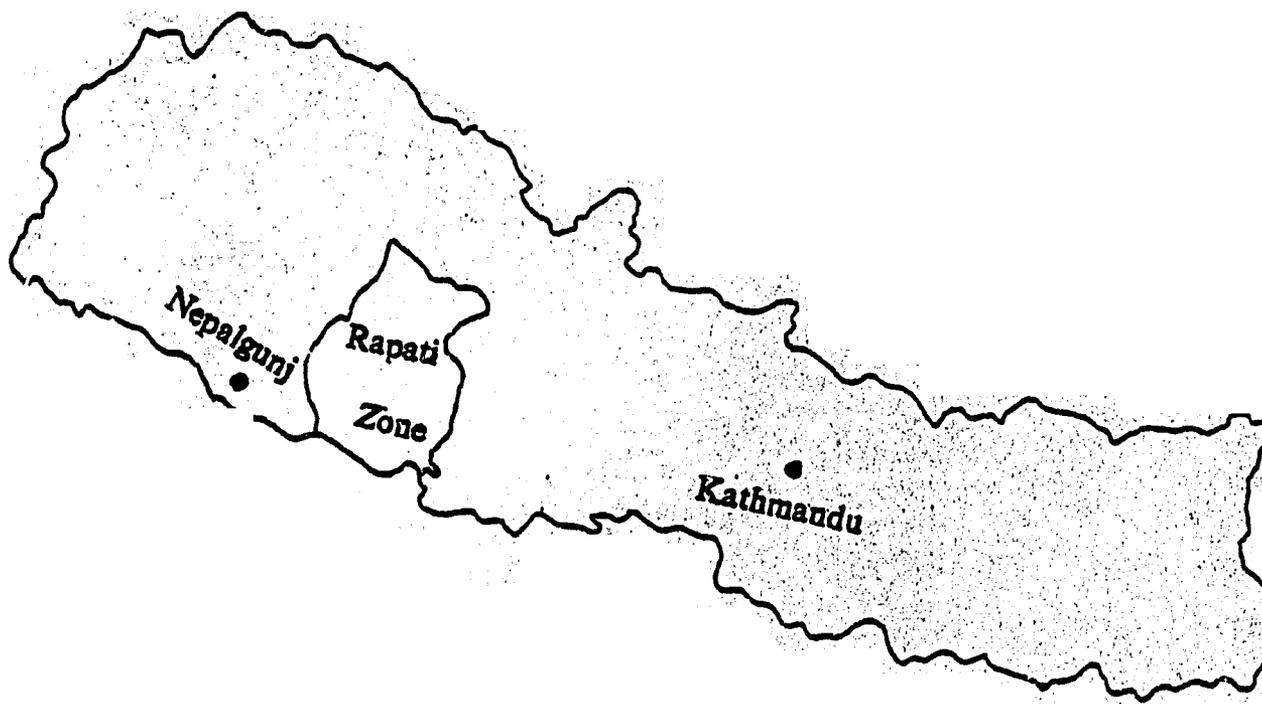


RURAL AREA DEVELOPMENT

RAPATI ZONE PROJECT PAPER



United States Agency for International Development
Nepal, Project No. 367-0129
May, 1980

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SUMMARY AND RECOMMENDATIONS

SUMMARY: The severe problems of rural poverty in Nepal and the current policies of the government to accelerate development in the hill areas, where 60 percent of the people live -- policies of increasing subsistence production, employment and the delivery of basic services -- have led to HMG's adoption of a strategy stressing integrated rural development across sets of districts. The project proposed here would support development at the village, district and zonal levels in the Rapti Zone of Far Western Nepal. Conditions in the hills of the Zone are such that population has already outstripped the ability of the land to support even a minimum standard of living through traditional production practices, trading and seasonal migration.

The project will improve crucial aspects of the quality of life, including income, productivity, employment, nutrition, control of family size and education of the rural poor in the five districts of the Rapti Zone. It supports Nepalese programs to improve farming systems, renewable resource management, small rural works, employment and skills development, and institutional development especially at the local level. Participation of the rural poor in the planning, design and implementation of discrete improvements, such as adoption of better cultivation practices, forestry preservation, construction of local roads and irrigation systems, development of cottage industries and improvement in literacy, sanitation and family planning practices -- as supported by the project and departments of the government -- will be key.

Social analyses indicate that the ability to adopt these improvements and participate in and influence their planned delivery exists among the 85% (about 720,000) poor of the Zone's total estimated population of 850,000. Special programmatic attention will be given to the needs of the most deprived, including occupational castes, Tharus and women. Administrative analyses indicate that the current disposition of governmental units at the center and at the local level needs to be augmented and authority decentralized but it does not need to be restructured or encumbered by a heavy foreign advisory component. The emphasis must be on training, particularly at the lower levels in the system, and establishing clear divisions of responsibility and rapid cash flows through the system. The project will have a Coordination Office under the overall responsibility of the Ministry of Home Panchayat with its main activities located in the Zone. Economic and financial analyses indicate that the rates of return on the productive components of the project (farming, livestock and forestry) range from 13 to 49 percent.

RECOMMENDATIONS: The total cost of the proposed project over five years is 33.7 million current dollars, of which it is recommended that AID finance, by grant, \$26.7 million. The 21 percent of total costs financed by the Government of Nepal is deemed appropriate, in that this does not include the value of forest land contributed, and considering that Nepal is one of the Relatively Least Developed Countries in the World. It is recommended that the requirement for 25 percent or greater host-country financing be waived. It is recommended that waivers concerning certain items to be procured for use in Nepal be approved. It is recommended, finally, that the obligation for FY 80 be \$2.5 million.

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5. PROJECT NUMBER (7 digits) [367-0129]	6. BUREAU/OFFICE A. SYMBOL ASIA	B. CODE [04]	7. PROJECT TITLE (Maximum 40 characters) [Rural Area Development - Rapati Zone]
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8. ESTIMATED FY OF PROJECT COMPLETION FY [8 5]	9. ESTIMATED DATE OF OBLIGATION A. INITIAL FY [8 0] B. QUARTER [3] C. FINAL FY [8 4] (Enter 1, 2, 3, or 4)
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10. ESTIMATED COSTS (\$000 OR EQUIVALENT \$I -)						
A. FUNDING SOURCE	FIRST FY			LIFE OF PROJECT		
	B. FX	C. L/C	D. TOTAL	E. FX	F. L/C	G. TOTAL
AID APPROPRIATED TOTAL	800	1700	2500	7996	18704	26700
(GRANT)	(800)	(1700)	(2500)	(7996)	(18704)	(26700)
(LOAN)	()	()	()	()	()	()
OTHER U.S.	1.					
	2.					
HOST COUNTRY	-	300	300	-	6974	6974
OTHER DONOR(S)						
TOTALS	800	2000	2800	7996	25678	33674

11. PROPOSED BUDGET APPROPRIATED FUNDS (\$000)									
A. APPROPRIATION	B. PRIMARY PURPOSE CODE	PRIMARY TECH. CODE		E. 1ST FY <u>80</u>		H. 2ND FY <u>81</u>		K. 3RD FY <u>82</u>	
		C. GRANT	D. LOAN	F. GRANT	G. LOAN	I. GRANT	J. LOAN	L. GRANT	M. LOAN
(1) FN	200	210		2500		5000		5400	
(2)									
(3)									
(4)									
TOTALS				2500		5000		5400	

A. APPROPRIATION	N. 4TH FY <u>83</u>		Q. 5TH FY <u>84</u>		LIFE OF PROJECT		12. IN-DEPTH EVALUATION SCHEDULED MM YY 0 2 8 3
	O. GRANT	P. LOAN	R. GRANT	S. LOAN	T. GRANT	U. LOAN	
(1) FN	7500		6300		26700		
(2)							
(3)							
(4)							
TOTALS	7500		6300		26700		

13. DATA CHANGE INDICATOR. WERE CHANGES MADE IN THE PIO FACESHEET DATA, BLOCKS 12, 13, 14, OR 15 OR IN PRP FACESHEET DATA, BLOCK 12? IF YES, ATTACH CHANGED PIO FACESHEET.

