

A.I.D. EVALUATION SUMMARY - PART I

72005

- 1. BEFORE FILLING OUT THIS FORM, READ THE ATTACHED INSTRUCTIONS.
- 2. USE LETTER QUALITY TYPE, NOT "DOT MATRIX" TYPE.

IDENTIFICATION DATA

A. Reporting A.I.D. Unit: Mission or AID/W Office <u>USAID/Manila</u> (ES# _____)	B. Was Evaluation Scheduled in Current FY Annual Evaluation Plan? Yes <input checked="" type="checkbox"/> Slipped <input type="checkbox"/> Ad Hoc <input type="checkbox"/> Evaluation Plan Submission Date: FY <u>91 Q 2</u>	C. Evaluation Timing Interim <input type="checkbox"/> Final <input type="checkbox"/> Ex Post <input type="checkbox"/> Other <input checked="" type="checkbox"/>
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D. Activity or Activities Evaluated (List the following information for project(s) or program(s) evaluated; if not applicable, list title and date of the evaluation report.)					
Project No.	Project /Program Title	First PROAG or Equivalent (FY)	Most Recent PACD (Mo/Yr)	Planned LOP Cost (000)	Amount Obligated to Date (000)
	Impact Evaluation - ESF Infrastructure Program 1980-1991 May 1991				

ACTIONS

E. Action Decisions Approved By Mission or AID/W Office Director	Name of Officer Responsible for Action	Date Action to be Completed
Action(s) Required		
1. Review recommendations in the 1989 process evaluation concerning construction materials, location of high schools, use of local contractors and monitoring of school maintenance to incorporate improvements in these areas in all school subprojects planned for the remainder of the program.	L. Aldovino	8/30/91
2. Expedite provision of laboratory equipment for high schools designed with such facilities.	L. Aldovino	8/30/91
3. Improve economic standards for road selection.	L. Aldovino	8/30/91
4. Assure that the effectiveness of road improvement sub-projects in Mindanao is examined/studied prior to road activities in that area.	L. Aldovino/	8/30/91
5. Develop and implement a work plan for implementing the recommendations from the SGV financial evaluation of municipal markets.	R. Dimayuga/ J. Starnes	7/31/91
6. Thoroughly examine alternatives to current implementation arrangements for the design of the follow-on program, particularly mechanisms that would give greater responsibility for implementation of subprojects to capable local government units.	J. Starnes	7/31/91

(Attach extra sheet if necessary)

APPROVALS

F. Date Of Mission Or AID/W Office Review Of Evaluation:	(Month)	(Day)	(Year)
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G. Approvals of Evaluation Summary And Action Decisions:			
Name-(Typed)	Project/Program Officer	Representative of Borrower/Grantee	Evaluation Officer
	Leroy Purifo	Ino P. Aldovino	Sulpicio S. Roco
Signature			Mission or AID/W Office Director (Acting)
			John A. Patterson

ABSTRACT

H. Evaluation Abstract (Do not exceed the space provided)

The impact evaluation serves as a follow-on to a process evaluation of the ESF Infrastructure Program conducted in 1989. The results of the two evaluations should contribute to the planning of future ESF infrastructure programming.

The evaluation assessed the social and economic impact of the ESF Infrastructure Program in the Philippines, which had completed over 3,400 various small-scale subprojects nationwide since 1980, under six individual projects. The evaluation examined the extent to which the major categories of ESF subprojects -- schools, roads, markets and other subprojects -- have affected economic conditions and the standard of living of communities affected by these activities to see where they have been most effective as well as least effective.

Survey work was first conducted covering a random sample of schools and roads and all twenty-three completed markets under the program. In the communities where these subprojects were located, a random sample of households was selected and over a total of 1,900 individuals were interviewed. The survey results, including the team's findings from their own field visits, were used in the analyses for this evaluation.

The evaluation generally concluded that despite the political origins of the ESF Program and the differing GOP and U.S. perspectives on the ownership of these funds, the program has been used for remarkably sound development purposes. Overall, it concluded that it is difficult to imagine a better use of the funds which would have a more tangible, greater or more immediate impact on the social and economic conditions of local communities. The major conclusions and recommendations of the evaluation follow:

1. School construction was the most consistently successful element of the ESF projects and should continue to be a major part of future ESF infrastructure programs.
2. Many road subprojects provided sound economic and social benefits. With improved economic standards for road selection, funding for road improvements should continue under future ESF infrastructure programs.
3. Future ESF programming should provide funding for markets, following closely the lessons learned from the present program, especially on market design, management and financial arrangements.
4. Slaughterhouses and solid waste facilities have been unsuccessful. Hospitals in more developed provinces have contributed to the overall provincial health care system. Other types of subprojects should be considered under future ESF projects should they meet certain criteria designed to ensure their economic and social soundness, financial sustainability and/or positive impact on the private sector.
5. Overall program impact should be increased by examining/adopting alternatives to current implementation arrangements and transferring of management responsibility and funds for small-scale infrastructure subprojects to capable local government units.

COSTS

I. Evaluation Costs

1. Evaluation Team		Contract Number OR TDY Person Days	Contract Cost OR TDY Cost (U.S. \$)	Source of Funds
Name	Affiliation			
Christopher Hermann	USAID/W	27	7,000	Mission OE
Richard Allen	N/A (PSC)	20	15,750	Proj. Design
Felisa Fernandez	EDF	20	}12,392.86*	}Proj. Design
Eliseo Mindoro	EDF	20		
Elenita Dela Cruz	EDF	10		

*Includes other support services, i.e., secretarial, report preparation, reproduction, etc.

2. Mission/Office Professional Staff

Person-Days (Estimate) 10

3. Borrower/Grantee Professional

Staff Person-Days (Estimate) 5

A.I.D. EVALUATION SUMMARY - PART II

SUMMARY

J. Summary of Evaluation Findings, Conclusions and Recommendations (Try not to exceed the three (3) pages provided)

Address the following items:

- | | |
|--|--|
| <ul style="list-style-type: none"> • Purpose of evaluation and methodology used • Purpose of activity(ies) evaluated • Findings and conclusions (relate to questions) | <ul style="list-style-type: none"> • Principal recommendations • Lessons learned |
|--|--|

Mission or Office:

Date This Summary Prepared:

Title And Date Of Full Evaluation Report:

The evaluation assessed the social and economic impact of the ESF Infrastructure Program in the Philippines. The evaluation was designed to look at the program as a whole, rather than at the individual projects. It examined the extent to which the major categories of ESF subprojects -- schools, roads, markets and other subprojects -- have affected economic conditions and the standard of living of communities affected by these activities. The evaluation was primarily concerned with the final results of the infrastructure subprojects to see where they have been most effective as well as least effective. The results of the evaluation should contribute to the planning of future ESF infrastructure programming.

This impact evaluation serves as a follow-on to a process evaluation of the ESF Infrastructure Program which was conducted in 1989. In preparation for the impact evaluation, survey work was undertaken in three areas of the country -- Luzon, Visayas and Mindanao. A sample of schools and roads were randomly selected in these areas, and all twenty-three completed markets under the program were included in the survey. In the communities where these subprojects were located, a random sample of households was selected and over 1,900 individuals were interviewed. The survey results, including the team's findings from their own field visits, were used in the analyses for this evaluation.

The ESF Infrastructure Program covers six individual projects that have been implemented over an eleven-year period beginning in 1980. The six projects and their purpose are as follows:

1. Elementary School Construction (completed) - To improve community access to basic elementary education throughout the Philippines.
2. Clark Access Road (completed) - To provide access to a portion of the reverted baselands at Clark, including the Sacobia resettlement area.
3. Municipal Development Fund (completed) - To improve social and economic conditions in base-impact areas of the country through infrastructure activities responsive to locally established priorities at the municipal/city level.
4. Markets (completed) - To construct/improve market facilities in five cities of the country.
5. Regional Development Fund (ongoing) - To provide ESF funds for high priority, growth-related infrastructure projects nationwide.
6. Project Design (ongoing) - To design development projects/activities for ESF financing and provide support to the other ESF infrastructure projects.

By the completion of the ongoing projects on August 30, 1992, the ESF program will have provided some \$200 million in funding for school buildings, road improvements, municipal markets and a variety of other small-scale capital development sub-projects. These sub-projects are distributed nationwide; however, Region III (Central Luzon) has received a major portion of program funds, reflecting the original intention of the program to improve social and economic conditions in the communities around the Clark and Subic U.S. military bases.

Despite the political origins of the ESF program and the differing GOP and U.S. perspectives on the ownership of these funds, the program has been used for remarkably sound development purposes. The results of the program have been largely beneficial and have produced important social and economic benefits for poorer segments of the population. School construction is clearly the most successful element of the program. Road improvements have also been generally successful, despite a number of sub-projects of highly questionable utility. The results for the municipal markets and various "other" sub-projects (e.g., slaughterhouses, hospitals, drainage and flood control works) are very mixed. Overall, it is difficult to imagine a better use of these funds which would have a more tangible, greater or more immediate impact on the social and economic conditions of local communities.

Schools

More than 2,300 school buildings have been constructed nationwide through the ESF program. The schools have been the most consistently successful element of the program and have had an immediate and direct beneficial impact on the local community. The presence of an adequate school building constitutes an important contribution to the standard of living in these communities, as reflected in the high value attributed to the schools by public officials and the local population. The schools also contribute to the national need for improving the educational sector. Elementary, secondary and vocational school construction should, therefore, be a major part of any future ESF infrastructure program.

Roads

Over 1,000 road improvement sub-projects have been completed thus far. Many ESF roads are well constructed and are located in areas that increase access to markets and facilitate reliable transportation. However, farmers and agricultural workers, who should be most knowledgeable about the effects of ESF road improvements, discount the magnitude of the impact. It appears that roads are more effective in increasing current levels of production under existing farming systems than in inducing major changes toward adoption of new farming systems.

The ESF road improvement program appear to have a comparatively greater impact in the middle economic range of Philippine provinces. Similarly, the effectiveness of the roads found in other provinces seems to be lacking in Mindanao. Feeder road projects which improve access of rural communities to local marketing centers appear to have a consistently higher impact than other types of improvements.

The overall impact of the ESF road improvement program is diminished by too large a number of poorly selected and/or poorly constructed roads. This reflects the strong political interests affecting selection of sub-projects especially during earlier years of the program. Many road improvements sub-projects were not sound investments and have not, nor in some cases, will ever generate adequate economic or social benefits to justify their construction.

The results of the impact evaluation clearly support continued funding for road improvement sub-projects as part of a future ESF infrastructure program. However, standards for the selection of projects need to be based on a stronger economic footing. Improvement of feeder/farm-to-market roads and roads linking rural market towns should be given high priority in future program funding.

Markets

The large majority of completed ESF funded markets have been demonstrated to be on an unsound financial footing. The current financial condition of many markets undercuts the original objective of developing a facility which generates revenue for the municipal government.

Poor maintenance practices, inadequate refuse disposal and failure to correct improper drainage systems further reduces the impact of the markets. In particular, such inadequacies diminish the market's longer-term contribution to improving health and sanitation conditions.

The local government's poor financial performance of the markets and the general mismanagement of a number of facilities, including poor maintenance, reflect the weak capabilities of the municipalities to operate a facility that should be a profitable business. Apparently, the program has not explored possibilities for private sector alternatives to municipal-owned and operated markets.

However, poor financial management of the markets is largely irrelevant to their near-term socio-economic impact. Markets have encouraged new business formation and generated employment. Though the markets appear to have contributed to the profitability of the businesses, external economic conditions exerted a much more powerful influence. There is also evidence that the markets have facilitated, to some extent, commerce within the province and/or region; resulting in a better supply of consumer goods. The markets have also increased competition among stall operators and between stall operators and ambulant vendors. Though this results in lower business volume or lower earnings for the individual business operator, competition typically assures that consumers receive reasonable prices.

The increase in ambulant vendors reflects a form of employment generation around the market. In effect, this employment spreads the consequences of a depressed economy between those who may have a viable business (i.e., the stall operators) and those who might otherwise be unemployed (i.e., the ambulant vendors).

The markets' impact on improving health and sanitation conditions is equally double edged. On the one hand, the conditions in a number of these markets clearly do not meet acceptable public health standards. On the other hand, conditions in the old markets were reportedly much worse. This relative improvement will diminish over time - and at a fairly rapid pace - when markets are poorly maintained as many currently appear to be.

Future ESF programming should include funding for markets, following closely the lessons learned from the present program, especially concerning market design, management of the facility and financial arrangements and performance. Future support for market construction should explore possibilities of engaging the private sector in owning and operating the facility.

Other Sub-projects

The importance of these sub-projects in the overall program is greater than their actual cost would indicate.

Regarding expansion of regional or provincial hospitals, there may indeed be better uses of ESF funds for infrastructure development which would have a more immediate or widespread impact on the health status of the poor. However, in relatively more developed regions or provinces, such as Region III, hospitals play an important part in the provincial health system by supporting health care delivery at lower organizational levels.

The ESF-funded slaughterhouses and solid waste facilities have definitely been the white elephants of the program. The amount of money involved is a relatively small proportion of the program. However, in absolute terms, these projects constitute approximately \$900,000 in program funds. As painful as that is, the more serious loss might well be the damage such failed projects do to the credibility of the program, to say nothing of the efforts of the GOP and USAID.

Future ESF infrastructure programming should include funding for "other" types of projects that: a) meet requirements for economic and social soundness, b) play a well defined and justifiable role in expanding essential social services commensurate with the level of development and needs of the community they serve, c) will receive adequate budget to operate public facilities effectively, or d) develop infrastructure facilities that address constraints to private business development and/or have high employment generation potential.

Increasing Program Impact

The ESF Infrastructure program spans two GOP administrations and changes in program procedures and management have occurred with the change in governments. Based on earlier experience, program management has taken positive steps taken to improve the effectiveness and impact of the program. This includes eliminating funding for small barangay roads, improving the standards for feasibility studies of sub-projects and attempting to streamline the implementation process.

In this program, the pace of implementation is central to increasing program impact. Measured in real terms, approximately 75% of the expenditures of the program were accomplished between 1982 and 1986. In the past four and half years, only the remaining 25% of total expenditures were made. Comparing operating costs to expenditures provides a rough measure of program efficiency. For the 1982 to 1986 period, the average annual percentage increase in real expenditures was 14.1%. For 1987 through 1991, the average for this period is 5.2%, roughly a third of the pace during the preceding period. Regarding operating efficiency, current operating costs of the program are estimated to be at least \$1,000,000 per year. Using 1990 expenditures (i.e., the best performance in recent years), this means that it costs one dollar to spend thirteen dollars.

The decline in the real output of the program during the past four and half years is significant and has reduced the overall impact of the program as a consequence. Therefore, extension of the PACD dates for the Rural Development Fund and the Project Design Project is not recommended. Alternatives to the current implementation arrangements for the program should be explored before proceeding with any follow-on activities. Particular attention should be given to mechanisms that would transfer management responsibility and funds directly to the development budgets of capable local governments for small scale infrastructure projects.

ATTACHMENTS

K. Attachments (List attachments submitted with this Evaluation Summary; always attach copy of full evaluation report, even if one was submitted earlier; attach studies, surveys, etc., from "on-going" evaluation, if relevant to the evaluation report.)

Copy of full evaluation report.

COMMENTS

L. Comments By Mission, AID/W Office and Borrower/Grantee On Full Report

Comments of ESFS are included in the evaluation report as Annex E.

USAID had minor comments on the report which were discussed with the team leader and incorporated into the final report.

X
73004

IMPACT EVALUATION

**ECONOMIC SUPPORT FUND
INFRASTRUCTURE PROGRAM:
1980 to 1991**

May 1991

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EXECUTIVE SUMMARY

This is an evaluation of the social and economic impact of some 3,300 small scale infrastructure sub-projects funded through the ESF program. The ESF Infrastructure Program covers six individual projects that have been implemented over an eleven years period beginning in 1980. By the completion of the current projects on August 30, 1992, the ESF program will have provided some \$200 million in funding for school buildings, road improvements, municipal markets and a variety of other small-scale capital development sub-projects. These sub-projects are distributed nationwide; however, Region III (Central Luzon) has received a major portion of program funds, reflecting the original intention of the program to improve social and economic conditions in the communities around the Clark and Subic U.S. military bases.

Despite the political origins of the ESF program and the differing GOP and U.S. perspectives on the ownership of these funds, the program has been used for remarkably sound development purposes. The results of the program have been largely beneficial and have produced important social and economic benefits for poorer segments of the population. School construction is clearly the most successful element of the program. Road improvements have also been generally successful, despite a number of sub-projects of highly questionable utility. The results for the municipal markets and various "other" sub-projects (e.g., slaughterhouses, hospitals, drainage and flood control works) are very mixed.

Quantitative estimates or measures of impact the ESF sub-projects have had on economic and social development cannot be made due to the lack of adequate program monitoring data. Nonetheless, it is difficult to imagine a better use of these funds which would have a more tangible, greater or more immediate impact on the social and economic conditions of local communities.

Schools

More than 2,300 school buildings have been constructed nationwide through the ESF program. In the case of elementary and secondary schools, a number of factors come together to contribute to their high impact: a) the growing size of the school age population, b) the significant shortages of school facilities, and c) the development of a relative simple design for a highly durable structure which can easily be adapted to site requirements and is delivered as a complete package (i.e., painted, furniture, etc.).

ESF school construction is the most consistently successful portion of the overall program. The schools have an immediate and direct beneficial impact on the local community. The presence of an adequate school building constitutes an important contribution to the standard of living in these communities, as reflected in the high value attributed to the schools by public officials and the local population.

The schools also contribute to the national need for improving the educational sector. It is not an exaggeration to view the ESF elementary and secondary schools as making a direct and essential contribution to producing an educated labor force. For the country to expand its use of more sophisticated technologies necessary to increase production efficiency and competitiveness, it will require adequate numbers of educated workers who are able to acquire the skills needed to use these technologies. Elementary, secondary and vocational school construction should, therefore, be a major part of any future ESF infrastructure program.

Roads

Over 1,000 road improvement sub-projects have been completed thus far. When the ESF road improvements are well constructed according to design standards; when they are located in areas that increase access to markets and facilitate reliable transportation of goods and passengers; and when they are maintained even to minimal standards; they provide the types of benefits expected. The impact evaluation team concludes that a majority of ESF roads meet these conditions.

This conclusion should be tempered, however, by other findings of the evaluation. Farmers and agricultural workers, who should be most knowledgeable about the effects of ESF road improvements, discount the magnitude of the impact. This is most evident with respect to inducing major changes in farming systems. Rather, it appears that roads are more effective in increasing current levels of production under existing farming systems than in inducing major changes toward adoption of new farming systems.

The ESF road improvement program has not been uniformly effective across all levels of socio-economic status and across all regions. Roads have a comparatively greater impact in the middle economic range of Philippine provinces. Similarly, the effectiveness of the roads found in other provinces seems to be lacking in Mindanao. Feeder road projects which improve access of rural communities to local marketing centers appear to have a consistently higher impact than other types of improvements.

The overall impact of the ESF road improvement program is diminished by a number of poorly selected and/or poorly constructed roads. This can be attributed to the strong political interests affecting selection of sub-projects especially during earlier years of the program. One could easily argue that program management over the years should be commended for containing these pressures as well as they have under the circumstances. Nonetheless, ESF funding has gone to road improvements sub-projects which were not sound investments and have not, nor in some cases, will ever generate adequate economic or social benefits to justify their construction. ESF program managers are aware of these problems and they have taken corrective actions recently and in the past.

The results of the impact evaluation clearly support continued funding for road improvement sub-projects as part of a future ESF infrastructure program. However, standards for the selection of projects need to be based on a stronger economic footing. This may result in slowing spending for road improvements, but other projects, such as schools, which have a higher probability of being constructed quickly and correctly, and producing immediate benefits, may be better conduits for maintaining expenditure levels. Improvement of feeder/farm-to-market roads and roads linking rural market towns should be given high priority in future program funding.

Markets

The large majority of completed ESF funded markets have been demonstrated to be on an unsound financial footing. The current financial condition of many markets undercuts the original objective of developing a facility which generates revenue for the municipal government. Subsidizing business operations by setting rental fees far too low and over-staffing reduce the net revenues earned by the municipality from the market. The lack of adequate monitoring of the markets' financial performance by program management contributed to allowing this problem to develop and continue over time.

Poor maintenance practices, inadequate refuse disposal and failure to correct improper drainage systems further reduces the impact of the markets. In particular, such inadequacies diminish the market's longer-term contribution to improving health and sanitation conditions. What adverse effects on commercial activity are likely from inadequate management of the facilities cannot be determined at this time.

The local government's poor financial performance of the markets and the general mismanagement of a number of facilities, including poor maintenance, reflect the weak capabilities of the municipalities to operate a facility that should be a profitable business. Apparently, the program has not explored possibilities for private sector alternatives to municipal-owned and operated markets.

The failure of municipalities to repay their construction loans to the ESF program is largely irrelevant to the near-term socio-economic impact of the markets. There is clear evidence of a positive impact on the local business community. Markets appear to have encouraged new business formation and generated employment. Though the markets appear to have contributed to the profitability of the businesses, external economic conditions exerted a much more powerful influence. There is also evidence that the markets have facilitated, to some extent, commerce within the province and/or region, resulting in a better supply of consumer goods. The markets have also increased competition among stall operators and between stall operators and ambulant vendors. Though this results in lower business volume or lower

earnings for the individual business operator, competition typically assures that consumers receive reasonable prices.

