adopted by several projects such as CEFORMI (Centre de Formation micro-industrielle) which trains carpenters and metal workers and which has an excellent placement record. In contrast provision of free food, lodging and tuition, as well as a per diem, seems guaranteed to attract a large number of students who did not necessarily have any interest in working as blacksmiths.

Furthermore, since no previous blacksmithing experience was required, the aptitude of the students was not tested. Although the questionnaire given to prospective students was supposed to indicate their motivation and aptitude, or lack thereof, it would not have been difficult for students to guess the "appropriate" answers. In the blacksmith's trade, which requires arduous work for relatively little gain, and in which even the traditional smiths in general only work part time, a high level of motivation is an absolute prerequisite.

C. Lack of a Market for Forge Products

Market demand for the items produced by the blacksmiths appears to have been assumed throughout this project, and was never questionned at the design stage or in subsequent evaluations. However, the fact that hoes, machetes, and other tools are needed in rural areas, did not necessarily mean that there was a market for the blacksmith's products. In the first place, machine made, mass produced tools tend to be of a higher quality

than those made by more traditional methods. Secondly, it is difficult for a blacksmith trying to earn a living by his trade to compete with the prices of imported products.

The difficutly of competing with imports is illustrated by the following cost comparison. An imported hoe retails for 320 RWF in Kigali. Given that a blacksmith takes approximately 2 days to make this tool, in addition to half a day to collect charcoal and scrap metal, the blacksmith's remuneration is less than 13 RWF per day, even prior to the deduction of raw material costs. This is not much more than the minimum wage of an unskilled labourer, and is significantly less than most domestics and chauffeurs in Kigali receive for physically less demanding work.

It is noteworthy that the blacksmiths who successfully established business mainly produced non-import competing goods. Christophe Sewabo, for instance, a 1981 Nyabisindu graduate, made local charcoal stoves and hammers for food mills, and Fulgence Ndekezi, from the same class, made lances and swords as well as some tools. This suggests that while there may be a large demand for farm hand tools in Rwanda, the Nyabisindu trained blacksmiths, by and large, cannot technically and/or economically complete with imported products.

It is true that the 22 blacksmiths trained under the Swiss project, and now working in the Nyabisindu forge, produce and sell a large number of farm hand tools. Many of these tools, however, are purchased by the Ministry of Finance for the Penitentiary. Furthermore, a large percentage of the remaining production of this forge consists of decorative items sold through the Comptoirs de Vente Artisanats. But even with Governement contracts for tools and craft items, and certain economies of scale, this enterprise still requires subsidisation from the GOR. Admittedly, costs could be trimmed; salaries are high, with the blacksmiths earning from 12,000 to 17,500 RWF per month, and vehicle use could certainly be curtailed. Nevertheless, the inability of this enterprise to achieve financial autonomy casts further doubt on the economic viability of rural farm hand tool production.

While it may be difficult for the students trained at Nyabisindu to market the tools that they were taught to produce, there are other possibilities open to them. One market in which they would have a comparative advantage (if they could obtain enough metal) is that for large imported items which have a very high transportation cost, such as bed frames and window frames. Other possibilities, mentioned in the 1979 project evaluation report, include fish dryers and water distillers. Most of these products will have their markets primarily in urban rather than rural areas, and since this coincides with the primary source of supply of raw materials, location in an urban area would probably be economically more rational.

The failure to carry out a market survey, for a project whose success depended on the ability of its participants to market their products, has been a major oversight.

Actions Needed to Aid Nyabisindu - Trained Blacksmiths to practice their Trade

The blacksmiths could gain from organizational support, both in obtaining their raw materials and in marketing their products. The most appropriate level at which this support could be provided is the Prefecture, since:

1. Few communes have more than two blacksmith trainees, whereas all the prefectures have between eight and thirteen, except Cyangugu, Byumba, and Kigali, which have two, four and five respectively.

2. Each prefecture already has an Inspecteur des Artisanats, who is responsible, among other things, for the development of local crafts and trades. This official could be given responsibility for establishing a system to provide scrap metal to the blacksmiths, at a rate sufficient to cover costs.

3. In all but two of the prefectures Comptoirs de Vente Artisanats provide a sales outlet for local craftsmen. Products handled by these establishments could be extended to include those mentioned above. These outlets could also take a more active marketing role by, for example, advertising the products and repair services the blacksmiths could provide.

Disposal of Project Inputs

The major inputs to this project, apart from technical assistance, were the construction of a new building, renovation of existing buildings and provision of dormitory furniture and forge and kitchen equipment.

The new building consists of one large room which served as a classroom and which is now used to exhibit items produced at the forge, another room which served as a dormitory and which is now used for storage, and several smaller rooms which function as offices for the forge director, accountant, secretary, etc. The renovated older building, is being used as a workshop by the blacksmiths who work full time producing tools, household articles and tourist items.

The dormitory furniture, consisting of 25 beds, mattresses and bedding sets, is presently unused and should be reallocated, (perhaps to the Kabuye Health center, or another center financed by AID under the section 206 program).

Very little forge equipment was seen since the blacksmith trainees have taken their tool kits with them. There were 5 anvils, approximately 15 hammers and several traditional mechanical bellows, which had been purchased by AID, and which were lying unused in a store room. These items should be transferred to one of the AID financed CERAIs with has chosen the blacksmith training option.

Recommendations for Future Projects of this Type

1. A market survey should be undertaken to study supply and demand factors, including, but not limited to, quality and prices of imports vis a vis quality and production costs of locally made items.

2. Admission requirements should be more stringent in order to ensure that only well-motivated students participate in the courses. A nominal fee or a requirement that students produce a certain number of articles for the center should be considered.

3. Follow-up activities, including continued logistical support after graduation, should be incorporated into the project from the outset. Short refresher courses after six or twelve months would enable ex-students to get advice from center staff, or additional training in specific areas, and could aid successive classes in avoiding some of the difficulties their predecessors had encounterd. Logistical support should include assisting the blacksmiths in obtaining metal and charcoal, and in marketing their goods. These activities would facilitate the monitoring of the ex-students for evaluation purposes and would also enable timely modifications in project implementation to be made if necessary.