2 1 = NO
3 = YES

14. ORIGINATING OFFICE CLEARANCE		15. DATE DOCUMENT RECEIVED IN AID/W, OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION
SIGNATURE	DATE SIGNED	
TITLE Samuel H. Butterfield Director, USAID/Nepal	MM DD YY 05/16/83	MM DD YY 05/27/83

AGENCY FOR INTERNATIONAL DEVELOPMENT
PROJECT IDENTIFICATION DOCUMENT FACESHEET
To Be Completed By Originating Office

1. TRANSACTION CODE
 G A Add
 C Change
 U Delete

PID
2. DOCUMENT CODE
 1

3. COUNTRY/ENTITY Nepal
4. DOCUMENT REVISION NUMBER 1

5. PROJECT NUMBER (7 digits) 367-0129
6. BUREAU/OFFICE
 A Symbol ASTA B. Code 04
7. PROJECT TITLE (maximum 40 characters) Rural Area Development - Rapti Zone

8. PROPOSED NEXT DOCUMENT
 A. 2 PHP B. DATE MM YY 01/78
 3 PP

10. ESTIMATED COSTS
 \$5000 or equivalent, \$1

FUNDING SOURCE		Life of Project
a. AID Appropriated		11,300
b. OTHER	1 Peace Corps	100
	2. US	
c. Host Country		3,000
d. Other Donor(s)		3,250
TOTAL		17,650

9. ESTIMATED FY OF AUTHORIZATION/OBLIGATION
 a. INITIAL FY 719 b. FINAL FY 719

II. PROPOSED BUDGET AID APPROPRIATED FUNDS (\$000)

A. APPRO. PRIATION	B. PRIMARY PURPOSE CODE	PRIMARY TECH CODE		E. FIMST FY		LIFE OF PROJECT	
		C. Grant	D. Loan	F. Grant	G. Loan	H. Grant	I. Loan
(1) FN	200B	200		11,300		11,300	
(2)							
(3)							
(4)							
TOTAL				11,300		11,300	

12. SECONDARY TECHNICAL CODES (maximum six codes of three positions each)
 210 240 250 260

13. SPECIAL CONCERNS CODES (maximum six codes of four positions each)
 BR BL BS EQTY PART LAB

14. SECONDARY PURPOSE CODE 100

15. PROJECT GOAL (maximum 240 characters)
 To increase participation of small farm and non-farm producers and their families in the process of development, both as contributors and beneficiaries.

16. PROJECT PURPOSE (maximum 480 characters)
 To increase production/income levels of small producer families and increase their benefits from national and local development projects within selected areas of the Rapti Zone.

17. PLANNING RESOURCE REQUIREMENTS (staff/funds)
 Approximately 15 person months consultant services will be required to assist in PRP preparation. Estimated cost is \$200,000 from FY 78 PD and S funds.

18. ORIGINATING OFFICE CLEARANCE
 Signature: Samuel H. Butterfield
 Title: Director, USAID/Nepal
 Date Signed: MM DD YY 01/26/78

19. Date Document Received in AID/W, or for AID/W Documents, Date of Distribution
 MM DD YY

CREATION OF MINISTRY OF LOCAL DEVELOPMENT

On June 1, 1980 His Majesty's Government of Nepal announced the creation of the Ministry of Local Development. This ministry will assume the responsibilities of the Ministry of Home Panchayat for coordinating integrated rural development projects, including the Rural Area Development- Rapati Project. (See Kathmandu 3256, Annex H). All references in this paper to the Coordination Division and Local Development Departments of the Ministry of Home Panchayat, and references to the Ministry of Home Panchayat as lead agency for the project should be understood to refer to the new Ministry of Local Development.

MAJOR ISSUES

[Major issues raised in the PID Review Cable of 16 July, 1977 (STATE 77-166120) and in the FY 82 CDSS Review Cable of 18 March, 1980 (STATE 071482) are addressed in annotated versions of those cables found at Annex G of this Paper. Issues discussed in those cables include: donor coordination in the Project area (PID Cable); adequacy of HMG/N staff and budgetary resources to carry out the Project including a discussion of recurrent costs (PID and CDSS Cables); incentives and mechanisms for maintaining adequate staffing in the Project area (PID Cable, response includes explanation of Project "Incentive Allowances" with reference to the recent USAID/N - AID/W cable exchange on the subject); the feasibility of effecting meaningful production increases in the Hills of Nepal (CDSS Cable); the probability of increasing local resource mobilization in Nepal (CDSS Cable); USAID/N management of the training elements of the Project (CDSS Cable); and participation of women in the Project (CDSS Cable).]

1. Scope and Complexity. The Project as designed is multi-sectoral, covers five administrative districts in three basic agro-economic regions within the Zone, and is to be implemented through a number of existing agencies and departments of HMG/N. The project organizational structure is based on stated policies of HMG/N regarding rural development projects articulated in the Integrated Panchayat Development Design (Ministry of Home Panchayat, 1978). Implementation is to occur in five districts simultaneously, with the phasing of various components based on existing and projected capabilities of various departments or agencies in the Zone. Life-of-project and annual targets for each component are derived from experience in Rapati and elsewhere in Nepal, and are considered reasonable and uninflated by USAID/N.

USAID/N suggests that the Administrative Analysis in Section III., F. of this paper, coupled with a full description of the Project Coordination Unit at Annex L, demonstrate that the Project is administratively feasible and can be successfully implemented.

Finally, USAID/N agrees that the Project is complex, but that the combination of HMG/N policy and sound development reasoning argues that the stated Project purposes cannot be achieved through a scaled down, less complex approach. As stated in Annex J, "Social Soundness Analysis", "by attacking the problems simultaneously from each of these directions, the probability of achieving widespread success increases considerably and exceeds the sum of the individual strategies' probabilities of success. Experience in rural Nepal suggests that thresholds of credibility, local participation, reduced opposition from the elite, and self-reliance are more likely to be crossed through the sensitive application of combined strategies such as these than if reliance were placed on only one or two alone. However, since it is impossible to predict which mix of strategy emphases will be most effective, the Project's soundness will depend greatly on the ability of project managers to identify and incorporate necessary readjustments as informed through adept monitoring."

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2. Phasing of Sub-activities. HMG/N's policies on decentralization call for establishment of up to nine Service Centers in each district over the next five years. These Centers are to serve the dual function of further disseminating HMG/N technical services (i.e. agricultural and livestock extension, credit, agricultural inputs) and of providing a locus for establishing local level planning and management of these services. Based on considerations of HMG/N's capabilities in construction and provision of technical staffing in remote areas like Rapati Zone, USAID/N has currently included provision for up to five service centers, in addition to the district headquarters, in each district.

Progress made in establishing and organizing Service Centers by the time of the third year evaluation should be taken into account in revising these targets and related budgeting.