The increase in ambulant vendors reflects a form of employment generation around the market. (In fact, the market should be viewed not just as the physical facility, but also the grounds around it used by the ambulant vendors.) But what this employment does is spread the consequences of a depressed economy between those who may have a viable business (i.e., the stall operators) and those who might otherwise be unemployed (i.e., the ambulant vendors).

The markets' impact on improving health and sanitation conditions is equally double edged. On the one hand, the conditions in a number of these markets clearly do not meet acceptable public health standards. On the other hand, conditions in the old markets were reportedly much worse. The relative improvement in health and sanitation conditions made by the new market over the old market (or town plaza) might be a fairer basis for assessing improvement. From that perspective, the ESF markets represent progress over previous conditions. Of course, that relative improvement will diminish over time - and at a fairly rapid pace - when markets are poorly maintained as many currently appear to be.

Future ESF programming should include funding for markets following closely the lessons learned from the present program, especially concerning market design, management of the facility and financial arrangements and performance. Future support for market construction should explore possibilities of engaging the private sector in owning and operating the facility. The municipal government should be viewed as a recourse to the private sector. Future ESF funding for markets to be operated by municipalities or other LGUs should include a technical assistance component for training in market management operations and should follow the model established by PREMIUMED on financial and operating conditions (assuming construction is partially or wholly loan financed). Any future ESF funding for market development should include financial performance monitoring and reporting.

Other Sub-projects

The importance of these sub-projects in the overall program is greater than their actual cost would indicate.

There may indeed be better uses of ESF funds for infrastructure development which would have a more immediate or widespread impact on the health status of the poor. However, in relatively more developed regions or provinces, such as Region III, hospitals play an important part in the provincial health system by supporting health care delivery at lower organizational levels. The patients of public hospitals tend to be from poorer households. There is nothing necessarily wrong with local

governments receiving funding for construction of hospital buildings and equipment when these facilities are essential to strengthening and expanding the provincial health care system, as appears to be the case for the ESF-assisted hospitals.

The ESF-funded slaughterhouses and solid waste facilities have definitely been the white elephants of the program. The amount of money involved is a relatively small proportion of the program. However, in absolute terms, these projects constitute approximately \$900,000 in program funds. As painful as that is, the more serious loss might well be the damage such failed projects do to the credibility of the program, to say nothing of the efforts of the GOP and USAID.

Future ESF infrastructure programming should include funding for "other" types of projects that: a) meet requirements for economic and social soundness, b) play a well defined and justifiable role in expanding essential social services commensurate with the level of development and needs of the community they serve, c) will receive adequate budget to operate public facilities effectively, or d) develop infrastructure facilities that address constraints to private business development and/or have high employment generation potential.

Increasing Program Impact

The ESF Infrastructure program spans two GOP administrations and changes in program procedures and management have occurred with the change in governments. Based on earlier experience, program management has taken positive steps taken to improve the effectiveness and impact of the program. This includes eliminating funding for small barangay roads, improving the standards for feasibility studies of sub-projects and attempting to streamline the implementation process. However, there is no evidence that the program is any less subject to political influence with respect to project selection.

Much more central to the question of increasing program impact is the pace of implementation. Measured in real terms, approximately 75% of the expenditures of the program were accomplished between 1982 and 1986. In the past four and half years, only the remaining 25% of the program's expenditures have been accomplished. Comparing operating costs to expenditures provides a rough measure of program efficiency. Combining both ESF program and GOP contributions, current total operating costs of the program are estimated to be at least \$1,000,000 per year. Using 1980 expenditures (i.e., the best performance in recent years), this means that it costs one dollar to spend thirteen dollars.

The annual incremental gains in cumulative real expenditures is also instructive. For the 1982 to 1986 period, the average annual percentage increase in real expenditures was 14.1%. For 1987 through 1991, the average for this period is 5.2%, roughly a third of the pace during the preceding period.

The decline in the real output of the program during the past four and half years is significant and has reduced the overall impact of the program as a consequence. In light of the program's current level of performances, an extension of the PACD dates for the Rural Development Fund and the Project Design Project is not recommended. Funds de-obligated should be directed to projects where they will be used more efficiently and expeditiously. Alternatives to the current implementation arrangements for the program should be explored before proceeding with any follow-on activities. Particular attention should be given to mechanisms that would transfer management responsibility and funds directly to the development budgets of capable local governments for small scale infrastructure projects at the very outset of the follow-on ESF project.

ABBREVIATIONS

A.I.D./USAID	-	United States Agency for International Development
DECS	-	Department of Education, Culture and Sports
DPWH	-	Department of Public Works and Highways
ESF	-	Economic Support Funds
GOP	-	Government of the Republic of the Philippines
MDF	-	Municipal Development Fund
NEDA	-	National Economic and Development Authority
NMIC	-	National Meat Inspection Commission
PACD	-	Project Assistance Completion Date
RDF	-	Regional Development Fund

REGIONS

I -	Ilocos	VII -	Central Visayas
II -	Cagayan	VIII -	Eastern Visayas
III -	Central Luzon	IX -	Western Mindanao
IV -	Southern Luzon	X -	Northern Mindanao
V -	Bicol	XI -	Southern Mindanao
VI -	Western Visayas	XII -	Central Mindanao
		NCR -	National Capital Region

EXCHANGE RATES (Pesos to \$1)

1983	-	9.50 to 14.05
1984-85	-	14.07 to 18.48
1987-88	-	20.04 to 20.08
1988-89	-	21.37 to 21.60
1990	-	22.48 to 29.30
1991	-	27.83 to 28.00

ACKNOWLEDGEMENTS

The evaluation team and USAID/Philippines is indebted to Bei Zonaga who has been instrumental in the overall effort to evaluate the ESF program over the past two years. Mini Dacanay generously filled in while Bei was busy being a mother for the second time.

Section 1: Background to the ESF Infrastructure Program

The Economic Support Fund (ESF) program which this evaluation examines has been under way for approximately eleven years beginning 1980. The ESF program can be divided into two main elements: a budget support and balance-of-payments program and b) a cash transfer mechanism from which local currency is generated for the funding of small-scale infrastructure sub-projects nationwide. (The term sub-projects is used throughout this report referring to the individual infrastructure activities funded through ESF projects described below.)

The local currency portion has been programmed in accordance with the basic policy directions which underlie the provision of U.S. economic development assistance. The basic mechanism operates on the basis of cash disbursements made on a quarterly basis determined by projected sub-project contract requirements. When the dollars are disbursed, an equivalent amount of pesos are deposited by the GOP into a special account for funding approved sub-projects. The GOP's principal agency for management of this account and the selection and monitoring of sub-projects is the ESF Secretariat. USAID exercises oversight functions much like it does in other bilateral projects, including approval authority over sub-project design and general monitoring responsibilities for compliance with construction standards and contractor performance.

This evaluation examines the development results of the small scale infrastructure portion of the overall ESF program. In particular, the evaluation focuses on the socio-economic benefits resulting from the more than 3,300 completed infrastructure sub-projects funded through six "core" ESF projects.

The ESF Infrastructure Projects: The ESF Program began in 1980 in conjunction with the 1979 amendment to the Military Bases Agreement between the GOP and the U.S. Government. Initially, the local currency portion was funded at a total of \$200 million over a five year period. Most of these funds were programmed through a set of infrastructure projects largely directed toward improving the social and economic conditions in areas affected by the U.S. military bases, including lands which had reverted to GOP control from Clark Air Base. The bulk of the infrastructure works have been schools, road improvements and municipal markets concentrated in Region III. The initial projects authorized in 1980 and 1981 for this purpose included Elementary School Construction, Project Design, Clark Access and Feeder Road, and the Municipal Development Fund (MDF).

These projects were followed in 1982 by the Markets Project and the Regional Development Fund (RDF). Funding for infrastructure sub-projects increased substantially through RDF, from \$45 million when first authorized to its present life of project

total of \$190 million. Initially focused on the areas surrounding the U.S. bases, an amendment in 1983 broadened the Fund to make it national in scope. (See 1983 Sinding, for details on the early development of the program cited in ANNEX B references).

Though not explicitly designated as such by the GOP or USAID, for the purposes of this evaluation, these six projects are viewed as constituting an ESF Infrastructure Program, sharing similar objectives and similar funding and implementation mechanisms summarized below.

As the funding of RDF illustrates, joint reviews of the Military Bases Agreement in 1983 and 1988 resulted in increased ESF funding on a "best efforts" basis. The overall "target" levels for ESF funding resulting from the reviews reached slightly more than \$900 million by the end of 1988. For the local currency portion of the program, total disbursements provided through completed infrastructure projects are as follows:

- Elementary School Construction - \$18,000,000
- Clark Access and Feeder Roads - \$2,999,000
- Markets - \$7,843,000
- Municipal Development Fund - \$30,761,176

The actual amounts disbursed through Clark Access and the Markets project were reduced from actual authorization through deobligations used for balance-of-payment support to the GOP when the Aquino administration took office. MDF was authorized at \$70 million, but only \$33.6 million was obligated by the time the PACD was reached.

Funding levels for on-going projects are as follows ('000):

	<u>Authorization</u>	<u>Obligations</u>	<u>Disbursement</u>
- Regional Development Fund:	\$190,000	\$182,278	\$111,667
- Project Design:	\$18,000	\$18,000	\$10,952 (1)

1. ESF is also used for the Rural Infrastructure Fund which funds large scale capital development, such as major road and port improvements, navigational aids for airports, etc. The Rural Energy Development project was an earlier ESF project now completed. Other projects and program assistance using ESF funding include Support for Development, Local Development Assistance Program, Agrarian Reform Support, Civic Action, Decentralized Shelter and Technical Resources. These projects constitute the balance of the overall ESF program. It is likely that approximately \$50 million from RDF will be de-obligated.

Both RDF and Project Design will be completed on August 30, 1992 with contracting for new sub-projects through RDF terminating on September 30, 1991. No PACD extensions are planned nor are any recommended by this evaluation. Given that there are only five months left before the contracting deadline is reached, it is likely that a substantial de-obligation will be necessary. In summary, by the end of the current ESF program, more than \$200 million will have been provided for small-scale infrastructure sub-projects nationwide.

Project Purposes: These six infrastructure projects broadly share the common objective of providing infrastructure that will improve the socio-economic conditions and the standard of living in beneficiary communities. In addition to funding the construction of infrastructure, the Markets Project, MDF and RDF also secondarily were intended to strengthen the capabilities of local governments to identify, plan and implement priority sub-projects. This would have been consistent with the broader decentralization objectives of the GOP and USAID. For example, technical assistance had been planned to improve local government project design management capabilities and, in the Markets Project, for management of the market facilities. However, over the course of the program, this objective received little concerted attention in the course of implementation.

Despite some programmatic differences concerning responsibilities for the control and accountability of the ESF generated local currency, the GOP and USAID agree on the general guidelines; projects should contribute to the following :

- Strengthen local institutions to help the poor majority
- Increase and diversify agricultural production
- Integrate agricultural, industrial and commercial development
- Provide the poor better access to basic facilities and services
- Increase employment opportunities and improve income distribution
- Strengthen economic links between urban and rural centers

ESF Secretariat: The ESF Secretariat was established in 1980 as the GOP counterpart organization which would work with other GOP departments and agencies and USAID to implement the ESF infrastructure projects. Prior to 1986, the Development Projects Funds Secretariat (the ESF Secretariat's former name) was originally under the Ministry of Human Settlements and subject to the oversight of the Management Advisory Committee, a ministerial level body. In principle, the Secretariat was responsible for developing procedures that it and other agencies would use in project development (e.g., planning, studies, etc.). It would then review proposals and make funding recommendations to the Advisory Committee and the President's Office. It would then monitor implementation.

In 1986, the role of the Secretariat was altered. Executive Order 15 designated the Secretariat as the funding and implementing agency under the Office of the President to supervise infrastructure sub-projects financed by the ESF program and executed by provincial, municipal and city governments. From an original body of about 30, the Secretariat now consists of approximately 130 professional, administrative, secretarial and clerical personnel. This is not a permanent body, but rather, the Secretariat is outside of the GOP's line departments and staff are retained on an annual contract basis. An in-house long-term engineering management consultancy team also provides technical assistance to the Secretariat. The Secretariat also contracts for external assistance on a short-term basis. The Secretariat's staff and its operations are funded through the Project Design Project and through GOP budget allocations for an annual budget currently estimated at \$1,000,000.

In general terms, the post-1986 system for sub-project identification, selection and implementation operates as follows. The local government identifies and prepares a proposal for priority infrastructure sub-projects that could be funded under MDF or RDF. This proposal is submitted to the Regional Development Council (a regional planning body under the National Economic and Development Authority - NEDA - consisting of provincial and municipal government officials with limited private sector representation).

The RDC forwards approved sub-projects to the ESF Secretariat. The ESF Secretariat, in turn, submits to the Office of the President (through NEDA) for approval lists of RDC-approved sub-projects. The Secretariat then carries out more detailed design work, either in-house or through external contractors. The local government is responsible for issuing requests for proposals and selecting the construction contractor; however, the Secretariat retains control over payment for work under the contract. It also contracts for engineering supervision of the sub-project, adding an additional level of oversight to the local government's own engineering supervision. USAID engineers also monitor project design and implementation.

In actual practice, the sub-project system is far more complicated than the preceding description, with certain sub-projects "short-cutting" the approval process. The implementation process of the ESF infrastructure program was the subject of an extensive process evaluation in 1989. As the evaluation team noted there are no fewer than ten GOP agencies involved in, or see themselves involved in, the ESF sub-project cycle. After careful review and study, the evaluation team concluded there is no "approved" or commonly accepted process for planning and implementing the sub-projects. Further, the Secretariat, an ESF program entity, has no authority over line government departments who can impose their authority and

regulations over ESF actions. The process evaluation made numerous recommendations designed to expedite the implementation process. USAID and the ESFS agreed to implement ten major recommendations. Three or four of these have been fully implemented, reflecting the intractable nature of the problems involved.

Section 2: ESF Infrastructure Program Outputs and Expenditures

Over the course of the eleven year history of the ESF Infrastructure Program, some 3,461 sub-projects have been completed nationwide. Current estimates of the actual number of completed sub-projects by type vary depending on the data source. The impact evaluation, as well as a design team working for a future ESF project, could not identify a single authoritative source for current and accurate statistics on program outputs and expenditures. Gross aggregates between ESF Secretariat and USAID data bases are comparable, but exact numbers, particularly on completed sub-projects to date, vary significantly when examined by sub-project type and location in some cases. Therefore, the following tables on program outputs and expenditures are only what appear to be the best estimates currently available.

Program Outputs

The following are USAID's statistics on the number of completed sub-projects by region as of September 30, 1990.

Table 1: Number of ESF Sub-projects by Region

<u>Region</u>	<u>Roads</u>	<u>Schools</u>	<u>Markets</u>	<u>Other(1)</u>
I	121	161	3	1
II	80	161	1	0
III	84	326	16	9
IV	141	266	0	0
V	68	164	1	0
VI	81	248	1	0
VII	53	180	1	0
VIII	123	308	0	0
IX	54	68	0	0
X	86	159	0	0
XI	52	103	0	0
XII	66	60	0	0
NCR	<u>118</u>	<u>97</u>	<u>0</u>	<u>0</u>
<u>Total</u>	<u>1,127</u>	<u>2,301</u>	<u>23</u>	<u>10</u>

(1 - Other includes hospitals, slaughterhouses, solid waste sites, resettlement, an export processing zone, and drainage and flood control).

What Table 1 shows is the relatively heavy concentration of sub-projects in Region III where Clark and Subic U.S. military bases are located. Even though the Regional Development Fund (RDF) broadened the scope of the ESF Infrastructure Program nationwide, the Region III concentration continues.

The sub-projects funded by the ESF Infrastructure Program have varied significantly among categories of sub-projects as well within the specific categories. A better picture of the relative distribution of sub-project activity by region is shown by estimates of total expenditures to date.

The data in Table 2 covers the period of 1982 through 1991. The table shows the concentration of sub-project activity in Region III with all other regions receiving between 2.3 to 6.7 percent. The distribution of expenditures outside of Region III reflects a spreading of resources throughout the country giving each region a share of the program. No significant difference was found in the overall pattern of expenditure distribution among regions when the data were expressed in real terms (i.e., 1990 pesos).

Table 2: ESF Expenditures by Category and Region ('000 Pesos)

<u>Region</u>	<u>Roads</u>	<u>Markets</u>	<u>Schools</u>	<u>Other</u>	<u>Total</u>	<u>Percent of Total</u>
I	19,845	29,304	42,454	467	92,070	4.6
II	23,018	26,125	76,243	5,392	130,778	6.5
III	260,338	318,508	225,973	125,480	930,298	46.3
IV	25,574	0	81,807	287	107,668	5.4
V	14,780	40,072	58,017	325	113,194	5.6
VI	14,313	63,947	55,543	1,455	135,257	6.7
VII	24,092	0	42,550	22	66,663	3.3
VIII	15,155	0	89,832	766	105,754	5.3
IX	11,287	15,453	19,095	0	45,835	2.3
X	16,129	0	66,436	64	82,629	4.1
XI	12,231	0	32,515	226	44,973	2.2
XII	10,067	0	44,662	4,220	58,949	2.9
NCR	38,369	0	58,260	0	96,630	4.8

Expenditures over the life of the program show the pace of implementation. As Table 3 shows, the program has progressed irregularly largely due to political events in the Philippines during the 1980's.

Table 3: ESF Peso Expenditures for Sub-projects

<u>Year</u>	<u>Amount</u> <u>('000)</u>	<u>Cumulative</u>	<u>Cumulative as</u> <u>% of Total</u>
1982	181,696	181,696	8.9
1983	0	181,696	8.9
1984	211,178	392,874	19.4
1985	519,558	912,432	45.0
1986	345,132	1,257,564	62.0
1987	80,830	1,338,395	66.0
1988	95,235	1,433,630	70.7
1989	10,420	1,444,050	71.2
1990	373,709	1,817,759	89.7
1991	209,580	2,027,338	100.0

(Source: ESF Secretariat Project Data, 1991 - partial year)

The data show that the initial start-up of the program took roughly two years before sub-project expenditures began to accrue. The program peaked in 1985 and began a precipitous decline in 1986 with the transition between administrations. Beginning in 1986, the Secretariat's operations essentially ceased, expenditures were for projects underway and new projects were those already in the pipeline. Many projects were halted for additional review and re-bidding of contracts let by the prior administration. Others were terminated and contractors were not paid. Implementation also slowed substantially due to tighter administrative procedures. The resulting decline in disbursements reached a low in 1989. In 1990, the decline reverses and 1991 may reach a comparable level.

However, given the high rate of inflation during the 1980's in the Philippines, a more accurate picture of expenditures is provided by expressing sub-project disbursements in real terms. This allows making meaningful comparisons of expenditures across years.

The most meaningful column in Table 4 is cumulative expenditures in real terms expressed as a percentage of the total expenditures made to date. What the table shows is that by the end of 1986, 74.4 percent of total expenditure made to date had been completed. For the entire period from 1987 to the present, only 23.6 percent of real expenditures have been made. In other words, the first five years of the program accomplished roughly 75% of the total expenditures made to date, with the following

Table 4: ESF Peso Disbursements for Sub-projects in Real Terms
('000 1990 Pesos)

<u>Year</u>	<u>Amount</u> <u>('000)</u>	<u>Cumulative</u>	<u>Cumulative as</u> <u>Percent of</u> <u>Total</u>
1982	565,242	565,242	18.13
1983	0	565,242	18.13
1984	400,082	965,324	30.96
1985	830,426	1,795,750	57.59
1986	524,156	2,319,905	74.40
1987	115,176	2,435,081	78.10
1988	122,900	2,557,981	82.04
1989	11,755	2,569,736	82.42
1990	373,641	2,943,377	94.40
1991	174,620	3,117,998	100.00

four and half years accounting for only an additional twenty-five percent. In real terms, current expenditures have not yet returned to a level of magnitude comparable to the first half of the program. In summary, implementation of the ESF program has slowed considerably despite what appears to be some improvement in 1990.

Section 3: Purpose and Method of the Evaluation

Purpose and Focus: The purpose of this evaluation is to assess the social and economic impact of the ESF Infrastructure Program. The evaluation examines the extent to which the major categories of ESF sub-projects - schools, roads, markets and other sub-projects - have affected economic conditions and the standard of living of communities affected by these activities. In other words, the evaluation is primarily concerned with the final results of the infrastructure sub-projects to see where they have been most effective, as well as least effective. The results of the evaluation should contribute to the planning of future ESF infrastructure programming.

This impact evaluation does not assess the implementation processes that underlie the ESF Infrastructure Program. That aspect of the program was studied thoroughly less than two years ago in 1989 by a process evaluation team. The process evaluation made numerous recommendations, the majority of which apparently were not implemented. As the completion dates for the two remaining projects - RDF and Project Design - near, taking action on those recommendations in the remaining months is probably unnecessary.

A new ESF project is being designed and part of that work should include examining options for implementation arrangements which would expedite the program.