3. Irrigation in Dang Valley. Project funding is proposed for the improvement, upgrading, environmental stabilization and/or new construction of approximately 1250 hectares of medium-scale (over 50 hectares) irrigation schemes and approximately 3100 hectares under minor irrigation schemes (under 50 hectares) over the life of the project. HMG/N has requested that AID reconsider this, and include funding for the establishment of major irrigation schemes in Dang Valley.

Reconnaissance and surveys undertaken in Dang during Project development support the fact that Dang has tremendous potential for increased production with increased availability of reliable irrigation. These investigations suggest, however, that adequate water for irrigating all of Dang Valley is not available from the immediate watershed and that the cost of channeling it to Dang might obviate the benefits of the increases. (The situation in Deokhuri Valley is quite different, with more widespread existing irrigation and quite adequate water supplies.) Further, the investigations suggest that the current landholding and tenancy situation in Dang, which HMG has created a special Commission to resolve, would probably result in any benefits accruing to a relatively small number of landlords and lead to a possible worsening of the situation of tenants. Finally, investigations suggest that overall well-being in Dang is much higher than in the hills, and equity considerations suggest that in the short- to medium-term, AID funding should go first to the hills.

Recognizing that HMG is in the process of improving the security of tenants in Dang, and Nepal's strong need to maintain self-sufficiency in food production, funding has been included in the Project for feasibility studies of major irrigation sites in Dang in anticipation of a resolution of landholdings and equity issues during the implementation of Project. Based on the results of these studies, and on the results of the evaluation scheduled for the third year of the Project, USAID/N is prepared to recommend shifting or adding funds to support expansion of irrigation activities.

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4. Development of Sub-Activities. As discussed in Section IV. B., Financial Management, "It is anticipated that although the overall Project budget, and departmental budgets for the initial Project Year, are very tightly costed out, some items will be shifted, dropped or added over the five-year life-of-Project. The emphasis throughout the Project on local level participation in [preparing] annual District Plans requires this flexibility. The detailed planning carried out by Project designers has laid the groundwork for this process; if, at the end of five years, these initial centrally-developed budgets have been rigidly followed and local decision-making has not occurred, the Project will have missed one of its primary objectives."

AID is directed by Section 611(a)(1) of the U.S. Foreign Assistance Act of 1961, as amended, that "No agreement or grant which constitutes an obligation of the United States Government in excess of \$100,000..... shall be made for any assistance authorized under [other Sections of the Act, including Section 103, Agriculture, Rural Development and Nutrition] (1) if such agreement or grant requires substantive technical or financial planning, until engineering, financial and other plans necessary to carry out such assistance, and a reasonably firm estimate of the cost to the United States Government of providing such assistance, have been completed....." This requirement for advance planning prior to the obligation of funds is intended to ensure that there is a reasonable certainty before funds are committed that the assistance intended will be delivered. It basically requires the detailed planning of the starting point for each component of a project.

The starting point under RAD, beyond the design work already done, is the annual workplans to be developed each year by the Districts. Plans for year one of the Project have been developed based on an analysis of existing District plans and project design investigations. The life-of-Project plans specify activities to be offered to project beneficiaries for selection each year as annual workplans are developed. The selection of these activities, and the proposed expansion of central agency and department programs is based upon an assessment of the needs and preferences of people in the Rapati Zone. It is the opinion of USAID/N that this is an adequate basis to permit obligation of funds for these purposes.

Project Implementation Letters to be issued on the basis of annual workplans and budgets will guide disbursement of funds for all Project components. One Condition Precedent to Additional Disbursement will be included in the Grant Agreement to ensure that "... final plans, cost estimates, specification, provisions for engineering supervision and contracts or other arrangements as specified in Implementation Letters..." have been completed and are approved by USAID/N prior to disbursement of funds. These plans will include, where necessary and appropriate, social, technical and environmental specifications as well as those for engineering. The various units of the PCO will also monitor and evaluate adherence to these specifications and identify and incorporate necessary readjustments as experience dictates.

GLOSSARY OF TERMS, ACRONYMS AND MEASURES

AA	Agricultural Assistant
ADB	Asian Development Bank
ADB/N	Agricultural Development Bank of Nepal
ADO	Agricultural Development Officer (same as DADO)
AID, AID/W	United States Agency for International Development, Washington
AIC	Agricultural Inputs Corporation
APROSC	Agricultural Projects Services Center, HMG
ATU	Alternative Technology Unit of PCO
CCC	Central Coordinating Committee
CDO	Chief District Officer
CDSS	Country Development Strategy Statemer . (of USAID)
CFD	Community Forest Division
CIDA	Canadian International Development Agency
CIHE	Cottage Industries and Handicrafts Emporium (P) Ltd.
CHIURI	<u>Bassia Buttreacia</u> , a fruit bearing tree; the kernel contains a saturated oil used in ghee and soap manufacture
CRORE	10 Million (1,00,00,000)
CVIDB	Cottage and Village Industries Development Board
DADO	District Agricultural Development Officer
DCVI	Department of Cottage and Village Industries
DFO	Divisional Forest Officer
DOR	Department of Roads
DSWC	Department of Soil and Water Conservation, HMG
DTO	District Technical Office
EIRR	Economic Internal Rate of Return
FAO	Food and Agricultural Organization of the United Nations
FIRR	Financial Internal Rate of Return
FP/MCH	Family Planning and Maternal and Child Health
FX	Foreign Exchange
FY	Fiscal Year - U.S. = Oct. 1st - Sept. 30th; Nepali = ca. July 15 - July 14
GON	Government of Nepal
GVP	Gross Value of Production
HA	Hectare - one ha = 2.47 acres
HAPS	Proposed USAID Project "Hill Agricultural Production Systems"
HMG, HMG/N	His Majesty's Government of Nepal
IBRD	International Bank for Reconstruction and Development (World Bank)
ICP	Integrated Cereals Project
IDA	International Development Association (World Bank)
IFAD	International Fund for Agricultural Development
IPDD	Integrated Panchayat Development Design
IRD	Integrated Rural Development
JT	Junior Technician
JTA	Junior Technical Assistant
KG	Kilogram = 2.21 pounds
KM	Kilometer = 0.62 miles
LAKH	100,000 (1,00,000)
LC	Local Cost

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LDD	Local Development Department
LF	Leader Farmer
LT	Long Term
M	Meter = 3.28 feet
MOHP	Ministry of Home Panchayat
MT	Metric Tonne = 0.98 tons
NDS	National Development Service
NRs.	Nepali Rupees, NRs. 11.9 = US\$ 1
NVP	Net Value of Production
PC	Project Coordinator
PCO	Project Coordination Office
PDO	Panchayat Development Officer
PF	Panchayat Forest
PPF	Panchayat Protected Forest
PID	Project Identification Document (of AID)
PMEU	Planning, Monitoring and Evaluation Unit of PCO
PWD	Public Works Department (old name for DTO)
RAD	Rural Area Development
RCUP	Resource Conservation and Utilization Project (of AID)
RRM	Renewable Resource Management
SADP	Small Area Development Program
SFDP	Small Farmer Development Program
SMS	Subject Matter Specialists
ST	Short Term
STOL	Soft Takeoff and Landing (aircraft)
TA	Technical Assistance
UNDP	United Nations Development Programme
USAID, USAID/N	AID Mission in Nepal
UNICEF	United Nations Childrens Fund
ZCC	Zonal Coordinating Committee

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II. DESCRIPTION OF THE PROJECT

A. Background and Rationale

Nepal is one of the poorest countries in the world. GNP per capita is about \$110, and the rate of economic growth in recent years has been exceeded by that of population. Several projections of current trends indicate that Nepal will have a recurrent food deficit within a decade. Opportunities for investment in industry and services are scarce.