The impact of the program on increasing local government capabilities for the design and management of infrastructure projects is more germane to process as opposed to socio-economic impact and, therefore, is not an issue for this evaluation. However, it appears that this objective was not a central concern of program management since key aspects of sub-project planning and implementation remain centralized in Manila with no immediate plans in the current program to decentralize more of these functions to capable local governments.

The "bottom-line" focus of the impact evaluation has another important implication for its content. The primary concern here is what infrastructure was produced and what effect did it have on the economic and social development of surrounding communities. The evaluation is far less concerned with the administrative history of good or bad results. Given the scope of the ESF Infrastructure Program - 3,300 sub-projects over the past ten years distributed nationwide - the evaluation has to operate at the level of broad generalizations about the results of diverse categories of sub-projects. That task is daunting enough in itself.

Method: Ideally, the evaluation would be able to estimate the percentages of sub-projects within each of the major categories

that produced high, medium and low (or negative) impact on the economic and social development of beneficiary communities. The data to make such estimates are simply not available because follow-up monitoring was not part of program management. That is, after construction of the sub-project was completed, no data were collected on even the most basic economic and social changes that should have resulted from the activity. This lack of basic management information is not an acceptable Agency practice, nor is this a minor oversight. For one major category of sub-projects - municipal markets - the lack of follow-up monitoring left program managers ill-informed about the extent and severity of financial problems which now threaten to undermine the longer-term impact of these sub-projects. Even though the impact evaluation lacks these data, we do attempt to provide what we feel are reasonable generalizations about the effectiveness and sustainability of categories of sub-projects.

In preparation for the impact evaluation, a representative survey was conducted in three regions - Luzon, Visayas and Mindanao. A sample of schools and roads were randomly selected in these regions. Twenty-three out of twenty-four markets reported complete by ESF Secretariat records were selected. In the communities where these projects were located, a random sample of households was selected to collect information on the effects these projects had on social and economic conditions. Over 1,900 individuals were interviewed for this survey (see Annex C: Survey Design).

The survey results are used very conservatively in the evaluation to avoid possible biases in reporting, e.g., cultural biases against giving negative information to strangers, interviewer biases that encourage favorable responses. Only when a very high percentage (e.g., 80% or more) of the respondents reported that the sub-project contributed, or did not contribute, to a specific type of effect or change did we feel relatively certain that this was a reliable result. When responses divided 50/50 or even 65/35, we chose to view this as evidence of mixed or uncertain effects produced by the sub-projects.

The impact evaluation team, consisting of four members for a four-week period, concentrated its field work in Region III, with some visits made to sub-projects in Region I. It was decided to concentrate on this area because that is where the majority of the sub-projects are located and it would maximize the use of our limited time for additional data collection. Completed sub-projects served as the basis for this portion of the team's assessment.

One team member visited ten completed markets and five completed high schools which had both ESF and DPWH facilities. Road works were selected in conjunction with site visits to municipal markets. Interviews with public officials were limited in order

to direct more time obtaining information from the actual beneficiaries of the sub-projects. Stall operators in markets, jeepney drivers and local business operators were used as key informants. Two other team members concentrated on interviewing local officials, users of the sub-project facilities and representatives of local business community, selecting sites where several sub-projects had been completed. On the basis of these interviews, information and recurrent issues reported frequently by those interviewed are summarized in the body of the evaluation. Cases and examples are cited that the team believes are representative or illustrative of broader patterns or trends concerning the impact of the sub-projects. Site visits and those interviewed are listed in Annex B.

One team member devoted considerable time and effort to trying to use available statistical data to see whether areas where sub-projects were most concentrated showed better economic performance than the national average. The purpose was to determine whether the collection of sub-projects produced an impact beyond the local community level. This effort proved inconclusive due to the lack of time series data. The results are presented in Annex A.

The evaluation benefitted substantially from the findings reported in the 1989 process evaluation whose six-member team, working for a six-week period, was able to cover a wider geographic area. A recent financial evaluation of seventeen ESF-funded municipal markets provided the team with timely information on the current condition of these markets and their longer-term sustainability.

In addition to the lack of follow-up monitoring of sub-projects, evaluations of the individual projects funded through the ESF program have not been conducted. The plan over the past two years has been to evaluate the set of projects as an ESF Infrastructure Program in light of their similar objectives and mode of implementation. This was carried out with the 1989 process evaluation and now with the impact evaluation. However, it is unclear how much use management made of the process evaluation since many of the recommendations made were not implemented. The fact remains there is no adequate evaluation of the program covering the earlier years. A process evaluation should have been conducted by late 1984 or early 1985, and again in 1987 with attention given to the effects of completed sub-projects. Consequently, we have no continuous record of the performance of these projects and the overall ESF Infrastructure Program to draw from.

Additional relevant documents referred to by the evaluation team are listed in Annex B.

Team Members:

Chris Hermann - Team leader, Program Analyst, APRE/SPEE
Eliseo Mindoro - Rural Development Specialist, EDF Manila.
Richmond Allen - Economist, independent consultant.
Felisa D. Fernandez - Economist, EDF Manila

Section 4: ESF School Buildings

Through September 1990, the ESF program has constructed some 2,301 elementary and high schools nationwide since 1980 distributed as follows (nominal value in '000 Pesos):

<u>Region</u>	<u>No. of Projects</u>	<u>Average Value</u>	<u>Cost</u>	<u>Value as % of Total</u>
I	161	50,280	312.3	7.0
II	161	38,406	238.5	5.4
III	326	230,060	705.7	32.3
IV	266	59,420	223.4	8.3
V	164	33,735	205.7	4.7
VI	248	57,372	231.3	8.0
VII	180	42,418	235.7	5.9
VIII	308	79,391	257.8	11.1
IX	68	19,075	280.5	2.7
X	159	41,815	263.0	5.9
XI	103	24,392	236.8	3.4
XII	60	11,240	187.3	1.6
NCR	97	25,686	264.8	3.6
<u>Total</u>	<u>2,301</u>	<u>713,290</u>		

(Source: USAID Completed ESF Sub-projects as of 9/30/90)

The initial intention of the ESF program was to improve the economic and social conditions in those areas bordering on the U.S. military bases. The regional data on the value of completed schools indicate that school construction has been concentrated in Region III (where Clark and Subic bases are located). Moreover, average cost of construction was substantially higher than in other regions, suggesting that schools in Region III have tended to be larger than those constructed elsewhere.

The impact evaluation team did not attempt to quantify the impact of these schools on the student population, e.g., on the basis of comparative performance of students between ESF schools and non-ESF schools. This was impossible given the total lack of monitoring data on the schools after construction is completed. Rather, the position taken by the evaluation team is to view the impact of school construction from the perspective of: a) addressing the sectoral needs for school facilities, and b) improving the conditions and environment for instruction within the schools.

Findings

The Need for Continued Investment in the Education Sector -

The Aquino administration assigns high priority to improving the nation's public education system. This is reflected in a

significant increase in its budget allocation for the education sector. Between 1986 and 1990, the Department of Education, Culture and Sports has increased by 169.1 percent, constituting 14.19 percent of the total national budget in 1990. In conjunction with this substantial increase in investment to develop the education system, the GOP initiated free public secondary education in 1988. This has resulted in a major increase in secondary public school enrollment.

The high priority the GOP places on improvement of the educational system is responsive to the needs of the Filipino people. With a continuing high population growth rate, the school age population is expanding rapidly, placing increased demands on the existing education system and requiring commensurate increases in the number of school facilities, teachers and educational materials and equipment. The following table summarizes the growing demand placed on the country's education system.

Table X: School Enrollment and Education System Requirements

<u>Enrollment ('000)</u>	<u>1986</u>	<u>1990</u>	<u>Percentage Change</u>
<u>Total</u>	13,944	16,500	18.3
Elementary	9,230	10,630	15.3
Secondary	3,357	4,010	19.4
Tertiary	1,358	1,853	36.4
<u>Public</u>	10,838	12,769	17.8
Elementary	8,639	9,945	15.1
Secondary	1,996	2,517	29.4
Tertiary	202	242	19.3
<u>Private</u>	3,106	3,371	20.1
Elementary	590	693	17.3
Secondary	1,361	1,427	4.9
Tertiary	1,155	1,611	39.4

Estimated Shortages of School Buildings

Elementary	15,498 (1987)	19,056	23.0
Secondary	6,105 (1988)	4,135	-33.1

(Sources: DECS 1990 Annual Report)

The data show a substantial increase in enrollment between 1986 and 1990, reflecting a corresponding increase in demand on school facilities and for teachers and educational materials. The most rapid enrollment increase occurred in public secondary schools and private tertiary school (e.g., vocational and trade schools). The free secondary education policy initiated in 1988 accounts

for the major increase in public secondary school enrollment. Secondary education became possible for those who could not afford private schools. The increase also stemmed from students who transferred from private to public secondary schools (i.e., private secondary enrollment between 1987 and 1988 decreased and the overall increase between 1986 and 1990 is relatively small).

As enrollment increased, shortages of schools and teachers correspondingly grew during the latter portion of the 1980's. The exception to this is the deficit of secondary schools which decreased between 1988 and 1990, though the number of additional secondary schools required was substantial in 1990 - estimated at some 4,135 school buildings. Although an estimate of the shortage of tertiary schools buildings is not available, the 36.4 % increase in enrollment between 1986 and 1990 suggests that shortages of these facilities also exist.

These data also provide a useful context in which to understand the contribution of the ESF school program to the country's educational system. The 2,301 ESF elementary and high schools completed to date constitute a very small percentage of the total number of schools in the country as of 1990 - 259,699 elementary schools and 28,146 high schools. However, the contribution of the ESF program is better understood in respect to the estimated shortage of schools. Though ESF high schools constitute only a small reduction in the shortage estimated in 1990, the ESF elementary schools represent a ten percent reduction in what the shortage would have been without the program (approximately 21,256 school buildings versus the actual estimate of 19,056).

- Construction Standards of ESF Schools

The standard designs of elementary and secondary schools developed through the ESF program have come to represent a standard of quality for school construction in the country. This was acknowledged by DPWH and DECS officials as well as school teachers and administrators. Not only are ESF schools well constructed, but they are provided with furniture, adequate toilet facilities and other basic requirements. The program has established basic designs for schools of varying classroom number that can be readily modified to accommodate specific site requirements. Previous reviews of the ESF program have found no major or systematic problems with the design. Problems that do occur infrequently with ESF schools have been attributable to poor performance by the construction contractor.

A comparison between ESF schools and DPWH buildings illustrates why ESF schools have established a standard for construction quality. A good example is Lakandula High School in Tondo (located in metropolitan Manila). Two annexes have been constructed at the high school - one through the ESF program and the other by DPWH. The superior design and construction

standards of the ESF schools were apparent in comparison to the DPWH building. Though only recently completed, the cement floors of the DPWH building had begun to crack, window and door frames were warped, walls were cracked due to use of lower quality building material and the edges of steps leading to the second story were already broken off. In contrast, at the ESF school, the contractor was being required to replace carborundum strips on the stairways because they did not meet ESF specifications, a seemingly minor problem but indicative of ESF construction standards.

An important aspect of ESF schools is that they are designed to withstand typhoons. Since the beginning of the program, no ESF school has been known to have suffered extensive damage from typhoons, whereas hundreds of DPWH schools have been seriously damaged or destroyed from these storms. The process evaluation noted that the construction standards of ESF schools were evident in the 61 schools that they visited with only minor problems associated with materials used for the louvers and doors. On visits to a representative sample of some 61 schools nationwide, the process evaluation concluded the schools design was sound and highly functional. Our additional site visits to schools fully support the process evaluation's findings.

ESF schools are more expensive than DPWH designs, which discourages the GOP from using the same design and construction standards. In general, the GOP's objective is to meet as much of the demand for school buildings as it can with limited resources. This perpetuates the use of lower cost school designs by DPWH. As one DPWH official described the situation, the effort to stretch limited school construction budgets results in "reverse engineering" - i.e., reducing costs by cutting corners on construction standards and materials. The team observed DPWH schools that were only several years old that had already fallen into disrepair and needing major rehabilitation work.

Department of Education, Culture and Sports (DECS) officials report that they plan to use a design for high schools developed with ADB assistance which costs approximately P3.5 million versus P5 million for ESF buildings. The trade-off, of course, occurs over the longer-run - because of superior design and construction standards, ESF schools will on average last longer and have lower maintenance costs than less expensive schools which are based on lower quality designs, construction standards and materials.

- Maintenance - In general, routine maintenance of the schools is minimal, according to local officials and school principals. Budget allocated for maintenance is lacking and school officials report that the PTA and students often carry out repairs and other improvements to the school facilities. The superior design and construction standards of ESF schools, therefore, takes on

added importance in that they are more durable structures than standard DPWH constructed facilities. Some school officials confirmed this by noting that they have observed that ESF school buildings require less maintenance than DPWH buildings of comparable age.

Value and Use of the ESF Buildings to the School and the Community

The evaluation team found that the ESF schools are highly valued by local government officials, school administrators, teachers, parents and the students. We have every reason to believe that this is nearly universally the case. We found no evidence of dissatisfaction with the ESF school buildings during our interviews and our survey data shows that respondents value the schools very highly. The most common remark made by local government and school officials is that they very much appreciate the new school building(s) and could they please have a couple more!

The large majority of survey respondents reported that the elementary schools contributed to: a) improved attendance and learning, b) increasing the number of students attending elementary school, c) better preparation for higher education, d) improved safety of the children, and e) reductions in transportation costs due to having a school nearby. The majority of respondents also believed there is considerable need for additional classrooms, improvements in instruction and more teachers, books and furniture. The survey also found that the elementary schools produced social benefits for the community, serving as places to hold sports events and community meetings, and as evacuation centers. A significant percentage of respondents also stated that farmers used the school grounds as a place for drying their rice crops.

The high value placed on the ESF schools is apparent in the desire of teachers to be assigned to these classrooms. Because the ESF schools are a better design than standard DPWH structures and are provided as a complete package - e.g., with furniture, well lighted, good ventilation, the buildings are painted - teachers clearly prefer working in the ESF buildings.

The value of the ESF schools is also evident in how principals use the new facilities. In some cases, they reported that the best classes and best students are assigned to the ESF buildings. Alternatively, one principal reported that the classes for first year entry students are located in the ESF building. Either way, the buildings were used as an incentive or reward to encourage good performance. As the principal at Lakandula High School pointed out, the district of Tondo is one of the poorest in the Manila area. The high school represents an "oasis" for the students to escape the conditions in which they live for at least

part of each day. The evaluation team also found no instances where the ESF buildings were not used predominantly for instructional purposes.

The Effects of the ESF School Construction

- Who Benefits: The ESF program funds the construction of public school buildings. Hard data are not available on the economic status of children attending public schools. However, there is a preference among Filipinos to send their children to private schools if they can afford it. The majority of ESF elementary and many ESF high schools are located in rural and poorer urban areas. For example, ESF schools visited in Metro Manila are in some of the most economically depressed portions of the city. Similarly, schools in rural areas will be attended predominantly by children from lower income families. Students at vocational education schools also came from predominantly poor households. In short, ESF schools are used primarily by children from poor to lower-middle income families in both rural and urban areas.

- Inadequate Facilities and Overcrowding: The most immediate effect of the ESF schools is to alleviate the severe overcrowding of existing facilities. Principals and school officials reported that the ESF school buildings contributed to overcoming numerous "make-do" practices necessitated by the size of the school's enrollment and lack of classrooms. Examples include conducting classes under the trees in the school yard (at least during the dry season), in the corridors, in the study hall (which was supposed to be reserved as a place for students to study), and in the gymnasium (by dividing the seating in the bleachers into several "classrooms" where instruction would be conducted simultaneously).

In some cases, the ESF school replaced dilapidated buildings constructed between the First and Second World Wars some sixty years ago. At many schools, the ESF building constitutes an annex or addition to existing facilities, whereas, in other locations, the new ESF buildings are the core facilities of the school. An illustration of the latter is Pateros High School in Manila. Prior to the ESF buildings, some 3,500 students received instruction in an old open-air market (no walls and no separation among classes under a corrugated metal roof), several small cinder block rooms constructed by the PTA and what might best be described as something resembling cattle pens (i.e., main posts supporting a metal roof with no external walls, a dirt floor, no instructional equipment and a few boards defining three "classrooms"). What seats and desks existed were very worn and/or broken. The two ESF buildings constructed at Pateros provide the only adequate facilities the school has.

- Enrollment and Class Size: The current demand for admission to schools greatly exceeds the capacity of the school facilities.

It is not uncommon to find classes of 50 to 70 students per room in elementary and secondary schools. The ESF school buildings visited by the team immediately helped to alleviate - but not eliminate - overcrowding. For example, at Mandaluyong High School in Manila, the principal reported that the ESF addition permitted a reduction in class size from 55-60 students per class to 40-45 per class. However, she does not plan to increase enrollment above the school's current level of 3,400 students because that would simply result in the same overcrowded conditions that the ESF building helped alleviate. At other schools, the ESF buildings will indeed permit increasing enrollment. For example, at Marcelo High School in Bulacan, school officials reported they expected new enrollments to be approximately 400 students per year, whereas actual requests for admission were closer to 800 students per year. The ESF buildings constructed there help the school to accept more of the students requesting admission.

Quality of Education: When asked about the effects of the ESF school buildings on student performance and the quality of education, principals and other local officials consistently reported various improvements in these areas. With the reduction in class size, teachers reported they were able to give more individualized attention to their students. One principal attributed the improved attendance she has observed recently to the construction of the ESF school building. Such improvements were not monitored through the ESF program; therefore, the evaluation team lacks systematic data to substantiate these claims. However, we do find such claims credible. Given severe overcrowding and the inadequacy of existing facilities, the contribution of the ESF building to improving the learning environment for the students is readily apparent to anyone who visits these schools.

In the case of high schools, the lack of books for the library and equipment for the laboratory included in these buildings was a universal problem quickly raised by the government or school officials. Laboratory equipment is part of the total ESF school package, but the long delay in procurement of this equipment by the ESF Secretariat now exceeds two years. The result is to diminish the effectiveness and impact of the completed schools to date.

The results of ESF school construction at two vocational education schools were very encouraging. One school is the only trade school in the entire region that provides training in several technical fields where severe shortages currently exist. Officials at both schools reported that the ESF buildings enabled them to admit more students and turn out more trained technicians. Yet, hundreds of students are still turned away each year due the limited capacity of school facilities. They reported that competition for admission is intense and that only

ten percent of the applicants can be admitted each year. They also stated that they think many of their students are a cut above most college students. Most of the students attending these schools are from the poorer segments of the community. The value of the training these schools provide is apparent in the employment graduates find locally and abroad. Many have jobs waiting for them in manufacturing firms even before they graduate. Others open small enterprises of their own.

What makes a school building able to contribute to improving the quality of education is, of course, qualified teachers. At least for the schools visited by the process and impact evaluations teams, we did not find an ESF-completed school standing idle due to a total absence of teachers. However, school officials did consistently report that they needed more teachers but current budget levels preclude obtaining them. Also, a majority of survey respondents did report that additional teachers were needed. In short, it is likely that the overall problem of a shortage of teachers affects the ESF schools no more and no less than it does other schools in the Philippines.

Conclusions:

Continued development of the education sector is clearly necessary for the Philippines throughout the 1990's. An adequately educated labor force has been a key factor behind the development of the newly industrialized countries in the Pacific Rim. An educated labor force is fundamental to attracting foreign investment and shifting to more efficient and competitive modes of production based on more sophisticated technologies. A reasonably well educated labor force also seems necessary for the private sector to become more competitive in international markets. In short, meeting the educational requirements of an expanding school age population through the 1990's will be a major challenge for the country.

ESF school construction is the most consistently successful portion of the overall program. The schools have an immediate and direct beneficial impact on the local community. The presence of an adequate school building constitutes an important contribution to the standard of living in these communities, as reflected in the high value attributed to the schools by public officials and the local population. The standard designs which can be easily modified to accommodate the specific requirements of the construction sites have facilitated completion of high quality structures. Consequently, the evaluation team believes that the schools have been the least problematic program element with respect to producing basic infrastructure that contributes to the program's economic and social development objectives.

The schools also contribute to the national need for improving the educational sector. It is not an exaggeration to view the ESF elementary and secondary schools as making a direct and essential contribution to producing an educated labor force. For the country to expand its use of more sophisticated technologies necessary to increase production efficiency and competitiveness, it will require adequate numbers of educated workers who are able to acquire the skills needed to use these technologies. In this regard, the program has funded building construction of a few vocational education schools which has been highly beneficial. Given the demand for such skills, expanding the ESF program's funding for such facilities would contribute to greater numbers of graduates with high employment potential.

In light of the success in producing a large number of durable, high quality school buildings much valued by the local community, this portion of the program contributes significantly to political objectives in several ways. The schools demonstrate the central government's interest in the welfare of local communities and provide tangible evidence of that concern. A.I.D.'s support for the program helps the GOP in this endeavor. Obtaining new school facilities for the community through the ESF program likewise enables local government to do something immediately beneficial for its constituency. Lastly, A.I.D.'s association with a program that reaches to a core concern of any society - the education of its children - certainly contributes to fostering goodwill between the two countries and creates a positive image of the U.S.