With only about five percent of its population in cities and towns, the Government of Nepal has long been concerned with economic and social conditions in rural areas. Lately this concern has been expressed in a shift from traditional policies benefitting urban and rural élites by the agricultural production and labor of farmers to an increasingly realistic view that improvements in the life of its rural population require widespread, locally supported development efforts. The rural poor of Nepal, about 8.4 million in number out of an estimated total of 14 million, subsist at or below the level of absolute poverty.

Attention to increasing the productivity of farmers has become more urgent in recent years, due to food production shortfalls caused by erratic monsoons, and heightened appreciation of (a) declining agricultural production in the hill areas accompanied by intensifying environmental degradation, (b) difficulties of transportation and communication within the national area, and (c) limited financial, management, manpower and other resources that the government can bring to bear on problems of national development.

This has resulted in a tightened focus in the revised Fundamental Principles for Sixth Five Year Plan on exploiting existing developmental infrastructure and local initiative to support increased food production and income-generation throughout the country. It is particularly applicable in the hills, where over 60 percent of the population live facing early death, malnutrition, and a worsening man-to-land ratio.1/

Current policies of His Majesty's Government (HMG) on the organization of integrated rural development are a carefully considered response to some 25 years of experience with community, local and rural development, strongly influenced by experience with Nepal's first IRD project beginning in 1976. They combine stress on line department and agency responsibility for staffing and implementation with, as noted, enhancement of local level capability and responsibility for planning, coordinating and implementing development activities of immediate importance.

1/ Infant mortality is 154/1,000 live births. Life expectancy is 45 years for Nepal as a whole.

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"IRD" Projects underway, all donor supported, emphasize the provision of basic services and amenities to rural communities, food production, and the availability of other income-generating opportunities. They provide benefits to as many of the local people as possible, and utilize and strengthen local development capabilities. To a degree, they also integrate the economies of sets of isolated districts having lowland, hill and mountain characteristics.

While recognizing the problems of implementing complex multi-sectoral projects in its more remote and poorer districts, His Majesty's Government views the alleviation of rural poverty and the chosen solution as essential to overall national progress. The problems encountered in coordinating and implementing accelerated line department efforts derive in large part from the lack of sound, coordinated local planning and initiative which these projects also seek to address. The coordinating structure for rural development projects at the national level has in addition brought about a more realistic and cooperative approach by individual departments to carrying out their responsibilities in rural areas. The approach being taken to rural development in Nepal is a product of its current development situation and its relatively unique arrival at a policy toward rural development which realistically recognizes the nature and dimensions of the obstacles to be overcome. Chief among the elements of this policy is its recognition that rural development is fundamentally a political-economic process which cannot be achieved through isolated technical and economic interventions.

Stress is now placed even more heavily on the need to increase and broaden local participation in the planning, implementation and enjoyment of the benefits of development. The subject of several high-level seminars and conferences in the past two years, participation has received strong emphasis in the evolution of the country's Sixth Plan. If properly structured and implemented, integrated rural development (IRD) projects are viewed as providing a sensible and supportive context for maximizing local participation and bringing earlier benefits to farm households, especially in remote areas.

The proposed integrated rural development project in Rapati Zone seeks to achieve realistic improvements in the life of the inhabitants of the Zone through the strengthening of village and district level capabilities, and improving the delivery of productive and social services, resources and infrastructure in the project area, within the context of regional and national priorities. For most of the population in the Zone, this will mean that they can better articulate their needs and pursue their aspirations within a more responsive development system. Several programs supported by the project will provide specially targeted benefits for marginal farmers, the landless, women, and the most disadvantaged within the Zone.

The Rapati Zone Project has been designed with the recognition that the five years of proposed activity must be part of a longer, 15-20 year intense development effort. Several subsequent efforts, with donor support, are likely to be required to respond to and sustain local development initiatives, integration, functional specialization, economic stabilization and growth within the Rapati Zone. Planning has included provision for broader zonal development. The inclusion of a functioning administrative unit or cluster of units in the project area represented by the five districts of the Zone facilitates the planning and administration of the project without requiring the undue establishment of ad hoc units or the restructuring of existing responsibilities and jurisdictions. District-level planning supported under this project will similarly incorporate a full range of local development efforts and inputs.

1. The Project Area. The Rapati Zone is one of fourteen administrative zones in Nepal and lies at the eastern edge of the Far Western Development Region. This Region contains some of the poorest and most remote districts in the country. The Zone's five districts extend from the Indian border on the south to the Himalayan Range in the north. Its total area is 10,136 square kilometers. Its estimated population (1980) is 850,000. Only 12 percent of the land is cultivated, and due to terrain there is very little additional land to be utilized. The Zone contains a partial cross-section of national patterns: arable land is concentrated in the southern inner-Terai District of Dang-Deokhuri; three primarily middle-hill districts to the north have limited arable land; the most northern district, spanning the middle hill and mountain regions is only minimally arable. The three major socio-cultural areas within the Zone correspond closely with these agro-economic and geo-climatic divisions.

Dang District (under 1,000 meters in altitude) includes a large indigenous Tharu population which has been increasingly supplemented and in part supplanted by in-migrating Hill groups. The District, comprising the Dang and Deokhuri Valleys, is agriculturally productive, containing about 30 percent of the Zone's population, but about 54 percent of the cultivated land, some of it multiple-cropped in rice and wheat under irrigation. As the most accessible district, Dang has most of the limited agricultural processing and related small industries in the Zone and the greatest trade with the rest of Nepal and with India.

Sallyan, Rolpa, Pyuthan, and Rukum Districts lie in the middle hill and mountain region north of Dang (ranging from 750 to 7,000 meters in altitude). With the exception of limited valley areas along major rivers, these districts are characterized by mountainous terrain, limited amounts of arable land and extremely high and growing population levels in relation to arable land. Although major patterns of movement are north-south within and among these districts and to Dang, several east-west corridors break this pattern in the lower and upper hills.

The western and southern areas of these four contiguous districts are inhabited by mixed Nepali-speaking populations of high caste Hindus, Magars, and low-ranking occupational castes. Cereal grains are the main crops with rice and wheat preferred over maize wherever irrigation is available. Small-scale animal husbandry based on buffaloes, cattle and some goats, sheep and poultry is practiced by nearly every household. In the higher-altitude northern and eastern portion of the Zone, Kham-speaking Magars are the dominant ethnic group living with bilingual occupational castes. Irrigation is not prevalent. The principal crop, maize, is supplemented primarily with barley and potatoes. While cattle are kept for draft power and manure, sheep and some pigs replace buffalo as the principal livestock.

Transport and communication in Dang are relatively good compared to the poor conditions which characterize the rest of the Zone. Only with the completion of the all-weather roads currently under construction will the area be accessible during the rainy season. Until two years ago none of the Hill districts was accessible by road transport. Rudimentary tracks constructed with local voluntary labor now provide access to two of the Hill district centers for six to seven months of the year. There are three STOL airfields in the Zone, one each in Dang Valley, Rukum, and Rolpa Districts. Trade and marketing in the Zone are limited and generally carried out by individual households selling and buying a few commodities in yearly trips by foot to market centers south, east and westward. The normal agricultural surpluses of Dang are either sold out of the Zone or moved by producers to the hills.

Education and health services in the Zone are minimal, in spite of a considerable increase in the number of health posts and primary schools in the Zone in the last ten years. Only 30 percent of primary and middle school teachers are trained. The health service-to-population ratio is less than half of the national goal which is currently achieved only in Kathmandu Valley. Problems of movement in the Hills limit the effective coverage of existing, poorly staffed and supplied health facilities. The same problems confront the newly introduced family planning program. Strong local interest in education and HMG policy have led to sharp increases in school enrollment at all levels, particularly primary, but the lack of trained and qualified teachers and scarcity of materials and equipment are major problems. Initial Baseline Survey findings indicate that functionally literate people comprise only 22 percent of the population; literacy among women is only 6 percent.

2. Development and Design of the Project. USAID/N was originally requested to take part in a joint investigation of agricultural development in Dang in 1977. From this initial focus, the Project has evolved into an area development project including both Dang and the four hill districts that comprise Rapati Zone. Within this areal unit is found a cross-section of development

problems common to the poorer-than-average areas of Nepal, including problems of hill linkages to the southern, potentially more productive terai and inner-terai areas.

Improvements for the household economic units in the Hills will require improvements in the varying subsistence strategies which allow Hill families to survive. These include field crop production, livestock husbandry, local wage labor and short and long-term migration for wage labor, and cottage industries. The more complex development potential of the Hills is balanced against Dang's greater agricultural potential, which is mitigated by a far higher proportion of tenant farmers and extreme concentration of land ownership and control. Resources within the proposed Project have thus been focused within the overall Project in the four hill districts, with most sectors receiving equal investment on a district by district basis.

Project design efforts have been based on: a) field visits and investigations in the Zone largely carried out by the Agricultural Projects Services Center, involving local citizens, representatives and central government officials; b) continuing work with HMG departments and agencies; and c) consultations with other donors. The proposed project is based on these design efforts as well as upon experience with AID-funded pilot activities.

The Rapati Project is one of eight proposed or on-going multi-district rural development projects in Nepal covering some 30 of the country's districts. Although the Swiss-assisted Lamosangu-Jiri Project has been in operation for a number of years, experience with the IBRD-assisted Rasuwa-Nuwakot Project, begun in 1976, has more strongly influenced subsequent projects, HMG rural development policies, and the design of this project. Agreements have been signed for three other projects in the past year with both bilateral and multi-lateral donors, but none of these projects has progressed far enough in implementation to offer any further guidance.

The Rasuwa-Nuwakot Project has been implemented by line departments and agencies carrying out discrete sectoral components. Its overall coordination and administration has been similar to that for the project proposed here, with the major difference of its having its own central coordinating committee during its first two years of operation. The coordination of the project has also been located in Kathmandu, rather than the project area, which has been possible due to the proximity of the project to the capital. The implementation of individual components of this project has progressed at quite different rates.

While overall progress and disbursement on the project have been slower than planned, the Rasuwa-Nuwakot Project has brought about considerable changes in several sectors, including widespread increases in adoption of improved varieties and fertilizer use. The

Rasuwa-Nuwakot Project experience has also suggested that some caution must be exercised in projecting rapid and radical project impacts. The use of existing agencies and authorities as the primary implementors of rural development efforts, while necessarily central to the strategy of such projects under present circumstances, suggests that progress will be somewhat slower than could be the case employing ad hoc implementing authorities. However, it is believed that the implementation of the Rasuwa-Nuwakot and Rapati Projects will have been more solidly based, and growth in their regions more assured for the long-run under the present arrangements.

B. Detailed Description of the Project

1. Overview. As stated in the USAID/Nepal Country Development Strategy Statement for U.S. FY 1982, the overall goal for the AID program in Nepal is "to assist HMG/N to promote development in such a way as to meet the basic needs of Nepal's poor majority, with special attention to the large, previously bypassed population in the "Middle Hills." This Project -- the first stage of an expected 15 to 20 year involvement in rural development in the Rapati Zone by AID -- will contribute to achievement of this program goal through emphasis on two Project purposes: a) to increase the measurable aspects of the quality of life, including income and production levels, of families in the Rapati Zone; and b) to improve local demand for, and control of, national level delivery systems for improved agriculture, health, education, resource management, and family planning.

In order to achieve these purposes, the Project will:

- improve food production and consumption quantitatively and qualitatively by households in the Zone;
- improve and increase income generating opportunities within the Zone which are accessible to poor farmers, landless laborers, occupational castes, and women;
- strengthen the capacity of panchayats and other local organizations to plan, implement and sustain local development efforts; and
- increase the availability and use of national delivery systems in the Zone.

Twenty-six million seven hundred thousand dollars (31.8 Crores Rupees) of AID grant funding to 10 ministries and agencies of HMG/N over an initial five year period with a 21 percent HMG contribution valued at \$7 million (8.3 Crores Rupees) will be provided to support achievement of these purposes.

Due to the interrelated nature of many of the problems in Rapati Zone and to its treatment as an areal unit of organization, the Project will also include activities related to other USAID/Nepal objectives listed in the CDSS as follows:

- Curtailling the process of environmental degradation will be addressed on the local level by the Renewable Resource Management cluster of activities described under 2.b. below. Technical guidance will be drawn from the HMG/USAID "Resource Conservation and Utilization" Project (AID No. 367-0132).
- Improving village health conditions will be primarily achieved through the national level support of the HMG/USAID "Integrated Rural Health/Family Planning Services" Project (AID No. 367-0135). The present project provides for local level activities such as upgrading District Health Centers and functional training courses in health and sanitation for local leaders and organizations, village workers, and small farmer groups.
- Control of rapid population growth will be facilitated by stimulating local demand for family planning services provided by the national FP/MCH Project. The Project will support short-term measures such as motivation and contraceptive distribution activities by Small Farmer Development groups, Women's and Youth organizations. Longer-term measures will focus on increasing employment opportunities for, and literacy, education and civic participation of women throughout the Zone. Guidance for assessing the impact of activities will be provided by the HMG/USAID "Population Policy" Project (AID No. 367-0130). The demographic data in the AFROSC Baseline Survey of Rapati Zone will prove particularly useful for this purpose.

For overall management purposes, Project components have been grouped into five clusters of closely related activities and/or implementing agencies. A summary of component activities and outputs follows.

2. Summary of Components

a. Farming Systems: The Project will increase production in field crops and pulses by 25 percent for a net present worth of \$5.4 million. An increase in milk, manure, meat and wool production by 25-30 percent of buffalo, cows, sheep and goats in the Zone will add an additional net present worth of \$845,000. One thousand hectares of fruit and nut orchards will be established over the five year period. At least an additional 1,250 hectares of land will become fully irrigated. Approximately 150,000 farmers (both men and women) will receive instruction in the availability and utilization of improved inputs and technologies of whom approximately 50,000 are expected to adopt new practices.

Improved consumption levels will be achieved through widespread production increases coupled with: a) the establishment of vegetable "kitchen gardens" in 45 percent of the households in the Zone; b) an intensive effort in basic nutrition education carried out

through agricultural extension personnel, local leaders, small farmer groups, health workers and schools; and c) pilot efforts in improving on-farm processing and storage of foodstuffs. An estimated 6.8 million work days of agricultural labor will be created over the five year Project. Approximately one million of these work days will be for hired farm labor, primarily in Dang, and the rest for family labor. Provision for the construction of small systems by the Department of Irrigation to bring approximately 1,250 hectares under new or improved irrigation has been made in addition to support for local improvements. Technical capabilities provided in association with the PCO will assist in carrying out feasibility studies for larger schemes in Dang.