Recommendations:

- Elementary and secondary school construction should be a major part of any future ESF infrastructure program.
- Recommendations made by the 1989 process evaluation concerning construction materials for doors and louvers, locating high schools consistent with demographic patterns, maximizing the use of local contractors for construction, and monitoring the maintenance of completed schools (on a sample basis) appears to have been largely ignored in the present program but should be reviewed and incorporated into any future ESF school construction program.
- Laboratory equipment needs to be provided immediately to completed high schools to make full use of these facilities. Future provision of this equipment should be better coordinated with anticipated construction completion to avoid the current excessive delay.

- Future ESF infrastructure programming should increase funding for construction of facilities and appropriate equipment for public vocational training schools. The feasibility of funding facilities for privately operated trade schools should be explored for inclusion in future ESF programming.

Section 5: Roads

The ESF infrastructure program has funded some 1,127 road improvement sub-projects through September 1990 distributed nationwide as follows (value reported in '000 Pesos):

<u>Region</u>	<u>No. of Projects</u>	<u>Value of Projects</u>	<u>Average Cost</u>	<u>Value as % of Total</u>
I	121	27,496	227.2	6.6
II	80	16,797	201.0	4.0
III	84	198,200	2,359.5	47.6
IV	141	26,919	190.9	6.5
V	68	15,190	223.2	3.7
VI	81	15,181	187.4	3.7
VII	53	9,740	183.8	2.3
VIII	123	15,179	123.4	3.6
IX	54	12,050	223.1	2.9
X	86	17,462	203.0	4.2
XI	52	12,595	242.2	3.0
XII	66	10,337	156.6	2.5
NCR	<u>118</u>	<u>39,035</u>	<u>330.8</u>	<u>9.4</u>
<u>Total</u>	<u>1,127</u>	<u>416,181</u>		

(Source: USAID Completed ESF Sub-projects as of 9/30/90)

These subprojects vary widely from relatively small barangay roads that provide access to larger roadways, to connecting sections between existing paved roads, to segments of major provincial arteries. The road improvements also vary widely in length, from less than a kilometer to several kilometers running between market towns; consequently, they also vary widely in cost. With respect to the distribution of expenditures, Regions I, III, IV, V and the NCR have been the focus of the program, constituting some 75.2% of total funding for ESF road improvements. Region III alone received 44.9% of funding for road improvements which reflects the original intention of the ESF program, i.e., to provide basic infrastructure that would stimulate economic development in the areas around the U.S. military bases. Spending outside of these lead areas shows the GOP's more recent efforts to allocate ESF funds in order to more or less even out expenditures among regions.

Given the total lack of program monitoring data on the economic and social benefits resulting from even a sample of completed road improvement sub-projects, the impact evaluation is unable to determine what percentage of these roads have been reasonably successful, i.e., effective in stimulating economic and social development. Needless to say, it also impossible to estimate what percentage of these roads have produced sufficient economic returns to justify the initial investment in their construction. Rather, the impact evaluation draws on existing program

documents, audits, interviews and survey data to make the following assessment.

Findings:

A) Survey Results

The survey conducted to collect data for the impact evaluation included a series of questions concerning the types of effects typically associated with road improvement projects. This included changes in agricultural production and marketing, commercial business development, travel time and transportation costs, quality of life and potential adverse effects of the road construction. The survey was conducted in Regions I, III, VI and X (i.e., Luzon, Visayas and Mindanao) based on a sample of 41 road improvement sub-projects. 615 respondents distributed across fifteen different provinces and cities were interviewed concerning the effects of main, arterial and feeder roads. The Survey data were desegregated by several key variables - by gender of the respondent, by employment category, by classification of the province/city, by region and by type of road. No significant or meaningful differences were found among male versus female respondents concerning the effects of the road improvement sub-projects.

In general, the survey results support the types of positive effects normally associated with road improvements, i.e., respondents associated the roads with increased agricultural production, commercial sales and local business activity; they tended to reduce travel time and transportation costs; and they tended to be viewed as improving the social conditions of the community. What the survey does not provide is information on how large these changes were, but only that these conditions were reported as positively affected by the road improvements.

However, a significant percentage of the respondents reported that deforestation became excessive in the area due to greater access resulting from the road improvements (40% of 625 respondent), that land appropriation for road improvement displaced a significant number of households, land tenants and/or squatters (20%). This suggests that road sub-projects have produced some negative environmental and social effects in a number of cases.

Disaggregating the survey data generated the following findings.

- Farmers and Agricultural Workers: Though the responses from 194 agricultural workers interviewed (31.1% of the total interviewed regarding roads) follow the general pattern of reporting that the road projects having positive effects, these workers tend to give support to these effects less frequently than other respondents. Significant difference of this sort are

found between agricultural workers and other respondents on the following questions pertaining to farm production (percent reporting positively):

	<u>Agricultural Workers</u>	<u>Other</u>
<u>Workers</u>		
- the road facilitated obtaining credit from banks by farmers	38.7	62.1
- the road encouraged a shift from small scale subsistence farming to commercial farming	45.9	68.4
- the road encouraged mechanization of farming	40.7	65.3
- the roads contributed to establishing new buying stations for farmers' produce	40.5	70.6
- the road encouraged construction of storage facilities	31.8	65.3
- as result of the road, more traders buy directly from farmers	61.0	76.7

A clear majority of agricultural workers and all other respondents gave positive support to the following effects on farming: a) encouraged farmers to increase production, b) contributed to introduction of new farm technologies, c) increased used of existing farm land, d) increased planting of cash crops, e) increased transportation for farm commodities, f) increased use of quality fertilizer, g) reduced spoilage of crops and h) increased sales of farmers.

In short, it appears that the roads covered in the survey clearly improved the situation of farm households. But based on the responses of agricultural workers who would have a better knowledge of these effects, roads did not have a consistently strong effect on changes in agricultural production systems - i.e., they were not strongly associated with increased use of mechanization, increased access to credit or a shift from small scale to commercial agriculture.

Economic Classification: Disaggregating the effects of roads by economic classification showed that roads had a more consistently strong impact on agricultural and commercial activities in the middle range of second through fourth class provinces - as opposed to the first, fifth and sixth class provinces. For a number of questions about the effects of road, fifth class provinces fell between the middle range provinces (classes 2-4) and the poorest provinces (class 6). For other road effects, they aligned with the middle range, and in others cases, with the sixth class provinces as though they indeed represent a transitional stage between poor and middle range provinces. A

clear division between the class 2-4 provinces and the class 1 and 6, with class 5 provinces varying between these groups includes the effects of roads on: increased farm production, introduction of new technology, increased planting of cash crops, faster transportation of farm commodities, mechanization of farming, increased use of fertilizer, reduced spoilage of crops, increased sales of farmers, increased the number of buying stations for farm products, encouraged the construction of storage facilities, and increased direct sales by farmers to traders.

The preceding questions received positive support across all provinces; however, that support is consistently weaker for class 1 and 6 provinces. What this suggests is that the socio-economic context in which the roads are constructed is a very important factor in determining what effect they have for the local communities. Given that most of the road sub-projects affect relatively short sections of road (e.g., less than ten kilometers), such improvements seem to have their greatest impact in areas which are neither the most nor least developed. In the most developed provinces, a short road segment may produce fairly insignificant effects because of the availability of alternative transportation routes. In the very poor provinces, problems are so severe that the effects of limited (short) road improvements are not substantial enough to overcome larger economic problems or deficiencies to produce significant improvements.

Region: One of the clearest and most consistent patterns that emerged from disaggregating the survey data was comparing responses across regions. Interviews concerning the road improvement sub-projects were conducted in Regions I and II (Luzon), VI (Visayas) and X (Mindanao). The data show a strong difference between Mindanao and the other three regions where the effects of the roads are reported to have been significantly weaker in Mindanao. To illustrate the point, the percentage of respondents reporting positively to questions about the effects of the roads are as follows:

	Region			
	I	III	VI	X
- Increased access to credit by farmers	58.0	76.8	49.6	28.2
- Introduced new farm technology	94.0	81.6	84.4	53.0
- Increased use of existing farm land	96.7	78.9	75.6	55.0
- Accelerated transportation of farm commodities	100.0	81.6	93.3	36.9
- Encouraged mechanization of farming	57.3	79.5	68.1	20.8
- Increased use of fertilizer	99.3	81.6	82.2	61.1
- Reduced spoilage of crops	98.0	80.5	85.2	56.4
- Increased sales by farmers	85.3	79.5	79.3	56.4
- Shortened travel time	100.0	97.4	98.5	58.0
- Increased number of passenger vehicles	99.3	95.3	94.8	28.7

	Region			
	I	III	VI	X
	(cont'd.)			
- Led to construction of buying stations	96.7	72.1	56.3	16.7
- Led to construction of storage facilities	95.3	75.8	36.3	4.7
- Increased direct sales by farmers to traders/merchants	97.3	78.4	71.9	38.0
- Increased employment	96.7	95.3	74.1	43.3
- Displaced families due to expropriation of land for road construction	7.4	8.9	18.5	42.0

It is important to view these percentages as relative as opposed to absolute numbers reflecting a consensus among those interviewed. The reason for cautious use of the data is a possible bias toward positive responses by those interviewed. Therefore, the percentages should be viewed as reflecting a strong probability that the road produced or contributed to the change or effect referred to in the question; and high negative percentages, a strong probability that it did not. Any response around a 50/50 (even 60/40 or 65/35) split between positive and negative responses should be viewed very conservatively with considerable caution as to what the response really means.

What is important in the preceding data is the consistent and significant division between Mindanao and the other regions concerning the effects of the roads. Clearly, respondents in Mindanao did not associate ESF road improvements with the positive changes reported in other regions.

Type of Road: The survey data were also desegregated by the type of road sub-project, using the ESF Secretariat's categories of feeder (roads connecting barrios to larger roadways), arterial (secondary) or main (provincial or national). The analysis of the data revealed a consistent pattern where responses to questions about arterial and main roads were very similar. Feeder roads were reported to have either a substantially greater impact for some types of road effects or, in a few cases, a substantially lower impact for other effects. The following exemplify where this pattern was strongest (percentage answering positively):

	Type of Road		
	Arterial	Main	Feeder
- Encouraged farmers to increase production	86.9	86.4	100.0
- Increased farmers' access to credit	60.0	75.2	39.0
- Facilitated introduction of new farm technology	71.7	75.7	97.7
- Increased use of existing farm land	69.0	75.1	93.3

	<u>Type of Road</u>		
	<u>Arterial</u>	<u>Main</u>	<u>Feeder</u>
	(cont'd)		
- Increased planting of cash crops	75.2	77.3	95.2
- Accelerated transportation of farm commodities	75.2	72.7	100.0
- Increased use of fertilizer	68.3	80.7	100.0
- Reduced spoilage of crops	82.1	74.6	96.2
- Increased sales of farmers	73.8	71.7	90.5
- Encouraged construction of new buying stations	61.1	56.5	77.1
- Encouraged formation of marketing cooperatives	43.4	47.2	71.4
- More farmers selling directly to traders	71.0	66.1	93.3

With few exceptions, the survey data indicate that feeder roads tend to be associated more consistently with having produced a clear impact on agricultural production and related commercial activity. Responses to other questions concerning improvements in business activity, transportation and the quality of life, as noted at the outset, were also decidedly positive with little or no differences found among types of road works.

B) Additional Findings on ESF Roads: Verifying the Predictable

In addition to the survey data on forty-one ESF road improvement projects reported above, the impact evaluation obtained additional information on the impact of ESF roads through site visits in Region III, from interviews with USAID, Secretariat and other government officials and by review of available documents, including the observations of the 1989 process evaluation team.

- Construction and Maintenance: The majority of more recent ESF improved roads are of concrete construction which is more durable than asphalt in the Philippines. Moreover, ESF road construction is supposed to follow design and construction standards that should make them more durable than regular DPWH constructed roads. These two factors increase their cost; however, this is justifiable in light of the generally poor maintenance of roads in the Philippines. Those knowledgeable about the transportation system observed that the problem of poor maintenance, not only of roads, but of most public facilities and infrastructure, is widely recognized. DPWH officials in charge of the national road maintenance program are quick to acknowledge the problem, pointing to the small budget allocation made for road maintenance. This situation is likely to continue for the foreseeable future as the GOP attempts to deal with its current fiscal problems. Consequently, the greater durability of ESF roads (assuming roads are indeed constructed to meet ESF standards) assures a longer useable life with less maintenance than asphalt roads.

Roads five or six years old visited by the impact evaluation team certainly appeared to be in good shape with little or no repairs required. However, the process evaluation team's observation about ESF roads is probably also representative of a percentage of the sub-projects:

" There were roads that were well maintained, and some that were poor. In one case in Bataan, an expensive asphalted road went nowhere, services few people, had little traffic, and yet, three years after completion was a maze of potholes, clearly due to contractor and/or inspection inadequacies." (page 31)

In short, ESF roads, once completed, become part of the standard road maintenance programs carried out by DPWH for national roads and by LGUs for roads under their jurisdiction. ESF roads that are constructed to high standards - and we believe that most are but have no way to determine what this proportion is due to a lack of monitoring data - should have a longer serviceable life and, hence, produce a more sustainable impact.

However, even for properly constructed roads in Regions I and III, many have been damaged by the 1990 earthquake. The impact evaluation observed one such example, where large sections of a concrete road had been broken and subsequently crushed by traffic. The shoulders of the road were broken or separated from the road way by a meter or more in places. An important part of the road project was construction of a bridge which had been knocked down and temporarily replaced by a wooden structure. No repair work was underway nor did the USAID engineer know of plans to repair the road. Such damage left unrepaired obviously reduces the sustainability of the road's impact.

- Project Selection as a Basis for Anticipated Impact: As stated at the outset, we are not able to estimate accurately the percentage of roads funded through the ESF program which have produced an acceptable level of economic or social benefits due to the lack of program monitoring data. However, the process evaluation reported that:

"The team doubts that most of the sub-projects could survive a basic cost-benefit economic analysis, although each may have had social, community or political justification. None seemed integrated into urban and regional plans considering growth, population, or traffic projections; none of the Municipal plans examined provided any written rationale for any priority project." (page 29)

The impact evaluation team easily obtained evidence of both highly beneficial road improvements (which probably would survive a post-construction cost-benefit analysis) and others that

appeared to have little enduring utility, much like the example cited above regarding the road in Bataan.

For example, the ESF program funded construction of a concrete road between Paniqui and Camiling which provides a direct connection between the two market towns (as opposed to the past where traffic moved via Tarlac - a much longer route). The effects of the road improvement were reported to be substantial by local residents and transportation providers. Before the project, the dirt road between the towns was very rough and travel was much slower than after the concrete road was completed. Prior to the road improvement, only three motorized tricycles routinely carried goods and customers between the two towns and only fourteen or fifteen jeepneys traveled this route. Now more than fifteen tricycles and sixty to seventy jeepneys provide transportation between the towns. Jeepney drivers reported that it was the construction of the road which led them to buy their vehicles and start business. Farmers now transport their produce to market via the roads and these vehicles, selling directly to market traders. In the past, they sold to middle men who transported their goods to market and received much less than they do now by selling directly. Increased agricultural production was also reported. We visited other roads where similar types of improvements were reported.

In contrast to this road are examples provided by such sub-projects as the Clark Perimeter Road and the Clark Access Road. Concerning the former, the reader is left to speculate on what the economic and social benefits are to paving a section of road peppered with bars and nightclubs on the fringes of the air base. In fact, some operators of handicrafts and other businesses reported they preferred the old road because traffic moved more slowly and more customers came into their establishments.

Clark Access Road was originally intended to open up lands turned over to Tarlac Province from the air base for settlement by displaced people. The plans for resettlement did not go forward, but the road did. There is now a splendid 5 kilometer asphalt road followed by a three kilometer gravel section which deadends, at a cost of \$2,995,046.13. Three years after construction, there is little significant commercial activity along the roadway. As the USAID engineer who worked on the project candidly observed, there is virtually no change at all in the area. The number of residents serviced by the road are so few that they could be counted in a day.

Another sub-project involved improving a gravel road to a fishing port; however, it was little used because users of the port facility preferred the old access road. Other roads were short-span sections, the rationale or justification for which could not be determined. The impact evaluation team also learned from people long associated with the ESF program that a number of road

improvements in the past were ill planned and poorly constructed, and have been so damaged by rains and storms that they have largely washed away. Small barangay roads were constructed which led nowhere. Others were apparently constructed primarily to give access to the holdings of a major landowner in the area.

These examples suggested problems with the initial selection criteria for ESF road improvement sub-projects. Many road project papers, especially those funded through MDF, have extremely weak or, in some cases, non-existent economic analyses of the proposed road. Some report agricultural production and population data, some with projections of increases, in the economic analysis sections. Some project papers provide the results of a benefit-cost analysis, whereas others are characterized by a caliber of analysis that leaves a great deal to be desired, for example:

"Being the subject of a grant, the projects (sic) will therefore not be subjected to the usual cost-benefit analysis...", and

"Surely the quantifiable benefits derivable from the project, in terms of financial analysis, are more than enough to warrant its immediate implementation."

Having concluded the benefits "are more than enough", no benefit-cost analysis was attempted. But economic analysis is not the only questionable part of these project papers. A standard "boiler plate" paragraph is found in paper after paper concerning environmental impact, concluding there is no adverse environmental impact due to road improvement because the track/dirt road already exists. One project paper concluded the following about the environmental impact of a road project:

"The proposed construction of the road project has a corresponding impact not only on the economic and social aspect, but on the physical environment of the area as well."

Problems with selection and construction of some ESF roads were recognized by program management and RDF is supposed to use a higher standard for feasibility studies. Indeed, some RDF-funded road sub-projects have sound economic analyses showing rates of return in excess of fifteen percent. However, others do not differ in substance or quality from the MDF project papers.

Even with better feasibility analysis guiding project selection, the highly political nature of the program and the issue of "who gets what project" has, on occasion, overridden the normal selection process. In general, proposals for projects are supposed to be initiated by the LGU which forwards the proposed project to the RDC for review and approval. With RDC backing, the proposed project is forwarded to NEDA which then informs the ESF Secretariat of which projects it approves. In principle,

these projects should conform to the development plans at provincial and/or regional administrative levels. Schools, for example, should conform with DEC's plans for school construction. However, in practice, the process is much murkier than this description suggests. The ESF Secretariat is not even sure of what NEDA's approval process is and who is involved. Circumventing the process is also reported to be a not uncommon practice. LGU officials are known to petition directly the Secretariat and/or NEDA to obtain project approval.

- Conclusions:

When the ESF road improvements are well constructed according to design standards; when they are located in areas that increase access to markets and facilitate reliable transportation of goods and passengers; and when they are maintained even to minimal standards; they produce the expected benefits. The impact evaluation team concludes that a majority of ESF roads meet these conditions.

This conclusion should be tempered, however, by the results of the survey reported above. In comparison to other respondents, farmers and agricultural workers, who should be most knowledgeable about the effects of ESF road improvements on farming, discount the magnitude of the impact. This is most evident with respect to inducing major changes in farming systems. Rather, it appears that roads are more effective in increasing current levels of production under existing farming systems, than in inducing major changes toward adoption of new farming systems.

The ESF road improvements have not been uniformly effective across all levels of socio-economic status and across all regions. The survey results suggest that roads have a comparatively greater impact in the middle economic range of Philippine provinces. Similarly, the effectiveness of the roads found in other provinces seems to be lacking in Mindanao. The exact reasons for this cannot be determined here, but it suggests that the ESF road projects in Mindanao are perhaps:

- a) less well selected or implemented;
- b) that these are newer road projects and have not yet had sufficient time to produce an identifiable impact; or
- c) that the development problems in Mindanao where the roads are located "overwhelm" the effectiveness of road improvements.

The survey results also suggest that feeder road projects which improve access by rural communities to local marketing centers appear to have a consistently higher impact than other types of improvements.

The impact of the ESF road improvement program has been diminished by the apparent number of poorly selected and/or poorly constructed roads. This can be attributed to the strong political interests surrounding the ESF infrastructure program. One could easily argue that program management over the years should be commended for containing these pressures as well as they have under the circumstances. Nonetheless, some ESF funding has gone to road improvements projects which were not sound investments and have not, nor in some cases, will ever generate adequate economic or social benefits to justify their construction. Of course, due to the lack of adequate monitoring data, such percentages are exceedingly difficult to establish. But there are enough examples to know that these are not random, insignificant events involving minor amounts of ESF funding. ESF program managers are aware of these problems and they have taken corrective actions recently and in the past.

In addition to political pressures affecting program impact, questionable project selection, particularly under MDF, most likely contributed to reducing overall program impact. Vague selection processes and circumventing the system runs contrary to using objective criteria to select those projects which are most likely to have the highest potential for producing significant economic and social benefits. While exceedingly important for a program of this sort, the need to increase spending levels can allow marginal projects through which might otherwise be rejected. Under these circumstances, the percentage of ESF road projects that produce marginal benefits could be much higher than most would care to believe.

It is also worth noting that the ESF road sub-projects have less continuing visibility as a joint GOP and USAID product. For example, though the large majority of respondents in the survey had lived in the area for ten or more years, many were not aware that the road improvement was an ESF sub-project - our interviewers had to tell them as much.