The Project will support a locally generated "demand" for and control of these new inputs and technologies by applying three basic mechanisms: (a) through an emphasis on recruiting local men and women for extension positions, the ratio of extension personnel to households will increase from 1:2,500 to 1:1,500 with most of those posted at service centers; (b) each of the 185 village panchayats will have at least five active trained "Leader Farmers" (3 men, 2 women) who will assist farmers to evaluate and adopt improved farming practices; and (c) each district will have at least five active Small Farmer Development Program Units (SFDP) with approximately 40 groups of 10-15 families or family members formed by each unit. These groups will facilitate access to credit, technical assistance and inputs for farmers whose holdings are too small or who are legally or culturally dissuaded from receiving credit on an individual basis. They can be expected to increase significantly the degree to which small farmers participate in decision-making concerning agricultural development and share in the benefits, as has been demonstrated persuasively elsewhere in Nepal.

Increased local demand will be met through an expanded and improved delivery system within the Zone and to the Zone from the national level. The Project will support the upgrading, and, where necessary, the construction of District Headquarters for the Department of Agriculture and Livestock and the creation (construction or rental, equipping, staffing) of varying numbers of sub-district level service centers in each district. Each service center will be provided with facilities for agricultural and livestock extension personnel. One or two service centers in each district will have a livestock service unit attached, providing management and health services to farmers. Each will also provide improved access to agricultural credit and have expanded agricultural inputs production, storage and/or processing facilities. The national HMG/USAID "Seed Production and Input Storage" Project (367-0118) and "Integrated Cereals Project" (367-0114) are or will be active in the Project area, and will complement these activities. Field units of the Ministry of Food and Agriculture will also be able to draw on the future work of the Hill Agricultural Production Systems (HAPS) Project for support in carrying out these strategies.

These expanded programs will be supported by training programs utilizing the Regional Agriculture Directorate in Nepalgunj, training assistance from the Project Coordination Office and district and service center training facilities. Support will be provided to upgrade the Agricultural Training Center at Nepalgunj for this purpose, and "Subject Matter Specialists" will be assigned to strengthen dissemination of research findings and carrying out of adaptive research in the Zone. One of the successful Small Farmer Development Program groups will be selected in year two of the Project for development as a training site for other groups.

The Farming Systems cluster represents 34 percent of total Project costs, with the AID contribution estimated at \$9.052 million (10.8 Crores Rupees) including \$1.04 million for credit, and HMG contribution at \$2.4 million (2.1 Crores Rupees). The economic rate of return for crop production is 49 percent and for livestock 29 percent.

b. Renewable Resource Management (RRM): The three inter-related components of renewable resource management will support the farming systems cluster through increasing, improving, and preserving the stock of natural resource products required for sustaining increased agricultural and labor productivity.

Under the community forestry program, 915 hectares of community-owned panchayat forests will be demarcated and planted in fodder and fuelwood species, 60 panchayat nurseries will be established, approximately 400,000 seedlings will be distributed for private and community planting, and an estimated 6,900 hectares of existing forest will be enriched and protected by local communities. In addition, a small farmer contract forest program will be launched under the SFDP to cover an initial 104 hectares of degraded land in useful tree and plant species. (See Appendix H.)

By the second year of the Project, a soil and water conservation program will be established within the Zone with offices located in Dang and mobile teams to serve the Hills. Over 400 hectares of critically eroded areas throughout the Zone will be treated as demonstration plots through use of biological control methods including fodder, fuel tree, and bamboo plantation and improved pasture development. Operational land use plans for Dang and other eroded areas will be formulated.

Under the National Forestry Component the project will plant 590 hectares of more isolated areas in fuel and fodder trees, demarcate 1,260 kms. of forest edges, establish an additional seven central support nurseries, and set up 60 trial plots for evaluating species suitable for the Zone.

An estimated 1,133,800 person days of labor will be employed by these RRM component activities. Approximately half of this amount represents semi-permanent local employment in the form of

forest guards and maintenance personnel, nursery foremen and workers (the latter often being women), village technicians, etc. The remainder consists of seasonal and part-time employment for planting, weeding, construction, and the like.

Local communities will establish their own management systems within program guidelines and have legal usufruct of public land resources that are currently under the nominal control of the government. These activities will lay the foundation for ecologically sound management of all community lands through increased local participation, but to maximize scarce government manpower resources. The RRM component activities will be carried out by strengthening the existing three Forest Divisions' staff and facilities; by establishing a new Soil and Water Conservation Office in the Zone; and coordinated by the Rapati Forest Circle Conservator located at Tulsipur, Dang.

The RRM cluster represents 12 percent of total project costs, with AID contribution estimated at \$3.197 million (3.8 Crores Rupees) and HMG contribution \$0.8 million (97 Lakhs Rupees). The economic rate of return to the investment is 15 percent.

c. Employment and Skills Development: Although mixed farming will probably continue to provide primary employment for most people in the Zone for many years to come, alternate employment for those with little or no access to land and enhancement of basic skills for younger people in particular are important if development in Rapati is to become self-sustaining. Emphasis on both agro-based and non-farm industries and services will support the farming sector as well as provide increased income for the disadvantaged; improved formal and non-formal educational opportunities will increase employment options and "bureaucratic literacy" on a widespread basis.

Increased opportunity for income from permanent non-farm activities will be made available to approximately 1,000 people during the course of the Project. In addition, approximately 15 percent of the teachers in the Zone (240 persons) will receive either one or two year campus training, and these and other teachers will operate about 500 extra-curricular programs to provide new skills and functional literacy to adults. These efforts will be supported by the work of an Appropriate Technology/Alternate Energy Unit in Ghorahi, which will conduct feasibility studies and technology trials in productive areas that will insure more efficient application of new skills learned.

1) Rural Industry: Approximately 900 individuals will be trained in technologies and skills to increase production and productivity in indigenous light industries, such as woolen textile manufacture, bamboo and cane work, and blacksmithing. Training in most of these activities is intended for part-time and off-season labor, and for those people who have less access to productive resources at any time of the year, i.e., the poorest farmers, landless,

occupational castes, disadvantaged ethnic groups, and women. Where feasible, key local artisans from occupational castes will receive training as trainers to promote techniques and technologies and encourage the development of local initiative.

The Project will support these activities through the expansion and improvement of technical personnel, training, and support facilities through the Department of Cottage and Village Industries and the public Cottage Industries and Handicrafts Emporium. AID will provide approximately \$0.55 million (65.5 Lakhs Rupees) to these organizations over the five year period.

2) Education: Eighteen percent of the primary schools, 39 percent of lower secondary schools, and 100 percent of the secondary schools will receive funds for upgrading facilities during the course of the Project, and 15 percent of the teachers will receive Level A teaching certificate or Certificate (2 year) campus training. In addition, all teachers will receive local training in a series of workshops focusing on local materials utilization and functional education, and 500 teachers will be supported in operating adult literacy-education programs in their schools. Approximately 8,000 students will receive fellowships or stipends for schooling; emphasis will be on girls and orphans or children from broken homes.

AID will provide \$1.107 million (1.3 Crores Rupees) and HMG \$0.29 million (34 Lakhs Rupees) through District Education Offices over the five year period to support these activities. In addition, through the efforts of the HMG/USAID "Radio Education Teacher Training" Project (AID No. 367-0123) already underway, by the end of 1984 all primary teachers in Rapati Zone who have not passed SLC will have received at least Level B teaching certificate training.