- Recommendations:

- Road improvement sub-projects should continue to be part of a future ESF infrastructure program. However, standards for the selection of projects need to be based on a stronger economic footing. This may result in slowing spending for road improvements, but other projects, such as schools, which have a higher probability of being constructed quickly and correctly, and producing immediate benefits, may be better conduits for maintaining expenditure levels.

- Improvement of feeder/farm-to-market roads and roads linking rural market towns should be given high priority in future program funding.

- A study should be conducted of the effectiveness of ESF road projects in Mindanao to determine if they are indeed less effective and , if so, why.

Section 6: Municipal Markets

Twenty-two municipal markets have been completed with funding from the ESF Infrastructure Program. Market sub-projects have been funded through three mechanisms - the Municipal Development Fund, the Regional Development Fund and the Markets Project. Originally undertaken as a means of stimulating employment and economic activity in the areas affected by the closure of U.S. bases, market sub-projects were subsequently expanded to the rest of the country. However, over half of the completed sub-projects are in Central Luzon (Region III), as shown by the following table ('000 Pesos as of September 1990):

<u>Region</u>	<u>No. of Markets</u>	<u>Value</u>	<u>Average Cost</u>	<u>Value as % of Total</u>
I	3	48,737	16,246	12.8
II	1	29,995	29,995	7.9
III	16	224,181	14,011	58.9
IV	0	0		0
V	1	27,451	27,451	7.2
VI	1	19,234	19,234	5.1
VII	1	30,903	30,903	8.1
VIII	0	0		0
IX	0	0		0
X	0	0		0
XI	0	0		0
XII	0	0		0
NCR	0	0		0
<u>Total</u>	<u>23</u>	<u>380,501</u>		

(Sources: USAID Completed ESF Sub-projects)

Municipal market construction is estimated to represent 24.8 percent of total program funding. The majority of funding for ESF markets has been directed to Region III, constituting 61.4 percent of total funding. The table also reflects the variation in the size of ESF markets, with average project varying from a low of P 14 million to a high of P 30 million.

Findings

Financial Viability: Funding of the markets was arranged on a combined grant - loan basis. Loan terms varied, not only among core ESF projects (i.e., Markets, MDF, RDF), but also among sub-projects funded by the same core project at ratios - the portion of civil works financed - varied from 30 to 100 percent. Repayment periods ranged from 15 to 25 years, with or without grace periods, and interest rates were set at 9 or 12 percent.

The process evaluation was the first documentation of the unsound financial conditions of the ESF-funded markets. The evaluation pointed out that the markets were far over-designed where second floors were planned, not fully occupied, poorly managed, and not able to meet their operating costs and loan re-payment schedules because of low rental fees. Initially, USAID questioned the veracity of these findings (see the 1990 Project Activity Completion Report for the Markets Project, pages 16 and 17). A financial evaluation of ESF-assisted public markets, completed by SGV Consulting in February 1991, updated and confirmed the findings of the 1989 process evaluation.

The SGV Report found that despite generally high stall occupancy rates (11 of 17 markets were 91 to 100 percent occupied), operating incomes of the markets were in all but two cases insufficient to meet the amortization costs under the terms of the loan agreements. Further, positive levels of operating income would not have been achieved had the markets been properly insured and paying insurance premiums, as also required by the loan agreements. Only two of the 17 markets had made loan repayments, and payments were incomplete in both cases. Unsurprisingly, none of the markets surveyed came close to achievement of the 28 percent internal rate of return (after loan repayment) projected for the markets portion of the ESF program. This is despite economic and financial feasibility studies reported in project planning documents which appeared thorough. After construction, there was no monitoring of the financial operations and performance of the markets.

Reasons for the markets' poor financial performance include construction costs far in excess of estimates, leading to higher than anticipated loan repayment obligations; serious over-staffing of markets; inadequate stall rentals (relative to rates charged under the World Bank-financed PREMIUMED Project, or to evident demand for rental space); and high delinquency rates in the payment of rental fees. Generally poor market management was evidenced by the lack of accounting records, in particular no separate system of expense accounting; poor market maintenance; and, according to the SGV and process evaluation reports, generally unsanitary conditions.

Higher than anticipated construction costs were attributed to over-design of the facilities (many markets being designed for two stories, with only the first eventually being used), and to delays in construction which compounded the inflationary impact on costs. Inflation has been blamed for higher than expected operating as well as construction and amortization costs. However, since inflation could be expected to have an offsetting favorable effect on rental incomes, the markets' poor operating performance cannot be explained on this ground.

Increased revenues for the municipalities were a key objective of many of the market sub-projects, as stated in market feasibility studies. Ironically, some of the municipal authorities with whom we spoke were able to point to the markets as a key source of municipal revenues. However, there appeared to be no sense of the need to maximize returns, and the same authorities were generally unaware of the markets' true financial situation; that is, after taking account of the absence of insurance, inadequate maintenance, and loan amortization obligations not met. Indeed, the SGV Report observed that several responsible authorities were unaware of the existence of loan repayment obligations.

The Team has reservations with respect to some of the process evaluation observations in the areas of maintenance and sanitation, but with two or three exceptions, the markets' financial performance has clearly been a shambles. Still, the markets' low (or negative, depending on the accounting) financial return would be only one aspect of a full economic cost-benefit analysis. From the standpoint of an evaluation of socio-economic impact, we are interested in the economic benefits to the community from increased business, employment generation and higher returns to farmers, as well as potential social costs, such as increased sanitation and reduced health hazards. A proper cost:benefit analysis is well beyond the means of this evaluation, but we have obtained additional information of the economic and social impact of the ESF markets.

Economic and Social Impact: The impact evaluation team visited eleven municipal markets in Regions I and III to interview local officials, market administrators and numerous market stall operators about the operation and effects of the market business activity. Some sixty interviews were held with stall vendors who were selected simply on the basis of their availability at the time of our visit and willingness to talk to us.

In all cases, the ESF-funded markets substantially increased the number of stalls available to vendors in comparison to the old market. The occupancy levels of the markets varied noticeably, several markets had substantial unused space, whereas the others were very full and showed a high level of business activity. It was also quite apparent that the new municipal market constituted an important center, if not the core, of local commercial activity for consumer goods and services. The markets were typically ringed by other business establishments on the same or neighboring streets. The markets were also commonly associated with increasing surrounding real estate values. Of course, this benefits only the fortunate few who owned this land prior to market construction.

The profitability of the markets has been studied and reported on in both the process evaluation and the SGV financial evaluation. As described above, their financial condition appears to be poor.

However, several of the markets visited had constructed or were in process of constructing permanent additional stall space to accommodate demand by stall operators. The municipality was funding the construction. Municipal officials at several markets reported that the facility was profitable, in one case - Dinalupihan - the market was reported to generate 25% of the municipality's income from daily cash tickets, stall fees and other assessments.

As a result of increased stall spaces, roughly twenty percent of the current market vendors represented new businesses established specifically because stall space was available in the new markets. Others reported that they had previously operated as ambulant vendors selling on the periphery of the old market or the town plaza where the market was located. The majority of vendors, however, operated the same or similar type of businesses in the old market or in other facilities. The vast majority of these businesses are micro or small-scale enterprises typically operated by one or two individuals, often by family members. The majority of the stalls are managed on a daily basis by women.

Interviews with stall operators revealed that it was a rare exception to find someone who reported that their business was better in the old market than in the new or that they preferred the conditions of the old market. The large majority of vendors reported that the level of business was about the same or better in the new market than in the old. Vendors selling dry goods (e.g., clothing, shoes, fabric) and some selling fruits and vegetables reported that they had been able to expand the range of items for sale because of increased stall space. Many, however, stated that their earnings had not increased substantially because of greater costs (rental fees) and considerably more competition both within the market and with ambulant vendors. Without exception, vendors in all markets visited reported that the number of ambulant vendors had increased and this was cutting into their business.

One interesting pattern found during the course of the interviews was that fish, meat and (less frequently) grain and animal feed vendors tended to report more frequently an improvement in their business after moving to the new market. Little or no improvement was more often reported by the majority of vegetable and fruit vendors.

Those who reported little or no improvement in their business often attributed this not to the new market, but to the state of the local economy and inflation over the past several years. Rapidly rising prices for their goods had to be passed on to customers, but many reported that this depressed their overall sales.

The most common problem reported by the stall operators was the ambulant vendors, who sold the same goods at a slightly lower price. (Ambulant vendors have no stall fees to pay and a daily ticket permitting them to sell just outside the market costs only one or two pesos per day.) Even where ambulant vendors were not permitted, attempts by market managers and the local police to run them off prove futile. The tension between the stall operators and ambulant vendors was reflected in their reference to them as "squatters". Others took a more benign view toward the ambulant vendors, noting how they too needed a means of employment.

Interestingly, when asked why they did not also operate as an ambulant vendor, none were willing to give up their stall space. Several vendors reported they operated both in the market and as ambulant vendors.

Management and maintenance of the market facilities varied widely. In most markets visited, stall operators reported that trash was collected and floors were swept daily. However, the way in which the trash and garbage was disposed of was another matter. At one of the markets reported by SGV to be financially sound, garbage and assorted refuse was piled sky high in an area immediately behind the market.

Sanitation conditions were, of course, a more critical issue for the wet as opposed to the dry sections of the markets. In most of the wet markets, fish and meat vendors reported that the water and electricity worked regularly and the drainage was adequate even during the rainy season. Floors were wet but free of trash and trailings in these markets and the drains were clearly functional. In several markets, this was certainly not the case, especially during the rainy season. Water faucets were inoperable and drains were clogged with garbage and trash. Urdaneta market represents the worst example of this. Water rose up out of the drains, flooding not only the wet market, but spilling over into the stalls of the dry market. Customers were reportedly treated to wading through this miasma until the rains taper off. This market also set a low for the evaluation of dirty floors - meat bits dropped on the floor had been tread into a slimy pate, equally stunning to the nose as well as to the eye. Though most of these problems may be attributable to poor maintenance practices, we also found a clear example of a major design or construction error in channeling run-off from the market. Instead of flowing into a proper drainage system, the run-off flooded the surrounding street. A store owner operating across the street from this municipal market reported that the only impact the market had on his business was to flood his premises regularly during the rainy season (he had been in operation long before construction of the market). Drainage problems in another market visited were due to earthquake damage.

Despite these problems in several markets, stall operators consistently reported that the sanitation and working conditions in the new market were superior to those in the old market. Customers also confirmed this view.

The survey conducted for the evaluation confirms many of the team's observations about the effects of the markets. ESF-funded markets were strongly associated by respondent to the following types of improvements:

- improved overall conditions in comparison to the old market
- contributed to the creation of new businesses
- contributed to increased employment
- increased shipment of goods to nearby markets and to larger urban markets
- increased availability of new consumer goods
- increased supply and quality of consumer goods

Conclusions

The large majority of completed ESF-funded markets are on an unsound financial footing. The current financial condition of many markets undercuts the original objective of developing a facility which generates revenue for the municipal government. Subsidizing business operations by setting rental fees far too low and over-staffing obviously reduces the net revenues earned by the municipality from the market. The lack of adequate monitoring of the markets' financial performance by ESF program management clearly contributed to allowing this problem to develop and continue over time.

The poor financial performance of the markets and their general mismanagement, including poor maintenance, reflects the weak capabilities of the municipalities to operate a facility that should be a profit-oriented business. Yet several municipal officials reported that their markets were profitable and demand for more stalls led to the local government funding construction of additional facilities. The program has not recently considered private sector alternatives to markets owned and operated by municipal governments which could be a solution to poor management.

The failure of municipalities to repay their construction loans to the ESF program is largely irrelevant to the near-term socio-economic impact of the markets. There is clear evidence of a positive impact on the local business community. Markets have encouraged new business formation and generated employment. Though markets appear to have contributed to the profitability of some businesses, external economic conditions exert a much more powerful influence. There is also evidence that the markets have facilitated, to some extent, commerce within the province and/or region, resulting in more and higher quality consumer goods.

However, the markets have increased competition among stall operators and between stall operators and ambulant vendors. Though this results in lower business volume or lower earnings for the individual business operator, competition typically assures consumers receive reasonable prices.

The issue of ambulant vendors is very interesting with respect to the impact of the markets. The numbers of ambulant vendors have increased around the new markets in comparison to the old markets. This has to cut into the business of stall operators. How significantly this affects the business of stall operators is unclear. The reluctance of current stall operators to give up their space and operate as an ambulant vendor suggests that profits are not as badly affected as some suggest and that the stall and the location it provides has an economic value to the renters.

Moreover, the increase in ambulant vendors is much more likely to be a result of current economic conditions as opposed to the market per se. The lack of alternative, more gainful employment probably forces many of these vendors into this trade. Whatever the cause, the increase in ambulant vendors reflects a form of employment generation around the market. (In fact, the market should be viewed as not just the physical facility, but also the grounds around it used by the ambulant vendors.) But what this employment does is spread the effects of a depressed economy between those who may have a viable business (i.e., the stall operators) and those who might be otherwise unemployed (i.e., the ambulant vendors).

The markets' impact on improving health and sanitation conditions is equally double-edged. Poor maintenance practices, inadequate garbage and refuse disposal and failure to correct non-functioning drainage systems further reduces the impact of the markets. In particular, such inadequacies diminish the market's longer-term contribution to improving health and sanitation conditions. But not all markets are so mismanaged and conditions in the old markets were reported to have been much worse. The relative improvement in health and sanitation conditions made by the new market over the old market (or town plaza) might be a fairer basis for assessing improvements. From that perspective, it appears that the ESF markets represent progress over previous conditions. Of course, that relative improvement will diminish over time - and at a fairly rapid pace - when markets are poorly maintained as many currently appear to be.

Recommendations

- The SGV recommendations concerning steps which need to be taken to correct the financial unsoundness of ESF markets should be pursued over the remainder of the program. Resolution of this situation should be a major management objective of the

Secretariat and USAID. Converting the loans to grants may be the most reasonable and expeditious solution at this point in the program.

- Future ESF programming should include funding for markets, following closely the lessons learned from the present program, especially concerning market design, management of the facility and financial arrangements and performance.

- Future support for markets should explore possibilities for engaging the private sector in owning and operating the market facility. The municipal government should be viewed as a recourse to the private sector.

- Future ESF funding for markets to be operated by municipalities or other LGUs should include a technical assistance component for training in market management operations and following the model established by PREMIUMED on financial and operating conditions.

- Any future ESF funding for market development should include adequate financial performance monitoring and reporting.

Section 7: Other Major ESF Infrastructure Sub-projects

Approximately five percent of ESF funding was directed to various other types of infrastructure projects. This included hospital buildings, slaughterhouses, drainage and flood control works and solid waste disposal facilities. These sub-projects were located only in Region I and III in the following provinces: (funding reported in pesos)

Region I: La Union - 4,138,676

Region III:

Zambales	-	30,400,555
Tarlac	-	4,387,016
Bataan	-	5,643,789
Pampanga	-	29,183,931
Bulacan	-	8,587,371

(Source: USAID Completed ESF Sub-projects as of 9/30/90. Excludes minor work orders.)

Though a small portion of the overall program, these projects offer potentially important lessons for future ESF infrastructure assistance. Sites visits were made to three hospitals, two slaughterhouses, two proposed solid waste sites and an industrial park/export processing facility. What is not reported here are an estimated 215 additional "other" projects which include numerous small work orders for finishing projects near completion when MDF reached its completion date and various other small works contracts.

Findings

Public Hospitals: The ESF program funded the construction of buildings and procurement of equipment for district and provincial public hospitals. These hospitals play a key role in the hierarchial organization of health care service delivery. Primary health clinics refer patients to District hospitals for more specialized treatment. District hospitals, in turn, refer patients to Provincial hospitals for even more specialized treatment.

The ESF-funded construction was reported by hospital officials to have alleviated severe overcrowding and the equipment enabled the hospitals to use the new facilities and provide additional services. However, they pointed out that overcrowding continued to be a problem.

At the Children's Hospital in Bulacan, the facility had stood unused until the recent appointment of a new administrator. The hospital had suffered from its poor location on a back road.

Provincial officials plan to construct a new access road to the hospital soon. Renovations were also underway on a room to accommodate an advanced X-ray machine provided through the ESF program.

The ESF-funded construction at the Guagua district hospital expanded its capacity to a level equivalent to a provincial hospital. However, the legislation increasing its budget accordingly had not been passed. Consequently, its budget was still set on a twenty-five bed basis when in fact the hospital now has approximately one hundred beds.

As public hospitals providing free or nearly free health services, the majority of patients using these facilities funded by the ESF program are from lower income households. Those who can afford it prefer private health care because it is generally considered to be superior to the services of public health facilities.

Municipal Slaughterhouses: The ESF program funded construction of four municipal slaughterhouses at a total cost to the program of approximately \$500,000. Only two of these facilities were completed. One stands unused; the other is used to slaughter approximately nine or ten animals a day though it is designed to handle many times more than this. Sanitary conditions at the one in operation seemed adequate given its very limited use. The other two facilities remain unfinished. They have been re-designed, but only one municipality has opted to complete construction. The other structure is in a state of deterioration. Because of continued delays and growing frustration with the ESF program, the municipality chose to renovate its old slaughterhouse instead of finishing the ESF building.

The major problem the slaughterhouses encountered was failure to receive the approval for their design by the National Meat Inspection Commission. Apparently, the ESF Secretariat moved ahead with its design of these facilities without the participation of the NMIC. Without approval of the design, NMIC will not issue the license necessary to operate the facility.

Municipal Solid Waste Facilities: The ESF program provided funding for proposed solid waste facilities for Olongapo City and San Fernando in La Union. Neither site functions as a solid waste facility because of the lack of basic equipment - e.g., a backhoe, a bulldozer, and dump trucks. Equipment was supposed to be provided through the Excess Property Program which terminated in 1986. Therefore, funding for equipment was not included in the original project budget. Olongapo City initially received equipment, but it was stolen during the political turmoil of 1986. Some additional equipment has been subsequently provided, but the municipality still lacks equipment necessary to operate

the site as a solid waste facility. San Fernando received a truck chassis and a bulldozer which local officials reported was inadequate for the job. The municipality made road improvements at its own expense to provide access to the proposed site.

Municipal officials attempted to obtain funding through the program for this equipment, but were told by the ESF Secretariat that their original funding source, MDF, is finished and no funding is available, even though \$60 to \$70 million remains uncommitted in RDF. Consequently, Olongapo City's site continues to be used as an open dump site which has an adverse environmental impact, as carefully documented in the 1989 process evaluation. San Fernando's site was completed five years ago and remains used only as a small nursery site by the watchman. It is surrounded by an attractive fence and on one of the buildings is a brass plaque acknowledging USAID's assistance.

The level of frustration expressed by the city officials of these municipalities concerning these projects is palpable.

The Pampanga Export Processing Zone - PEPZI (Angeles Livelihood Village): The ESF program funded the initial construction of infrastructure for an export processing zone in Pampanga. Between 1984 and 1988, approximately P 90 million were spent to develop basic services - e.g., water, sewerage, electricity, security fences - and twenty-seven buildings. This facility is currently managed by the Livelihood Corporation, a government organization operating under the Office of the President. It occupies 33.75 hectares within a total estate of 71.5 hectares owned by the Export Processing Zone Authority (EPZA). EPZA was supposed to have also developed its portion of the zone, but to date, it has undertaken no construction of facilities.

The managing director of the facility reported that USAID staff had told him some time ago that the project would be a "white elephant" in the belief that tenants would not be found for the facility. Within in one year after completing construction, all facilities were occupied by fourteen tenants and other businesses have requested space when it becomes available. Some of these operations are new, others have re-located to the facility. Eighteen of the buildings are used as factories, the remaining nine serve as warehouses. Current tenants include garment and rattan furniture manufacturers who are producing primarily for export. Current operations have resulted in 1,600 employees working in these facilities. The facility apparently has had a positive impact on the local community by creating job opportunities and by stimulating the local housing market. According to the director both current tenants and other manufacturers are interested in leasing additional building space if it were available.

The director reports that the facility is still in the red because of the size of the initial capital investment. The entire facility is divided into twenty-four blocks, existing facilities occupy only six blocks, with eighteen blocks remaining unused. The corporation estimates that thirty additional buildings are needed to increase their rental earnings to become profitable. However, it has not been able to attract local investors nor obtain financing elsewhere. Local manufacturers are apparently unwilling to finance the construction of their own facilities at the site. At one point, Japanese and Taiwanese companies had planned to build their own facilities at the site, but since the coup attempt in 1989, they have not returned.

Conclusions -

The importance of these sub-projects in the overall program is greater than the amount of funds they constitute.

In the case of public hospital sub-projects, construction of primary health care facilities would probably have a more direct or immediate impact on the health status of the poor than would a central hospital. On the other hand, in relatively more developed regions or provinces, such as Region III, hospitals play an important part in the provincial health system by supporting lower levels of health care delivery. They provide programs, services and treatment unavailable through primary health care clinics. The improvements funded by the ESF program i.e., construction of basic facilities and procurement of medical equipment - expanded the capacity of these hospitals to meet this need for health services. Furthermore, the patients of public hospitals are reported to be from poorer households. In short, there is nothing necessarily wrong with local governments receiving funding for construction of hospital buildings and equipment when these facilities are essential to strengthening and expanding the provincial health care system, as appears to be the case for the ESF assisted hospitals.

The four ESF funded slaughterhouses and two solid waste facilities are clearly the white elephants of the program. The amount of money involved is a relatively small proportion of the overall program. In a program of this magnitude involving thousands of sub-projects nationwide, a certain number of failures will occur regardless of all the controls, reviews and standards built into the program's management system. However, in absolute terms, these sub-projects constitute approximately \$900,000 in program funds. As painful as that is, the more serious loss might well be the damage such failed sub-projects do to the credibility of the program, to say nothing of the efforts of the GOP and USAID. After all, how many successful sub-projects are needed to offset the negative impact of a failed sub-project?

The PEPZI project is an interesting case of what looked to some as a white elephant in the making. But if the information about current operations and demand for additional facilities is accurate, it could have the potential to succeed, perhaps in a big way. Other than the public markets, this project was the only one funded through the ESF program which deals directly with a constraint to private business operations. There are probably other types of infrastructure that could be funded in the future which also directly address the needs of private business and have employment generation potential.

Recommendations:

- Future ESF infrastructure programming should include funding for "other" types of projects that: a) meet requirements for economic, social and environmental soundness, b) play a well defined and justifiable role in expanding essential social services commensurate with the level of development and needs of the community it serves, c) for public facilities, will receive adequate budget to operate properly, or d) develop infrastructure facilities that address constraints to private business development and/or have high employment generation potential.
- A basic requirement of all future LGU projects funded through the program is that the designs and construction standards of the project have approval by all concerned regulatory agencies prior to funding.
- All future projects should include funding for the total package required for the project to operate successfully or have assurances that un-funded components will be obtained by the LGU in coordination with project implementation.

Section 8: Improving Program Impact

Based on the preceding sections, the impact of the four major categories of sub-projects funded by the ESF Infrastructure Program is certainly sufficient to continue funding for such activities. The results of the program have been generally beneficial and have produced social and economic benefits for poorer segments of the population. This is especially true of the schools; less so for the roads; less for the markets (due to the current financial problems they are experiencing) and a mix of good and bad depending on the type of "other" sub-project. Quantitative estimates of how great these benefits have been and whether they are indeed significant contributions to economic and social development are not possible given the lack of adequate data. In fact, it is hard to think of a better use of the local currency generated by the ESF program which would have a greater, more immediate or more tangible impact on the social and economic development needs of the country.

In the case of elementary and secondary schools, a number of factors come together to contribute to their high impact: a) the growing school age population, b) the continuing significant shortages of facilities, and c) the development of a relative simple design for a highly durable structure which can easily be adapted to site requirements and is delivered as a complete package (e.g., painted, furniture, etc.).

Ordinarily, A.I.D. would want to go beyond the output level - the completion of a properly constructed building - to assess the subsequent benefits of that building, e.g., how it has improved the quality of education at the school and how that resulted in benefits to the students. But given the preceding factors, the output - the completion of a properly constructed, completed school building - can be treated as a proxy measure of impact.

For roads and markets, that type of reasoning is not applicable. There seems to be far more variation in the quality of construction and the longer-term utility of the roads than the schools. Though standard designs for markets have been developed, the problem here arises with the management and operation after construction. The situation seems even more complicated with a number of the "other" sub-projects, e.g., slaughterhouses and solid waste sites. Simple counts of these outputs are not proxy measures of impact.

Nonetheless, the obvious fact is that to increase the impact of the program, more outputs simply have to be produced more quickly than is currently happening. Look again at the pace of expenditures in real terms since 1982 presented earlier in Section 2.

Table 4: ESF Peso Disbursements for Sub-projects in Real Terms
('000 1990 Pesos)

<u>Year</u>	<u>Amount</u>	<u>Cumulative</u>	<u>Cumulative as Percent of Total</u>
1982	565,242	565,242	18.13
1983	0	565,242	18.13
1984	400,082	965,324	30.96
1985	830,426	1,795,750	57.59
1986	524,156	2,319,905	74.40
1987	115,176	2,435,081	78.10
1988	122,900	2,557,981	82.04
1989	11,755	2,569,736	82.42
1990	373,641	2,943,377	94.40
1991	174,620	3,117,998	100.00

As pointed out earlier, almost 75% of the program's expenditures in real terms (i.e., standardized units needed to make comparisons meaningful over time) were accomplished between 1982 and 1986. In the past four and a half years, only the remaining 25% of the program's expenditures have been accomplished. The disbursement procedures and the use of an advance-based FAR mechanism differed from current practices. But that does not change the fact that the bulk of sub-projects had been completed by 1987. Slower disbursement is claimed to be due to stricter contract management and accountability requirements which are to reduce poor contractor performance or misappropriation of funds. This should result in better quality projects. If that is the case, the evaluation team has no evidence of it.

Another way to view the situation is to compare operating costs to expenditures as a rough measure of program efficiency. Combining both ESF program and GOP contributions, current total operating costs of the program are estimated to be at least \$1,000,000 per year. Using 1990 expenditures (i.e., the best performance in recent years), this means that it costs one dollar to spend thirteen dollars.

The annual incremental gains in cumulative real expenditures is also instructive. The gain between 1983 to 1984 was 12.8%; 1984 to 1985 - 26.6%; 1985 to 1986 - 16.8%. For the period 1982 through 1986, the average annual percentage increase in real expenditures was 14.1% (excluding 1982/83, 18.3%). After 1986, the subsequent increases were: 1986 to 1987 - 3.7%; 1987 to 1988 - 3.94%; 1988 to 1989 - 0.4%, 1989 to 1990 - 12%; and 1990 to 1991 (partial year) - 6.4%. The average for this period is 5.2%, roughly a third of the pace during the preceding period.

It should be noted that during both of these periods, the virtually same procedures and regulations for contracting, payment and disbursement were in effect for the ESFS. Moreover,

the same types of sub-projects were undertaken. A major change that distinguishes the two periods, however, was a substantial tightening of administrative controls and greater accountability for the use of public funds imposed on all GOP agencies by the current GOP administration in 1986 and 1987.

Conclusions:

The decline in the real output of the program during the past four and half years is significant and has reduced the overall impact of the program. This slowdown may be attributable to stricter administrative controls and greater accountability requirements imposed by the current GOP administration. If so, whatever these tighter controls reportedly achieve occurs at the expense of the development objectives of the ESF Infrastructure Program by impeding implementation. Consequently, the results of the program could have been greater than they are.

The pace of program implementation as measured by disbursements in real terms for sub-project activity has not recovered to pre-1986 levels and shows no sign of doing so. The substantial amount of funding remaining in the RDF which will have to be de-obligated, combined with current low levels of disbursement, throws into question the desirability of continuing existing implementation arrangements. After more than ten years of experience with the current arrangement, the present situation calls for careful consideration of alternatives before proceeding with a follow-on program.

Recommendations:

- Given the performance of current implementation arrangements for the ESF Infrastructure Program, an extension of the PACD dates for RDF and the Project Design Project is not recommended. Funds de-obligated should be directed to projects where they will be used more efficiently and expeditiously.

- Examine alternatives to the current implementation arrangements for the program before proceeding with any follow-on activities. For example, consider the use of an external, non-governmental technical assistance team for the review of the engineering, economic, and other requirements, as well as project implementation monitoring of sub-projects proposed by local governments.

- Give particular attention to mechanisms that would transfer management responsibility and funds directly to the development budgets of capable local governments for small scale infrastructure projects at the very outset of the follow-on ESF project.

- Include in any future program management information system monitoring of the social and economic effects of completed sub-projects (specific recommendations are made in Annex D).

ANNEXES TO THE ESF IMPACT EVALUATION

Annex A: Assessing Impact Beyond the Local Community

Annex B: Site Visits, People Interviewed and References

Annex C: Evaluation Survey Methodology

Annex D: Recommendations for Monitoring and Evaluation of Future
Small Scale Infrastructure Projects

Annex E: ESFS Comments on the Impact Evaluation

Annex F: Scope of Work for the ESF Infrastructure Impact
Evaluation

ANNEX A: Assessing Program Impact Beyond The Local Community

A. Introduction: Hypothesis of Higher Order Impact

The ESF Infrastructure Program comprises a number of projects designed to improve social and economic conditions through assistance for institutional development and the building of high priority, growth-related infrastructure projects, such as schools, roads, public markets, health facilities, and solid waste disposal facilities. Intended beneficiaries under the initial projects, the Municipal Development Fund (\$70 million, authorized in FY 81) and the Regional Development Fund (\$45 million, FY 82), were the individuals and communities displaced or otherwise affected by the reversion of U.S. bases in Region III and, to a lesser extent, Region I. With the Markets Project (\$21 million, FY 82) and the First Amendment to the RDF in 1984, the program was expanded to cover the entire country. Through related, smaller-scale projects and amendments to the RDF, the Program was expanded to an obligation authority of \$325 million..

From its origins as a means for assisting groups affected by the base closings, the Program has expanded to encompass such broad economic objectives as increasing and diversifying agricultural production, increasing employment opportunities, and improving income distribution throughout the country. An underlying hypothesis of the ESF Program is that by funding high impact types of infrastructure concentrated in specific locations (e.g., Region III), the sub-projects will have a collective effect beyond the immediate community, perhaps at the provincial or regional levels. This type of "higher order" impact should be reflected in such indicators as agricultural data (production, yields, prices, agricultural input use), employment, transportation costs, and new business formations. For purposes of assessing whether the collection of sub-projects is affecting social and economic development beyond the immediate community, the more disaggregated these data are (i.e., reported at regional or provincial levels), the better.

The following analysis attempts to assess whether the preceding hypothesis about that sub-projects concentrated in specific areas produce broader economic effects beyond the local economy. Unfortunately, none of the projects comprising the ESF Infrastructure Program provided for the establishment of baseline data, nor for the on-going collection of performance data by which progress could be measured. In the absence of such information, this section attempts to assess the program's economic impact using existing official data sources.

The analysis begins with considering program size in relation to the overall economy to determine where potential impact should be greatest (region and province); then the timing of sub-project

completions and resulting impact are examined; and available and relevant indicators for the affected areas are identified.

Sub-projects have been divided in a ratio of roughly 51-43-6 among schools, roads and markets, and "other" construction activities, respectively. School construction cannot be expected to have an economic impact within the relatively brief time span being considered here, and the impact of the "other" activities has been indeterminate where the sub-projects have not been outright failures. (See Section 7 - Other Sub-projects.) Accordingly, this analysis is confined to the impact of road and market construction. Through their effects on transportation and the delivery of agricultural inputs, improved farmer access to markets, and the proliferation of market outlets, road and market construction could be expected to have greatest impact on the agricultural sector.

B. The Project in Economic Context

ESF-funded Road and market completions through 1987, which we will assume as the last year in which sub-project completions could conceivably have had an impact on the period 1987-90, amounted to 549 million Pesos, which in turn was 0.15 percent of fixed capital formation in the Philippines for those years. Assuming (very broadly) that one third of fixed capital formation is in agriculture or areas directly promoting agricultural development, ESF road and market construction might have accounted for 5% ($.15 \times .33$) of investments promoting agriculture. In assessing macroeconomic results at the national level, it is extremely difficult to distinguish the relative importance of contributing factors - investment, productivity, import and credit constraints, weather, etc. It becomes virtually impossible when the contributing factor, as in this case, is relatively minor, and when there is, by definition, no basis for comparison; that is, no area with similar characteristics in which the road and market construction did not take place. Impact can be assessed, if at all, only with respect to those regions or provinces where road and market construction have been most concentrated. Comparisons of recent trends in the region(s) or province(s) can then be made with the corresponding trends for the rest of the country, where the ESF activity has taken place to a significantly lesser extent.

C. Geographic Concentration of Road and Market Construction

Table 1 shows completed ESF construction of roads and markets, adjusted for the effects of inflation and placed on a per hectare basis to provide the best measure of project impact by region. The data cover only the years 1984-87 on the assumption that

expenditures after 1987 are unlikely to have had a significant economic impact during the period under review.

Table 1

ESF Expenditures on Roads and Markets, 1984-87

Region	Farm Area (000 Has.)	1980 Pesos (000)		Percent shs per 000 ha
		Total	Per 000 Ha	
I	333.7	68922	206.5	13.7%
II	508.0	63797	125.6	8.3
III	501.9	405213	807.4	53.5
IV	1261.9	41787	33.1	2.2
V	1042.5	85704	82.2	5.4
VI	766.5	60757	79.3	5.3
VII	584.2	37415	26.8	3.7
VIII	740.5	24400	32.7	2.2
IX	802.6	18301	22.8	1.5
X	965.8	26301	27.2	1.9
XI	1134.6	20016	17.6	1.2
XII	839.3	15967	19.0	1.3
TOTAL	9715.7	868580	89.4	100.1

Notes: (1) Nominal expenditures deflated by Implicit Price Index for Government Fixed Capital Formation.

(2) Cordillera Region included in Regions I and II.

Sources: ESF Project data

Philippines Statistical Yearbook, 1990.

As may be seen, Region III accounted for 53.5 percent of the real expenditures on roads and markets on a per hectare basis during 1984-87. Regions I and II, which include part of the new Cordillera Region, accounted for 13.7 and 8.3 percent, respectively. No other region had more than five percent of the total.

The concentration of ESF expenditures in Region III was attributable mainly to market construction. Markets in Region III accounted for 62 percent of all market construction during 1984-87, roads for 25 percent. These data are confirmed by the data in Table 2, which show number of market projects and kilometers of roads for the period 1984-90. Region III has the most ESF roads of all regions, with 13.7 percent of the total in terms of kilometers of construction, but it has 56 percent of the markets.

Given the far greater amounts of ESF expenditures on roads and markets in Region III than elsewhere in the country, it is clear, first, that Region III is the place to look for indications of

Table 2

Number of Market Projects and Road Kilometers, By Region

Region	Markets Completed		Roads Completed	
	No.	% shares	km.	% shares
I	3	11.1	144.5	7.4
II	1	3.7	170.7	8.8
III	15	55.6	268.2	13.7
IV	0	0	216.9	11.2
V	1	3.7	181.7	9.4
VI	1	3.7	203.5	10.5
VII	1	3.7	78.6	4.1
VIII	0	0	195.5	10.1
IX	0	0	92.9	4.8
X	0	0	127.1	6.5
XI	0	0	120.0	6.2
XII	0	0	97.0	5.0
CAR	5	5	46.0	2.4
TOTALS	27		1,940.6	

Source: USAID project data.

Program impact; second, that it would probably be futile to look elsewhere. That is, it seems unlikely that the Program would have led to economic changes outside of Region III significant enough to be discernible in the macro kinds of data available to us. This analysis, therefore, will focus on changes in relevant economic variables for Region III as compared with the corresponding measurements for the rest of the country.

D. Timing of Sub-project Construction and Its Impact

The time lag between completion of a road or market sub-project and its economic impact - a year, three years, five - is anyone's guess. What can be said for certain is that the bulk of the road and market sub-projects completed during 1984-90 were completed during the early years of that span, that is, by the end of 1986 (mainly reflecting difficulties in disbursements during recent years), so that if the time lag is relatively brief, the Project should have had some impact during, say, 1987-90 - more, of course, during the most recent years. Table 3 shows the cumulative shares of sub-project completions by year through 1990. As may be seen, 71 percent of all road and market construction was completed by 1987, 56 percent of the construction in Region III.

Table 3

ESF Roads and Markets Constructed, By Year of Completion

Year	Millions of 1990 Pesos		% Completions (Cum.)	
	PHIL	Reg. III	PHIL	Reg. III
1984	173.0	78.9	13.0	10.9
1985	405.8	143.5	43.5	30.7
1986	285.5	113.7	64.9	46.4
1987	77.2	69.2	70.7	55.9
1988	75.0	58.8	76.4	64.1
1989	0.0	0.0	76.4	64.1
1990	219.3	170.3	92.9	87.6
1991	95.06	90.2	100.0	100.0

Source: ESF Project data

E. Economic Impact in Region III

In assessing the impact of the ESF Program on Region III, certain characteristics of the Region should be noted. Central Luzon accounts for 6.1 percent of the country's land area, with 10 percent of the population. Reflecting its proximity to Manila, it is the least dependent of the 13 regions on agriculture. In 1989, 36 percent of the labor force were employed in agriculture, and the ratio was declining as the shares of manufacturing and wholesale and retail trade were rising. Average family income in 1985 was 17 percent higher than that of the Philippines as a whole, and 67 percent higher than average family income for the rural areas. Central Luzon led all areas (outside of Metro Manila) in that respect. Palay production accounts for some 85 percent of Region III agricultural output, and the Region's Palay yields are the second highest of the 13 regions (after only Southern Mindanao), in part because of the relatively high density of roads in the Region. As of 1985, Region III had 7.3 kilometers of roads per one thousand hectares of land area, which compares with 5.4 kilometers for the Philippines as a whole. A cross-sectional analysis undertaken by the Philippines Department of Agriculture in 1989 (1) revealed a strong correlation (r squared = .78) between road density and agricultural yields (gross value added in agriculture per unit area harvested).

For purposes of this analysis, the significance of the regional characteristics cited above would seem to be twofold: (1) given the ongoing secular trend away from agriculture, increases in agricultural output (as opposed to yields) in Region III relative to the rest of the country should not be expected; and (2) relative increases in Palay yields may be as much a matter of the existing higher density of roads as of any additions to the road network.

There follows a comparison of progress (or lack of it) in Region III with respect to certain economic variables, relative to developments in the rest of the country during recent years.

1. GDP

Table 4 compares GDP growth in Region III with that in the rest of the Philippines (excluding Metro Manila) during 1981-89. Metro Manila was shown separately to test the hypothesis that the GDP of Region III tracks closely with that of the capital region. This does appear to be the case.

Table 4
GDP in Constant Prices, 1981-89
(1986=100)

<u>Year</u>	<u>Region III</u>	<u>Manila</u>	<u>Rest of Philippines</u>
1981	112.6	114.9	100.3
1982	116.7	118.8	102.8
1983	114.8	122.1	103.1
1984	105.8	109.9	99.5
1985	103.8	100.2	97.2
1986	100.0	100.0	100.0
1987	103.9	106.8	103.9
1988	110.3	116.5	108.9
1989	120.4	125.0	114.2

Source: Philippine Statistical Yearbook, 1990

As may be seen, the GDP of both Region III and Manila declined much more rapidly during the political uncertainties of 1983-86 than in the rest of the country, where the decline was tempered by the greater weight of the relatively stable agriculture sector. Increases in GDP since 1986 have been less marked in the rest of the country, also reflecting the higher weight of the slower growing agriculture sector. It may be noted, however, that the GDP increase in Region III in 1989 was well above that of Metro Manila, as well as the rest of the country: 9.2 percent vs. 7.3 percent and 4.9 percent, respectively. Little can be made of one year's results, especially when considering such a broad measure as GDP. Still, the Project could have contributed to Region III's superior recent performance.

2. Agriculture

Table 5 compares growth in value added in agriculture, in constant prices, in Region III with that of the rest of the country. Ideally, the data would be on a per hectare basis, but the data harvested land needed to make the conversion were not available.

Table 5

Value Added in Agriculture, in Constant Prices
(1986=100)

<u>Year</u>	<u>Region III</u>	<u>Rest of Philippines</u>
1981	101.3	89.8
1982	107.6	92.4
1983	98.4	91.0
1984	93.3	93.8
1985	100.8	96.4
1986	100.0	100.0
1987	100.8	98.8
1988	101.0	102.6
1989	114.1	105.9

Source: Philippine Statistical Yearbook, 1990

Notwithstanding the secular trend in Region III away from dependence on agriculture noted above, value added in agriculture rose significantly more sharply in Region III than in the rest of the country during 1986-89. This was especially the case during 1988-89 when Region III showed a rise of 13.0 percent vs. 3.2 percent for the rest of the country. The post-1986 comparisons are the reverse of the situation during 1981-86. During that period, agriculture in Region III stagnated while the rest of the country showed steady growth. Again, the Project could have contributed to the superior performance of Region III during recent years.

3. Palay Yields

The building of roads and markets should contribute in various ways to increases in agricultural yields: increased availability of agricultural inputs (fertilizers, credit, agricultural implements), improved farmer access to markets, greater marketability of crops, perhaps even increased visits by extension agents. The only available indicator of increased yields is for Palay, which however accounts for over 85 percent of agricultural output in Region III. Table 6 depicts trends in Palay yields in Region III, and in the rest of the country, for the years 1976-90.

Table 6

Palay Yields, 1976-90
Output per Ha. (MT)

<u>Year</u>	<u>Region III</u>	<u>Rest of Philippines</u>
1976	2.40	1.71
1977	2.75	1.86
1978	2.77	1.94
1979	3.25	2.03
1980	2.73	2.12
1981	3.23	2.16
1982	3.52	2.30
1983	3.08	2.27
1984	3.05	2.39
1985	3.06	2.60
1986	3.24	2.57
1987	3.18	2.53
1988	2.73	2.63
1989	3.26	2.61
1990	3.67	2.65

Average annual rates of increase (%)

1976/77-85/86	2.3	4.2
1986-87	-1.7	-1.9
1987-88	-14.1	4.2
1988-89	19.2	-0.8
1989-90	12.5	1.5
1987-90	4.9	1.6

Source: Bureau of Agricultural Statistics

If the greater density of roads accounts for the higher Palay yields in Region III (as suggested above and in the referenced Department of Agriculture study), this factor did not lead to greater yield increases during the decade before completion of most of the sub-projects. During the period 1976/77-1989/90, yields rose only half as rapidly in Region III as in the rest of the country: 2.3 percent vs. a rate of 4.2 percent. Yields declined in Region III in both 1987 and 1988 - dramatically in the latter year - for reasons unknown to the Team, then increased rapidly during 1988-90 even as yields stagnated elsewhere. The swing in the yield data for Region III, from a 14.1 percent decline in 1988 to a 19.2 percent increase in 1989, is suspiciously large. However, even if we "throw out" the 1988 and 1989 data as lacking credibility, and measure only 1987-90, we still find yields rising three times as fast in Region III as in the rest of the country. And certainly, the far greater increase for Region III in 1990 - 12.5 percent vs. 1.5 percent - is both

consistent with and contributes to the findings with respect to agriculture and GDP.