3) Appropriate Technology/Alternate Energy Unit: A small unit, staffed jointly by professionals seconded from the ADB/N and by the Project Coordinator's Office, will be established at Ghorahi to undertake two important tasks: a) supervise and/or undertake feasibility and marketing studies of selected local industries, including ginger, milk products, chiuri, pottery and tile, and small-scale hydropower, and b) undertake research and development on locally adopted "appropriate" technologies to support local industry, including and sharing of proven designs with local artisans and entrepreneurs. Emphasis on the latter will be on technologies designed to increase energy efficiency and to improve the quality and quantity of food processing and storage in the Hills. Existing local organizations, such as the District Women's Organizations and Small Farmer Development Program groups, will receive priority attention for pilot activities and prototype development and participate in the evaluation and adoption of the technologies to local conditions.

Additionally, the ATU will share workshop facilities with the Gobar Gas and Agricultural Equipment Development Company (Pvt.) Ltd. to enable them to undertake local manufacture of components

for up to 200 bio-gas plants during the five year period. ~~Importance~~ indicates that the local manufacture will save in transport costs and thus reduce cost to the farmer, enabling more families to benefit from this efficient energy source. The Company will also undertake two pilot community gas plants in Tharu communities, which appear particularly suited for such pilot efforts due to large family size and social cohesiveness, during the Project. These will be based on the experience gained under the current USAID/United Missions to Nepal operational program grant.

AID's support to the ATU over the Project period will total \$0.65 million (77.2 Lakhs Rupees).

The Employment and Skills Development cluster represents eight percent of total Project costs.

d. Rural Works: The Project will create approximately 1,500,000 days of wage labor over a three year period in the upgrading and environmental stabilization of 200 kilometers of road. It will also provide grant funds for each district to support the undertaking by village panchayats and other local organizations of small rural works which should have the dual effect of increasing labor productivity and increasing local ability to plan and sustain development efforts.

1) Rural Roads: The people of four districts in the Zone have contributed millions of days of labor over the last 25 years for the construction of three currently jeepable roads: Tulsipur-Sallyan (61 k.), Ghorahi-Pyuthan (81 k.), and Ghakchaikai-Libang (58 k.). With the completion of the IDA-funded Tulsipur-Ghorahi-Lamahhi feeder road connecting to the East West Highway, these penetration roads, planned and constructed through local participation, will provide the people of these three hill districts with improved access to Dang, the rest of Nepal, and India, better marketing outlets for their own products and improved access to goods and services.

AID will provide funds through the Department of Roads to assist the Panchayat Roads Project in the Zone to improve all three roads to a level to accommodate 5-7 ton single axle trucks for at least 8 months of the year. Emphasis will be on both structural and biological methods of environmentally stabilizing and protecting the roads and thus decreasing recurrent maintenance costs and road closure time. The construction technology will remain the same as in the past: minimal use of heavy equipment, use of locally contributed labor for soft earth cutting, and use of locally hired labor for planting, rock cutting, and structures. The improvements to be carried out with project support will expand and continue an ongoing effort by HMG and the local people to upgrade and stabilize these existing, seasonably useable roads to a level permitting their use by larger vehicles for more months of the year. The standards to be used strike a balance between estimated use, initial and

29 recurring costs, and minimal harm to the environment. In addition to providing specialized expatriate consulting assistance, this activity will draw upon the experience of the current Landslide and Soil Stabilization Project (367-0138) being carried out in the Far Western Hills Road. Total cost to AID will be \$2.5 million (2.9 Crores Rs.) and to HMG \$1 million (1.2 Crores Rs.) over the Project period.

2) Small Rural Works: AID will provide approximately \$600,000 in grants for each district for a total of \$3 million to support locally planned and constructed rural works. For these and other small rural construction and civil works projects to be supported, where prior identification of sites and sub-projects is not consistent with local planning and decision making objectives, costs have been based on careful analyses of experience with identical types of projects in Nepal. Using standard designs and construction standards, costs have been conservatively estimated for the number of sub-projects identified. For all these components, funding level commitments will be the controlling factor, not the number of sub-projects. The allocation of funds among project types is based on an assessment of local priorities and needs as reflected in village and district annual plans and Five Year Plan submissions.

All activities will be initially identified for assistance by village panchayats or other local organizations and approved at the district level. Technical assistance for project planning and design, which will be required prior to funding, will be provided through overseers and sub-overseers recruited from the Zone and trained at the Panchayat Training Institutes at Nepalgunj or the Institute of Engineering at Kathmandu. Supervision will be effected by District Engineers, the Technical Support and Monitoring Unit, and in the case of irrigation, by Department of Irrigation and Project advisors. Unskilled labor equalling 25-50 percent of the cost will be donated by villagers. All technologies envisioned are currently in use in Nepal and the Rapati Zone; the Project's intensified efforts will be guided by national programs supported by AID (bridges) and UNICEF (water systems and schools).

Total support of \$1 million (1.2 Crores Rs.) of drinking water systems, \$1 million (1.2 Crores Rs.) of minor irrigation improvements and \$1 million (1.2 Crores Rs.) of other works, including bridges and trails.

The Rural Works cluster represents 25 percent of total Project costs.

e. Institutional Development: As discussed in previous sections, the Project envisages the upgrading of district level line ministry offices and the creation of 5 additional service centers in each Hill district and 2 in Dang to provide improved access to goods and services. Through the formation of service center committees, local participation in the planning and evaluation of services provided by the centers will support HMG's efforts to decentralize authority.

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The planning and delivery of these services will be enhanced through a variety of institutional improvements at the local, district and project levels as follows:

1) District and Local Development: The Project will support the physical upgrading, equipping, increased staffing, and logistic support ability of both the Chief District Officers' (CDOs) Offices and the District Technical Offices (DTOs). In addition, storage facilities will be constructed at each district center so that construction materials are more easily accessible for local efforts, and multi-purpose training centers will be established to support various training activities and meetings of committees, leaders, etc. Districts will also receive improved communication facilities through the installation of solar panels to provide more reliable energy for existing transceivers. Training funds will also be provided for study and observation tours for local officials and the training of village leaders in various development skills, including public health, sanitation and family planning.

Primary support for the improvement and expansion of health and family planning programs in the Zone will come from the HMG/USAID Integrated Rural Health/Family Planning Services Project (367-0135). Additional support for the construction and equipping of District Health Centers in Salyan and Pyuthan (the only district centers in the Zone where such facilities do not exist or for which funds are not currently committed) is provided under the Rapati Project to assure the establishment of these basic facilities throughout the Zone.

AID's support for the above will be roughly \$1.3 million (1.6 Crores Rs.) and HMG's \$0.4 million (44 Lakhs Rs.) over the five year period.

2) Project Coordinator's Office: AID will support the rent and construction, staffing and operations of a Project Coordinator's Office to be located in Ghorahi and a small liaison office to be located in Kathmandu. Approximately \$2 million (2.4 Crores Rs.) will be provided through the Ministry of Home Panchayat and other ministries, as appropriate, to establish, staff, and operate this office; its functions will include backstopping and coordinating both local and central level development efforts described above during the five year project. Details on the structure and rationale for the PCO are provided in Annex K.

Both local and expatriate technical assistance needs have been identified after a careful review of the structure and objectives of the proposed project activities and an assessment of professional staffing available within HMG and the private sector in Nepal. These include approximately 144 person months of long-term expatriate technical assistance, primarily within the Project Coordination Office and an additional 51 person months of short-term expatriate technical assistance. Over 300 person months of short-term

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Nepali technical assistance for project implementation in addition to services contracted from the private sector and the technical assistance to be provided through the PCO have been included. The total cost to AID will be \$3.2 million (3.8 Crores Rs.) for these services which are discussed in more detail in Annex K.