4. Rice Marketing Spreads

The construction of roads and markets in rural areas should, by improving farmers' access to markets and increasing the number and variety of marketing outlets, lead to a narrowing of the spread between farmgate and wholesale prices. Indeed, as will be noted elsewhere in this Report, the team was told of farmers newly enabled to skip the middleman and take their produce directly to market in cases of well-placed feeder roads.

Table 7 shows ratios of farmgate to wholesale prices of Palay during 1980-89. An increase in the ratio of farmgate to wholesale prices (decrease in marketing margin) can be regarded as beneficial to the farmer.

Table 7

Farmgate and Wholesale Rice Prices

Ratio of Farmgate to Wholesale Prices for Palay Rice(a)

<u>Year</u>	<u>Region III</u>	<u>Philippines</u>
1980	.548	.500
1981	.559	.498
1982	.552	.493
1983	.586	.512
1984	.563	.512
1985	.537	.498
1986	.473	.487
1987	.524	.500
1988	.538	.488
1989	.561	.528

Average annual rates of increase (%):

1980/81-86/87	-1.6	-0.2
1987-88	2.7	-2.8
1988-89	4.3	8.6
1987-89	3.5	2.8

Source: Bureau of Agricultural Statistics

Marketing margins in the Philippines are affected by rice price controls as well as by market forces. Without an understanding as to how price controls affected wholesale prices during 1980-89, therefore, no meaning can be attached to the overall trends in margins during the decade; that is, upward during 1980/81-

85/86, downward during 1987-90. However, since price controls operate throughout the country, while farmgate prices are free to fluctuate with market forces and farmers' access to markets, the relative changes in margins over time - Region III as compared with the country as a whole - is relevant. As shown in Table 9, the marketing margin narrowed only marginally more in Region III than in the rest of the country during 1987-90, and it narrowed by only half as much in 1989 alone. If the Project has helped to provide higher farmgate prices for the farmer, these data do not show it.

F. Impact at the Province Level

Since the evidence of economic impact at the regional level is inconclusive, it is worth considering - despite the lack of data available to us - the situation at the province level. Table 8 shows ESF funded expenditure on roads and markets in Region III by Province during 1984-90.

Table 8

Expenditures on Roads and Markets in Region III, By Province
(Cumulative through 1990)

<u>Province</u>	<u>Exp. per</u>	<u>Percent Shares</u>	
	<u>000 Ha.</u> <u>(Pesos)</u>	<u>of region</u>	<u>of PHIL</u>
Zambales	2,161	31.5	17.9
Bataan	1,946	28.4	16.1
Tarlac	1,816	26.5	15.0
Pampanga	538	7.8	4.4
Nueva Ecija	248	3.6	2.0
Bulacan	<u>151</u>	<u>2.2</u>	<u>1.2</u>
TOTALS	<u>6,860</u>	<u>100.0</u>	<u>56.6</u>

Sources: USAID Project data. Philippines Statistical Yearbook, 1990. Note: Totals are not completely consistent with regional totals based on ESF data, shown elsewhere.

As may be seen, Zambales, Bataan and Tarlac together have accounted for some 86 percent of ESF expenditures on roads and markets. As shown in Table 9 below, road construction under the Project has added from 1.2 to 4.6 percent to the road infrastructure (excluding national roads) of the various provinces in Region III. It may be noted that Zambales, which led the list in terms of pesos spent on roads and markets, ranks fifth of the six provinces on the basis of road kilometers alone (reflecting relatively heavy spending on markets), while Nueva Ecija, fifth in roads and markets combined, is third in roads alone.

Table 9

ESF Road Construction in Region III
(Kilometers)

Province	ESF Roads			All Prov. Roads (excl nat'l rds)	ESF as % Total
	R1	RD	Total		
Tarlac	6.2	105.3	111.5	2,431.8	4.59
Bataan	2.9	17.0	19.9	778.8	2.56
Nueva Ecija	34.5	31.7	66.2	2,823.0	2.35
Pampanga	2.8	24.4	27.2	1,803.8	1.51
Zambales	3.5	10.0	13.5	1,075.6	1.26
Bulacan	3.5	24.3	27.8	2,388.1	1.16
TOTALS	53.4	212.7	266.1	11,301.1	2.36

Sources :USAID Project data
NEDA Region III data

From the data in Tables 8 and 9, it would appear that Zambales, Bataan, Tarlac and Nueva Ecija are worthy of close scrutiny for indications of Project impact. Unfortunately, and notwithstanding two visits to NEDA Region II headquarters in Pampanga, it has not been possible to come up with relevant and consistent Province level data on even a brief, say, 1987-90, time series basis. Efforts to obtain province level data on such indicators as rice production, rice prices, fertilizer use, transportation costs and new business formations at appropriate government departments in Manila have been equally unavailing. The concentration of Project activity in certain provinces may, however, be borne in mind in assessing survey and other findings from Region III.

G. Conclusions

Most of the economic data relied upon in this analysis is of too macro a nature to warrant a firm conclusion with regard to Project impact. About all that can be said with regard to GDP, value added in agriculture, and Palay production (Section E), is that the Project could have been a factor in the relatively favorable recent trends in Region III. Unfortunately, the neutral finding with respect to Palay marketing margins - the least macro of the indicators adduced - casts doubt on even this cautious a finding. In the final analysis, the question of Project impact must depend primarily on other data sources.

6. Recommendation

Future ESF Infrastructure Projects should contain provisions for the establishment of baseline data and the periodic collection of performance indicators by which to assess project impact. Such data is most meaningful at the province or lower level. Baseline and performance data may be acquired/developed either from available government data sources or from special surveys developed for the purpose. Concerning these possibilities:

a. Government data sources: The team's inability to acquire relevant province-level data might seem to be evidence of the futility of relying on such sources. In fact, relevant data can be acquired and maintained provided that someone has clear responsibility for cultivating the data source and seeing to its continuing availability over time. Several times in our quest for lower level data, we were offered data for one or two years, or we were offered scattered and inconsistent data on which it was impossible to develop a time series. That is what happens to outsiders - especially expatriates - trying to deal with government offices on a hurry-up basis. Relevant data can and must be located at the inception of the project and periodically followed up, so that consistent and relevant time series can be developed and maintained. If such a provision had been made at the outset of the ESF Program, it might now be possible to have province-level time series data on, e.g., fertilizer use or transportation costs.

b. To augment local data availabilities, special surveys may be needed. Surveys need not be complex, nor would it possible or necessary to cover all sub-projects. It should not be too difficult, or expensive, to undertake simple surveys on, say, one out of every 25 road projects. These might involve simple traffic counts, and the acquisition of information on such matters as fertilizer use, transportation costs, and farmers' access to markets. The survey would be repeated in, say, three years time. If provision had been made for such surveys at the outset of the present program, an evaluation team would by now have over 40 sets of survey data by which to assess project-related changes over time.

It is recommended, therefore, that any follow-on project make provision for a comprehensive information system involving the collection of baseline data, maintenance of performance indicators, and surveys of sample projects.

ANNEX B: Sites Visited, People Interviewed and References

- Schools

Quezon City Science High School
Pateros High School
Olongapo Elementary School
M. H. del Pilar High School
San Marcelino Central School
Urdaneta National High School
Mameltac Elementary School
Bagong Lipunan Elementary School
Bataan National School of Arts and Trades
Bataan National High School
Bangal Elementary School
Pagalanggang Elementary School
Roosevelt Elementary School
San Benito Elementary School
Dinalupihan Elementary School
Saguig Elementary School
Ramon Magsaysay Memorial School of Arts and Trades
Iba Central Elementary School
Palanginan Elementary School 1 & 2
Zambales National High School
Victoria National High School

- Markets

Olongapo Public Market, Zambales
Subic Public Market, Zambales
San Marcelino Public Market, Zambales
San Antonio Public Market, Zambales
Sta. Maria Public Market, Bulacan
Magalang Public Market, Pampanga
Capas Public Market, Tarlac
Urdaneta Public Market, La Union
Moncada Public Market, Tarlac
Dinalupihan Public Market
Iba Public Market
Pampanga Public Market
San Nicolas Public Market
Bacolor Public Market

- Roads and Drainage

Castillejos Roads and Drainage, Zambales
Pandi - Angat Road
Angeles Perimeter Road
Lourdes - Telacsan Road
Paniqui - Camiling Road
Tarlac Drainage
Concepcion - Pampas Road

Clark Access Road
General Capinpin Market Road
Tarangka - Kabalutan Road
Bilolo Road
Ramos-Pura Victoria Road

- Slaughterhouses

- San Antonio Slaughterhouse, Zambales
- San Fernando Slaughterhouse, La Union

- Solid Waste and Other Projects

Pampanga Export Processing Zone
San Fernando Solid Waste Site
Olongapo Solid Waste Site

- Hospitals

Bulacan Provincial Hospital:
Remedios Gonzales, Chief Nurse
Dr. Ricardo Trinidad, Provincial Health Officer

Children's and Maternity Hospital:
Dr. Marites Aldaba, Director
Dr. Villaroman, Outpatient physician

Guagua Emergency Hospital:
Dr. Santos, Hospital Administration

People Contacted

Mr. Ramon Bacani, Assistant Secretary for Planning, DECS
Mrs. Edy L. Losaria, Principal of Tondo High School
Dr. Jesusa D. Ballesteros, Principal of Mandaluyong High School
Mr. Dominlar Andriano, Acting Principal of Marcelo High School
Ms. Belen P. Magat, Principal of Urdaneta National High School
Mr. Augustin Dyquiango, Chief of Municipal Planning
Mr. Jose G. Macapinlac, Mayor of Tarlac, Tarlac
Mr. Carlos Gatdula, Municipal Administrator, Tarlac
Ms. Elizabeth Zavalla, Deputy Mayor of Olongapo City
Mr. Francisco Pascual, Director Bureau of Design, DPWH
Mr. Victor Tisbe, Bureau of Maintenance, DPWH
Mr. Cruz, Chief Engineer of Bulacan Province
Mr. Salvador Fernandez, Manager, Angeles Livelihood Corporation
Mr. Robert Damasco, Director, Bureau of Agricultural Statistics
Mr. Celestino Orlando, Bureau of Agricultural Statistics
Ms. Gloria Cruz, NEDA, Pampanga
Ms. Norma Abad, District Supervisor for Iba Elementary School
Ms. Rizalina More, Teacher at Iba Elementary School
Ms. Rosie Nero, Principal for Palangihan Elementary School

Ms. Lorena Yap, Teacher at Zambales National High School
 Mr. Alberto Barrera, Ramon Magsaysay Memorial School
 Ms. Zenaida Botaran, Asst. Municipal Treasurer, Iba
 Mr. Tony Mielat, Municipal Councilor, Iba
 Ms. Rose Bautista, President of the Iba Market Vendors Association
 Ms. Liz Ditona, Auditor of Iba Vendors Association
 Ms. Jinna Romero, Development Project Analyst, Olongapo City
 Mr. Honorio Lopez, Municipal Treasurer, Dinalupihan
 Mr. Bienvenido Mallari, Manager of Dinalupihan Market
 Ms. Adelaida Badilla, Dinalupihan Stallholders Association
 Ms. Rosalinda Mancupa, Dinalupihan Stallholders Association
 Mr. Rodrigo Marcos, Dinalupihan Stallholders Association
 Mr. Carlos Ma. Almario, Dinalupihan Stallholders Association
 Mr. Rogel Navarte, Dinalupihan Stallholders Association
 Mr. Serafin Salvador, Dinalupihan Stallholders Association
 Ms. Esther Paguio, Principal for Bataan National High School
 Mr. Melchor Bangug, Attorney and COA Auditor
 Mr. Leandro Villar, Department head, BNSAT
 Mr. Manuel Legaspi, Placement Coordinator, BNSAT
 Mr. Ruperto Rueda, Vocational Instructor, BNSAT
 Mr. Marcelino Penaflor, District Supervisor, Dinalupihan
 Ms. Felicidad Mallari, Principal for Dinalupihan Central School
 Mr. Ernesto Penaflor, Principal, Pagalanggang
 Mr. Eduardo Puzon, Principal, Bangal
 Ms. Trinidad Rigor, Asst. Principal, Victoria High School
 Mr. Cresencio Paragas, Councilor, Ramos, Tarlac
 Ms. Helen Paragas, Principal of Victoria Elementary School
 Mr. Danilo Teopaco, Senior Economist, NEDA
 Mr. Leon Dacanay, Chief of Infrastructure, NEDA Region III
 Mr. Alfredo Dizon, President, San Nicolas Market Vendors Assoc.
 Mr. Rafael Galang, Assistant Superintendent, Pampanga Public Mkt.
 Mr. Rafael Del Rosario, Councilor, Angeles City
 Mr. Gerthy Liwang, Councilor, Angeles City
 Mr. Antonio Bedoral, Engineer, Angeles City
 Mr. Sonny Dobles, Mayor's Office, Angeles City
 Mr. Antonio Abad Santos, PMO, Angeles City
 Mr. Raul Naguit, Project Analyst, Guagua
 Mr. Jun Panganiban, Assistant to the Mayor, Guagua
 Mr. Victor Liangco, Auditor, Bacolor's Market Vendor's Association
 Mr. Zoilo M. Lindo, Municipal Budget Officer, Tarlac, Tarlac
 Ms. Florence Santos Municipal Budget Officer, Concepcion, Tarlac
 Ms. Judith P. Angeles, Chief of Trade and Industry, DTI, Pampanga
 Mr. Marcos Kabling, Director, DPWH, Region III
 Mr. Wilfredo Miguel, Mayor of San Clemente, Tarlac
 Ms. Lydia Milla, Vice-mayor of Camiling, Tarlac
 Ms. Flordeliza Reyes, Chief, Elementary Education, DECS Region III
 Ms. Patricio S. Cao, Supervisor of School Buildings, Angeles City
 Mr. Guillerma Manalac, Regional Director DOST, Region III
 Mr. Bren Guiao, Governor of Pampanga Province

References

MDF and RDF Feasibility/Project Papers:

La Paz - Victoria Road
Paniqui - Camiling Road and Bridge
Marong - Mabayo Road
Guimba Public Market
Public Market for Munoz
San Leonardo - General Tinio Road
Quezon - Guimba Provincial Road
Bucot - Aliaga Road
San Antonio - Zaragosa Road

Project Papers for ESF funded Infrastructure Projects:

- Elementary School Construction Project
Project Design Project
Clark Access and Feeder Roads Project
Markets Project
Municipal Development Fund
Regional Development Fund
Regional Development Fund Amendment
- 1982 Audit Report No. 2-492-82-12: Elementary School Construction Project, July 14, 1982.
- 1983 Sinding, Monica Knorr, The Evolution of the Philippine Economic Support Fund Program, USAID/Philippines.
- 1984 Nussbaum, Jay, Status Review of ESF Projects, USAID/Philippines.
- 1987 Audit Report No. 2-492-87-08: Audit of Project Assistance under the Philippine Support Fund Program, USAID/Philippines.
- 1989 Steinberg, David et al. A Process Evaluation of the Economic Support Fund Projects. ESF Secretariat and USAID/Philippines
- 1990 Project Assistance Completion Report for the Markets Project, USAID/Philippines.
- 1990 Project Assistance Completion Report for the Clark Access and Feeder Roads Project, USAID/Philippines.
- 1991 Evaluation of ESF-Assisted Public Markets: Summary Report. SGV Consulting, Manila.

ANNEX C: Survey Conducted in Preparation for the Impact Evaluation

Planning for the evaluations of the ESF Infrastructure Program began in Spring 1989 with a review of options for conducting process and impact evaluations. The impact evaluation appeared the problematic of the two because of the effects of completed sub-projects had not been monitored over the course of the program. After considering the options, it was decided that a survey would be conducted to collect information on the effects of the three main types of sub-projects - schools, road improvements and markets.

The survey was started on January 7, 1991 and completed on March 9, 1991. Various extraneous reasons accounted for the delay, but time and cost constraints resulted in having to modify both the scale and content of the survey to more conservative standards. Consequently, it was decided that the survey would focus on interviewing respondents about whether the types of effects normally associated with these sub-projects had occurred in the local community.

The survey was restricted to five regions: I, III, VI, VII and X (Luzon, Visayas and Mindanao). Twenty-four markets were selected, forty-one roads and forty-six schools were selected in the vicinity of the markets (to reduce travel time and costs). Separate questionnaires and a basic fact sheet had been prepared for the sub-projects. From communities located near to these sub-projects, the following number of respondents were randomly selected to be interviewed about the sub-projects: 691 respondents for the schools, 615 for roads, and 628 for the markets.

For the total sample of 1934 respondents, the sample obtained was distributed as follows for several key variables.

Occupation

- Professional/management	18.7%
- Industrial worker	3.2%
- Farmer/agricultural worker	16.2%
- Self-employed	30.3%
- Others	8.4%
- Unemployed	23.4%

The high percent of unemployed is a reflection of current economic conditions. 60% of the respondents were women, many who worked only in their home and may considered themselves as unemployed.

Length of Residency in the Area

- less than one year	1.6%
- 1 to 5 years	7.1%
- 6 to 10 years	7.9%
- more than 10 years	83.4%

The fact that a large majority - 90.3% had resided in the area for 5 years or more works contributes to the reliability of the survey - i.e., most had been in the area long enough to be able to recognize changes associated with the ESF sub-projects.

Age

- 20 years old and below	3.3%
- 21 to 34 years old	29.7%
- 35 to 49 years old	44.1%
- 50 to 64 years old	20.4%
- 65 years old and above	2.5%

The distribution by age also contributes to the reliability of the survey in that majority of respondents were adults and would be familiar with changes in the community over the recent years and able to recognize whether or not the ESF sub-projects had an effect on community conditions.

Due to time constraints, the only analyses of the survey data carried out for the evaluation were simple cross-tabulations. The purpose of the analysis was to see whether the impact of the sub-projects varied by key variables. Survey data were cross-tabulated by gender and occupation of the respondent, by economic classification of the province, by region, by categories of sub-project (e.g., feeder, arterial and main road improved), and for markets, by age of the facility.

The impact reported for the sub-projects did not vary significantly by gender. Significant and meaningful differences were found for the road improvement sub-projects which are reported in the body of the report. Significant or consistent variation in the reported impact of schools and markets was not apparent from the analysis. For these sub-projects, only aggregate responses are reported in the body of the report. More analysis of the data is certainly possible which might reveal yet more variation in sub-project impact.

The following describes the sampling plan and list of sub-projects used to give reasonably acceptable margins of error and yet stay within budget and time constraints

- Using the empirical statistical formula:

$$\text{Sample Size} = \frac{\text{Population Size}}{1 + \text{Pop. Size (margin of error)}^2}$$

and given,

Population size of school projects = 2,302
 Population size of road projects = 1,132,

the computed sample sizes for

Schools = 43) for a 15%
 Roads = 43) margin of error
 Public Market = 23 (for a 100% coverage)

- Recomputing the number of respondents by using the same formula for a total household population of 10 million and a 4% margin of error, the sample size for respondents

$$= \frac{10M}{1 + 10M (.04)^2} = 624$$

- Thus, 624 respondents shall be interviewed within 43 school projects, another 624 within 43 road projects and another 624 within the 23 public markets for a grand total of 1,872 respondents.

- To have a completely random and relatively dispersed selection of municipalities, the following scheme shall be observed as originally proposed in the Technical Proposal:

	<u>Luzon</u>				<u>Visayas</u>		<u>Mindanao</u>	
	<u>Region A</u>		<u>Region B</u>		<u>Region C</u>		<u>Region D</u>	
	Prov.1	Prov.2	Prov.3	Prov.4	Prov.5	Prov.6	Prov.7	Prov.8
<u>Roads</u>	5 Mun.	5 Mun.	6 Mun.	6 Mun.	6 Mun.	5 Mun.	5 Mun.	5 Mun.
<u>Schools</u>	5 Mun.	5 Mun.	6 Mun.	6 Mun.	6 Mun.	5 Mun.	5 Mun.	5 Mun.
<u>Pub. Mkt.</u> (100% as prescribed)								

5. Using the foregoing configuration, the randomly selected municipalities and cities are Tabulated in Tables 2 and 3. Table 1 lists the 23 Public Markets required to be surveyed.

Table 1
List of Completed Public Markets

1. Urdaneta, Pangasinan	13. Moncada, Tarlac
2. Tuguegarao, Cagayan	14. Iba, Zambales
3. Sta. Maria, Bulacan	15. Masinloc, Zambales
4. Guimba, Nueva Ecija	16. San Antonio, Zambales
5. Muñoz, Nueva Ecija	17. San Marcelino, Zambales
6. Bacolor, Pampanga	18. San Narciso, Zambales
7. Candaba, Pampanga	19. Subic, Zambales
8. Magalang, Pampanga	20. Legaspi City, Albay
9. Porac, Pampanga	21. Kabankalan, Negros Occ.
10. Sta. Rita, Pampanga	22. Dumaguete City, Negros Or.
11. Capas, Tarlac	23. La Trinidad, Benguet
12. Concepcion, Tarlac	

Table 2
Road Projects to be Surveyed

Region I

1. <u>Ilocos Norte</u>	<u>Municipality</u>	<u>Project Code</u>
San Nicolas-Similla Rd.	- San Nicolas	2901RD01
Kabulalaan-Sabong Rd.	- Burgos	2918RD02
Barbarangay Rd.	- Espiritu	2908RD01
Gabu-Nalasin Torre Rd.	- Laoag City	2900RD01
Cacafaen Rd.	- Marcos	2907RD01
2. <u>Ilocos Sur</u>		
Manangat-Pandan B/R	- Caoayan	2702RD01
Cabalangegan B/R	- Vigan	2700RD01
Margaay B/R	- Narvacan	2704RD01
Tinaan-Laslasong B/R	- Santa Maria	2705RD02
Sived Casili B/R	- Sto. Domingo	2729RD01

Region III

3. <u>Pampanga</u>		
Del Carmen B/R	- San Fernando	2000RD02
San Agustin B/R	- Sta. Ana	2022RD01
Ebus-Natividad B/R	- Guagua	2003RD01
Batasan B/R	- Macabebe	2018RD01
Angeles City		
Perimeter Rd.1	- Angeles City	2009RD01
San Isidro B/R	- Bacolor	2001RD01

4. Zambales

Folmeda Diaz Bridge	-	Cabangan	2203RD01
Castillejos Mun. Rd.	-	Castillejos	2208RD03
Water Dam Rd.			
Sta. Rita B/R	-	Olongapo City	2200RD01
Bancol-Pamonahan Rd.	-	Sta. Cruz	2213RD01
Alusiis-Castillejos	-	Castillejos	2208RD01
Castillejos Mun. Rd. A	-	Castillejos	2208RD01

Region VI

5. Iloilo City

Ban-Ag Colina Rd.	-	Iloilo City	5000RD01
Managuit-Bantud Rd.	-	Dumangas	5006RD01
Tolarucan-Tigib Rd.	-	Janiuay	5034RD01
Poblacion Asuroy Rd.	-	Mina	5032RD01
Igbago-Bacolod Miagao Rd.	-	Miagao	5023RD01

Region VII

6. Negros Occidental

Mandalagan B/R	-	Bacolod City	6100RD05
Bago-Ma-Ao Rd.	-	Bago City	6101RD01
La Carlota Sugar			
Central Rd.	-	La Carlota City	6130RD01
Medina-Prosperidad B/R	-	San Carlos City	6127RD01
Upper Manggas-Balatanay B/R	-	Isabela	6128RD01

Region X

7. Misamis Occidental

Macabayan Sinara Alto Rd.	-	Jimenez	7204RD01
San Nicolas Gamaring Rd.	-	Tudela	7202RD01
Banglay-Hoyohoy B/R	-	Tangub City	7214RD01
Tinacaluan-Segatic Rd.	-	Clarin	7201RD01
Ozamis Molicay Labo Rd.	-	Ozamis City	7200RD05

8. Misamis Oriental

Carmen Canitoan B/R	-	Cagayan de Oro	9000RD02
Nrj-Rosario Tagoloan Rd.	-	Tagoloan	9001RD01
Looc-Banban Rd.	-	Villanueva	9002RD01
Talacogon Aya-aya Rd.	-	Lugait	9025RD01
Aplaya-Corrales Rd.	-	Jassan	9003RD01

Table 3
List of School Projects to be Surveyed

Region I

1. Benguet

La Trinidad C/S	-	La Trinidad	2601ES01
Baguio North C/S	-	Baguio City	2600ES02
Twin Peaks Municipal H/S	-	Tuba	26035501
Pontino E/S	-	Tublay	2615ES01
Sablan C/S	-	Sablan	2614ES01

2. Pangasinan

Felipe Maramba E/S	-	Urdaneta	2428ES01
San Bartolome E/S	-	Rosales	2441ES01
Bacayao Sur E/S	-	Dagupan City	2400ES01
Mapandan C/S	-	Mapandan	2429ES01
Manaoag C/S	-	Manaoag	2430ES01

Region III

3. Tarlac

Tarlac Central E/S	-	Tarlac	2300ES09
Concepcion North C/S	-	Concepcion	2316ES00
Magaspac E/S	-	Gerona	2302ES02
Lomboy E/S	-	La Paz	2314ES02
Paniqui South E/S	-	Paniqui	2307ES01
San Felipe I & II E/S	-	San Manuel	2309ES01

4. Nueva Ecija

San Pascual E/S	-	Sto. Domingo	3133ES01
Sibul E/S	-	Talavera	3114ES01
San Gregorio E/S	-	Sta. Rosa	3101ES02
Tambo South E/S	-	San Leonardo	3102ES01
Bantug E/S	-	Muñoz	3119ES01
Jaen West E/S	-	Jaen	3109ES01

Region VI

5. Iloilo City

La Paz E/S	-	Iloilo City	5000ES03
Cagbag E/S	-	Oton	5020ES02
Aganan E/S	-	Pavia	5001ES01
Mina C/S	-	Mina	5032ES01
San Miguel C/S	-	San Miguel	5025ES02

Region VII

6. Negros Occidental

Fuentebella E/S	-	Bacolod City	6100ES05
Tabugon E/S	-	Kabongkalan	6111ES02
Bago E/S	-	Bago City	6101ES01
Esabela West E/S	-	Isabela	6128ES02
Bato E/S	-	Moises Padilla	6132ES01

Region X

7. Misamis Occidental

Clarin Central School	-	Clarin	7201ES01
Ozamis City Central School-	-	Ozamis City	7200ES01
Central E/S	-	Tangub City	7214ES01
Tudela C/S	-	Tudela	7202ES01
Sinacaban Central School	-	Sinacaban	7203ES01

8. Misamis Oriental

City Central E/S	-	Cagayan de Oro City	9000ES03
Cogon E/S	-	El Salvador	9017ES01
Cabalantian E/S	-	Manticao	9024ES01
Mat-I E/S	-	Naawan	9023ES01
Canitoan E/S	-	Initao	9022ES01

Annex D: Monitoring and Evaluation for the ESF Infrastructure Program

The ESF Infrastructure Program and its six core projects did not monitor the effects of the completed sub-projects, nor have there been prior evaluations of the program's development results. After some eleven years of implementation, there is a total lack of data collected on a systematic basis on the social and economic impact of the ESF Infrastructure Program's 3,300 sub-projects. This is unacceptable by current Agency management standards.

This situation may be attributable to the fact that this is not a standard bilateral project where monitoring and evaluation would have been an expected part of program management. Nonetheless, the GOP and USAID have established a process for programming the local currency generations in ways consistent with the overall development purposes of U.S. economic assistance. To be responsive to the accountability requirements of both the GOP and U.S. Government, as well to keep program managers informed, adequate monitoring of the impact of completed sub-projects on the local beneficiary communities should be part of future program management systems.

Monitoring the effects of the sub-projects does not require complicated and expensive data collection. It does require planning for the types of data that need to be collected, identifying a suitable methodology to obtain and analyze the data and establishing a mechanism or process to carry out the work.

For each major category of sub-project, a limited number of key indicators of economic and social development should be identified that could be collected annually on a sample of sub-projects. These indicators should reflect important effects that the sub-projects are expected to produce, if successful. For example, for schools, this might include:

- Total enrollment by class cohort/grade
- The average number of students per class (class size)
- The ratio of students to teachers
- The average annual drop-out rate (the percentage of students in a class cohort - e.g., the class of 1991 - who stopped attending classes that year, averaged across the cohorts/grades of the school)
- Maintenance expenditures by classroom building or total maintenance expenditure if not disaggregated

For markets, key indicators might include:

- Total number and percentage of stalls currently occupied
- Total revenues
- Total expenditures

- Maintenance expenditures
- Number of stall operators terminating business in the market
- Number of new businesses starting business in the market

For roads, key indicators might include:

- Number of jeepneys and motorized tricycles providing transportation along the improved road section
- Average fare charged by jeepney and tricycle operators for travel from the beginning to the end of the improved road section
- Number of new businesses established along or near the road
- For large major roads, an annual traffic count

Similar types of indicators could be identified for other categories of sub-projects that are funded by future ESF infrastructure programs. A sample of ten to fifteen percent of sub-projects approved for funding each year would be sufficient. Additional new sub-projects would be selected each year as they are approved. The indicators would be collected prior to sub-project construction and then updated annually to develop longitudinal data tracking the effects of the sub-projects. The number of sub-projects could reach a point where annual data collection for the entire sample is impractical or too expensive. If so, then data should be collected every other year on a rotating basis where one or two categories of sub-projects are covered one year, and the remainder is covered in the following year.

In addition to the key indicators, more detailed qualitative data should be collected on the operations and effects of the sub-projects through brief interviews with administrators/managers (e.g., school principals, market managers) and users of the facility/sub-project (e.g., jeepney drivers, stall operators). The same types of information collected by the impact evaluation team could be obtained quickly over a two or three week period. This should be done roughly every other year.

Given the capabilities of local consulting firms in the Philippines, program management should contract for this work rather than try to develop an in-house capacity. A Request for Proposals would describe the purpose, uses and general data requirements for monitoring the effects of completed sub-projects. Firms would then develop proposals covering the design, operation and cost of managing such a system for the program. Each year, an annual performance report would be produced by the contractor based on the key indicators and interview data.

This type of monitoring and reporting should serve as the basis for annual program reviews between USAID and the GOP. This would also reduce the need for large, expensive external evaluation

teams. A process evaluation should be conducted only if implementation problems arise that the GOP and USAID cannot resolve themselves. This could be scheduled to include participation in one of the annual program reviews. In the third year or so after initial sub-projects have been completed, an evaluation of the immediate, near-term effects of these sub-projects should be conducted in conjunction with the annual program review. A two person team would be sufficient, assuming the preceding monitoring of sub-projects is carried out. This could be repeated prior to the PACD with an expanded scope of work to include the overall impact of the program.

ANNEX E. ESFS Comments on the ESF Impact Evaluation Draft Report

Date : 15 May 1991

This Aide Memoire is in addition to or an elaboration of the comments and/or observations made by the ESFS in a meeting this morning among Mr. Chris Hermann, USAID and ESFS representatives.

The ESFS finds the subject draft report generally acceptable except for the following observations and comments:

PREMIUMED VS. ESF Markets

1. There had always been a tendency to compare market projects funded by PREMIUMED against market projects funded by ESF especially on matters pertaining to financial performance as measured through loan recovery. While it may be accepted that PREMIUMED funded market projects have better performance than ESF funded market projects based on said measurement, it is suggested that the nature of both PREMIUMED and ESF proceeds be factored in the analysis.
2. Proceeds from PREMIUMED are sourced from World Bank loans while proceeds from ESF are sourced from grants. Since funds used by PREMIUMED in funding market projects are sourced from loans from World Bank where the Government has to worry about principal/interest payments and commitment fees there is a strong pressure for the Government to collect from the LGU-beneficiary in order for the former to service its debt to the World Bank. Many agencies are involved (e.g. Department of Finance) to make sure that the LGU-beneficiaries pay back its loans.
3. ESF proceeds on the other hand are not loans contracted by the Government. These proceeds are worry-free in terms of principal/interest payments and commitment fees. Funds from ESF are grant proceeds which is not known to the LGU-beneficiaries. (Most LGU beneficiaries even consider ESF proceeds as rentals and not grants). The government therefore is not subjected to a strong pressure to compel the LGU beneficiaries to pay back their "loans".
4. Moreover, the ESFS was not structured nor meant to be a banking institution. It does not have the mechanism to effectively and efficiently collect from the LGU beneficiaries. The ESFS is not equipped for the purpose.

5. There is also a strong resistance from the LGU beneficiaries to pay. The LGU-beneficiaries know that the ESF proceeds are grants, and it has been their position that the ESFS therefore should not profit from the transaction. Following the argument that if ESF proceeds are grants, some LGU beneficiaries believe that ESF-funded market projects should also be treated as grants. They could be right. The ESFS would have no objection if it will be recommended that market projects are funded on full-grant basis.
6. Insofar as the recommendation to engage the private sector in the market projects, (which, off-hand, is a very sound recommendation) the ESFS feels that such move will not be consistent with the program design for the RDF which is to build-up the capabilities of the local government units. It must be recalled that the infrastructure projects (including markets projects) being funded and implemented through ESF under the RDF are merely the channels to realize the objective of the institutional build-up and strengthening of local government units' capabilities.

CONTROL VS. IMPLEMENTATION

7. The draft report compared the program's performance for the 1982-1986 to the period 1987-1991. Approximately 75% of program's expenditures were accomplished during the period 1982-1986 while only 25% during the period 1987-1991.
8. In order for us to clearly comprehend the decline of the program's performance for the period 1987-1991, it would be advisable to compare the conditions obtaining during the period 1982-1986 and the conditions during the period 1987-1991. For both periods, the "centralized" set-up is present, the same types of projects are implemented, the same rules and regulations governing tendering (PD 1594) are applied and the same payment and disbursement methods are used. As a matter of fact there should be improvement on the program's performance rather than a decline for the period 1987-1991 because of the improved designs, standards and contract administration that were put in place for this period.
9. One development that happened on the period 1987-1991 that could explain the decline in the program's performance are the controls that were suddenly put in place. The ESFS believes that the controls set-up by the USAID can explain a lot the reason for the decline in the program's performance. There were no new GOP controls that were set up. The same accounting and auditing requirements were present during both periods. If there had been changes from the GOP, such changes were more for improvement of systems and procedures.

10. In this connection, the first paragraph of page 51 (conclusions) should be quoted.

"The decline in the real output of the program during the past four and half years is significant and has reduced the overall impact of the program. This slowdown may be attributable to stricter administrative controls and greater accountability requirements. If so, whatever these tighter controls reportedly achieved occurs at the expense of the development objectives of the ESF Infrastructure Program by impeding implementation. Consequently, the results of the program could have been greater than they are."

11. It is also worth noting that while the above conclusions were in the draft report, there were no specific recommendations that should logically follow those conclusions. The ESFS feels that this section on Conclusion and Recommendations on Improving Program Impact should be further expanded and elaborated upon since this is a very important aspect of the draft report.

ANNEX F. Scope of Work for the ESF Infrastructure Impact Evaluation

1. Purpose of the Evaluation

The purpose of the evaluation is to assess the economic and social impact of the infrastructure projects - roads, schools and markets - funded through the ESF program. The evaluation will focus on changes in economic activities, agricultural production, commercial activity, private sector growth and improvements in the standard of living in communities benefiting from the projects. The evaluation will draw on data collected on a sample of roads, schools and markets in five regions of the country by a special survey recently undertaken by the ESF Secretariat. The results of the evaluation will be used by the ESF Secretariat and USAID to guide the planning of future ESF funded infrastructure projects.

2. Background

As an outcome of the Military Bases Agreement of 1979 (renegotiated in 1983 and 1988), \$1,087 million in Economic Support Funds (ESF) have been obligated since 1980 in conjunction with the agreement. The ESF program provides both project and non-project assistance (i.e., balance of payments support, budget support). To date, \$325 million have been provided for project assistance, and \$762 million for non-project assistance. Of the \$325 million obligated in project funding, \$283.3 million have been used for seven projects implemented by the ESF Secretariat. (The remaining ESF funds are used for the Rural Infrastructure Fund implemented through the Department of Public Works and Highways.)

Elementary Schools Construction, Municipal Development Fund, Regional Development Fund and Markets projects under the ESF Secretariat have been the main infrastructure projects through which construction of schools, roads, markets and a variety of other capital development projects have been carried out. As of June 30, 1990, over 3,400 sub-projects have been completed and another 277 are under construction or are authorized under the ESF projects.

In general, the ESF funded projects are intended to produce the following types of economic and social improvements:

- Strengthen local institutions to help the poor majority;
- Increase and diversify agricultural production;
- Integrate agricultural, industrial and commercial development;
- Provide basic infrastructure that increases access by the poor to social services and facilities;
- Increase employment opportunities and generate income; and

- Strengthen commercial linkages between urban and rural centers.

The ESF program has been underway now for approximately ten years and is expected to continue for the foreseeable future. However, the economic and social impact of these projects has not been evaluated. Approximately \$83 million in planned expenditures remain for on-going project activities and planning for a new infrastructure project involving additional funding is underway. In short, an assessment of the economic and social impact of these past activities is highly warranted at this time to guide the development of new infrastructure projects.

3. Evaluation Questions

The evaluation will focus on the following questions. It is expected that, at best, the answers to these questions will be based on generalizations and qualitative, judgmental assessments (e.g., high medium or low). In general, what the evaluation team is expected to do is try to estimate which types or categories of projects, e.g., secondary roads versus barangay roads, are more less effective in producing sustainable economic and social impacts.

3.1. Infrastructure Projects

3.1.1. Schools

- Are the schools being used and adequately maintained?
- Are there teachers assigned to the schools? Are there adequate furnishings and supplies?
- Has the school increased access to education in the immediate and surrounding communities? Has attendance improved? Are more students going on to attend high school than before the school was constructed?
- Do residents perceive improvements in the quality of education available due to the school?
- Are the school being used for other worthwhile purposes, e.g., evacuation centers, community meetings?

3.1.2. Markets

- Has the number of stall operators and their sales increased due to the improved market facility?
- Has there been additional employment generated or new businesses established in the market area due to improved facilities?

- Are there other indications of increased commercial activity transactions in the market area due to improved facilities, e.g., increased diversity, supply and/or value of consumer goods, increase business investment?
- Has production of agricultural and manufactured goods by local establishments increased due to improved market facilities?
- Has there been an increase in the volume and value of goods moving to and from the market to "higher-order" regional or urban markets? Have the number or frequency of shipments to and from regional centers increased? Have new business relations been established between stall owners and businesses in regional or urban areas, e.g., access to a line of credit?
- Has management of the market facility improved and is there any indication of progress toward financial viability of the markets, including repayment of construction loans by the local community?
- Do customers of the market report improved satisfaction from better sanitary conditions, a broader array of goods, etc.? What are the inadequacies of the markets and the services provided?
- Has the market and the increased commercial activity it has stimulated contributed to lessening intra-regional economic disparities?

3.1.3. Roads

To the extent that data available to the evaluation permit, assess the following potential effects of the roads constructed through the ESF program.

a) Farm Technology

- Fertilizer use
- Use of improved seed varieties
- Mechanization

b) Agricultural Production

- Increased planting of cash crops (e.g., increase in area planted, more intensive production)
- Shift from subsistence to commercial cash crops

c) Agricultural Credit

- Increased planting of cash crops (e.g., increase in area planted, more intensive production)

- Shift from subsistence to commercial cash crops

d) Land Values and Tenure

- Changes in land values near the road

- Land tenure of small farmers

e) Marketing and Agricultural Input Distribution

- Construction of storage facilities

- Increase in wholesale or middle-man businesses

- Competition among transport and input providers, and effects of competition on prices

f) Commercial Activity

- Increase in agricultural processing (e.g., rice and corn mills, sugar refineries, food processing)

- Establishment of new businesses, crafts and services

- Generation of employment in new commercial activities

g) Environmental Effects

- Problems resulting from road construction (e.g., deforestation

Due to increased logging made possible by the roads, runoff and

Siltation of streams, flooding)

- Problems resulting from changes in agricultural production

(e.g., excessive use of pesticides, poor land management associated with new commercial crops)

h) Transportation Costs

- Changes in vehicle operating costs travel time

- Availability of transportation (e.g., frequency of travel, passage during the rainy season)

- Competition among transportation providers, e.g., increase in the number truck/jeepney operators

- Changes in farmgate prices received by farmers due to improved marketing systems resulting in part from road construction

- Passenger fares
- Freight and shipping costs

3.1.4 Social Benefits

- Distribution of benefits among socio-economic groups, differential impacts by gender.

- Access to education, health and other basic services

- Changes in standards of living due, for example, to employment or income gains or to faster, more reliable transportation resulting from road improvements.

3.2. Program Issues

Based on the preceding assessment of infrastructure projects, the evaluation team will address the following issues pertaining to future ESF program direction.

- Which types of infrastructure projects tended to produce significant economic and social benefits? What factors seem to account for this? Which types of projects were least effective, i.e., produced only marginal or no measurable benefits? What accounted for this? (To the extent possible, this assessment should follow a benefit/cost analysis approach.)

- Which project types are most likely to continue to produce a sustained impact?

- The ESF infrastructure program of the 1980's concentrated largely on schools, road and markets. Given the development requirements of the Philippines during the 1990's, in particular, the importance of the country developing a manufacturing export economy, are these still the best types of infrastructure projects to fund? Do they support private sector development, particularly export oriented manufacturing, as effectively as other alternative projects? What alternative infrastructure projects should be considered that might better meet the development needs of the Philippines during the 1990's?