The Institutional Development cluster represents 11 percent of total Project costs. Technical assistance represents 10 percent.

3. Other Donor Activities. The intended relationship between other USAID-supported projects and this project has already been mentioned; other donor assisted efforts in the Zone will also prove complementary. During the next five years, the Asian Development Bank will support the upgrading and/or construction of Livestock Centers in three districts of the Zone as well as a Quarantine Station on the Indian border in Dang (est. \$.1 million). The Netherlands Leprosy Relief Association will provide assistance to two district hospitals and 6 health posts (est. \$1 million) and UNICEF will support the construction of gravity flow drinking water systems in three districts (est. \$.18 million). As previously mentioned, the IDA-supported (est. \$5 million) Tulsipur-Ghorahi-Lamahi road will be completed as will the Indian-supported (est. \$10 million) East-West Highway through the southern portion of the Zone. Donor-supported national programs, such as the UNICEF supplies to FP/MCH centers, will continue. It is expected that construction work on a major highway (Pokhara to Surkhet) through the northern hills of the Zone will be undertaken with assistance from the People's Republic of China during the Project period.

III. CONCLUSIONS FROM PROJECT ANALYSIS

A. Technical

Virtually all of the technologies to be supported under the Project exist either in the Rapati Zone itself or in Nepal at the present time. The overall technical strategy of the project is to increase the diffusion and adoption in the Zone of the most successful of these as demonstrated in previous trials and by experience. The strategy is innovative in that it focuses much more on local initiative management and maintenance of improved technologies than most other projects. It is straightforward in the types of technologies it will support and how this will be accomplished.

Detailed technical summaries for each of the five clusters of project components described above appear in Annex J. They treat various subcomponents in the light of current conditions and assess their feasibility in terms of strategies, assumptions and a range of experience. The ability of institutions to support technical innovation and village-level operations is invariably the crux of the problem -- given the simplicity of most of the endeavors. The principal conclusions, by cluster, follow.

1. Farming Systems. The Project's strategy assumes that improvements within existing systems is the only way to increase food production for the foreseeable future and concludes that farmers can and will adopt "new" technologies if the advantage of doing so are clear to them. It appears feasible to improve water management, and extend irrigated areas both in Dang and the Hills, and upgrade seed quality and on-farm storage, improve livestock and expand kitchen gardening and fruit production as appropriate throughout the Zone. Given the nature of existing, improvable crop rotations and animal husbandry, enhanced productivity, levels of nutrition, demand for credit and farmer cooperation should ensue.

2. Renewable Resource Management. Dwindling forest and range culture can be improved in output, area under cover, and the fuelwood and fodder they provide increased at no significant loss to field production through better resource management based on community action and more effective technical assistance from the government's extension agencies. The benefits in terms of substituting for animal wastes, which are better used as fertilizer than fuel, are especially high in the Hills. Gradual, but significant ecological improvement — especially reduced erosion — should result.

3. Employment and Skills Development. It does not appear possible to rely on a strong local base or national institutions to vitalize the industrial and services sectors for the underemployed population in Rapati. Phased development can be achieved, however, by (a) improving the dissemination of known and proven technologies and improving marketing for rural industries and trades, (b) enhancing the profitability of existing, less widespread industries, especially food processing, through adaptation, and (c) applying and demonstrating the feasibility of technologies through pilot projects, including those adapting devices seemingly higher in risk, such as community bio-gas plants. Dramatic increases in cash incomes will be possible for at least a small number of households, including some of those of the most deprived which are specifically targeted for benefits. Improved returns to labor from mixed farming will continue to provide primary employment for most people in the Zone.

4. Institutional Development. To expand existing capabilities and hasten the pace of development activities, it is necessary to (a) strengthen planning, implementation and technical capabilities at the district and local level, (b) establish a systematic means of monitoring progress and dispersing information to the agencies involved, (c) promote and support national level programs in their attempts to reach local people. The Project's administrative and implementation plans are designed to accomplish the above and are based upon field investigation, and HMG's experience with development elsewhere in Nepal.

5. Rural Works. In order to expand and improve support of rural works undertaken at the district and village levels, it is necessary to strengthen planning, finance, technical assistance and the availability

of materials. The PCO, Ministry of Works and Transport, DTO and LDD, as providers of assistance under the project in these fields, should be able to: (a) see that three existing roads are improved and stabilized to truckable, seasonal road standards, (b) expand the development of village water supply facilities at relatively low cost, (c) channel support to improvement in minor irrigation that is inexpensive and maximizes local participation, and (d) assist in the construction and maintenance of trails, bridges and other small rural works activities. There are no technical/engineering impediments to construction, operation and maintenance of such works at this scale, and there is no risk of meaningful environmental damage.

B. Financial and Economic

1. Overview. The probable economic and financial benefits of components of the Project relating to increasing food production, farm income and sustained natural resource utilization in the Rapati Zone have been quantified and analyzed. Additional Project investments in training, improvements in administration and local management, provision of basic services and infrastructure and technological development are necessitated by the poverty, inaccessibility and unsophistication of the Zone's economy and basic development structure. Although these investments have important benefits, these have not been quantified in the present analysis. The overall analysis of the financial and economic returns of the Project examines the costs of all Project components, including those for which benefits have been neither valued nor included in benefit calculations (48 percent of Project costs), against the benefits of the Farming Systems and Renewable Resources Clusters (52 percent of Project costs).

The combined financial internal rate of return (FIRR) for all components of the Project is 10 percent. Correcting costs for economic values of foreign exchange and unskilled labor (see Annex B) results in an economic rate of return (EIRR) of 10 percent as well. Correcting for foreign exchange alone yields an EIRR of 9 percent, while correcting for unskilled labor alone yields an EIRR of 12 percent. Reducing benefits by 10 percent or increasing costs by 10 percent, holding other factors constant, reduces the FIRR to 8 percent.

With the availability of additional rural credit to be provided by USAID's proposed FY 1982 project or another source, the total FIRR for the Project reaches at least 17 percent, taking both costs and benefits of the additional credit into account.

2. Rate of Return on Farming Systems and Renewable Resource Management Clusters

a. Crop Production: Standard analyses of projected cropping patterns with and without Project investments, correlated with costs and availability of expected new inputs and their affordability within model farm budgets of three cropping regions within the Zone, assuming conservative adoption rates, produces the following results: net

financial benefits discounted at 15 percent over 20 years imply a net present worth of \$5.7 million (6.8 Crores Rupees), and an internal rate of return (FIRR) at farm gate prices of 49 percent. Including economic benefits to unskilled labor yields an EIRR of 54 percent, while correcting for the value of foreign exchange lowers the EIRR to 42 percent. Correcting for both of these economic cost factors yields an EIRR of 46 percent.

Increasing costs by 10 percent, holding benefits constant, yields an FIRR of 43 percent. Decreasing benefits by 10 percent, with costs held constant, results in an FIRR of 41 percent. A total reduction of benefits by 50 percent would yield an FIRR of 15 percent.

b. Livestock Production and Health: Net Financial benefits discounted at 15 percent over 15 years imply a net present worth of \$.99 million, (1.2 Crores Rupees). The internal rate of return (FIRR) at farmgate prices is 31 percent, assuming conservative adoption rates of management, health and breeding improvements. Correcting for the economic value of foreign exchange yields an EIRR of 29 percent. Correcting for unskilled labor does not effect the EIRR, resulting in an EIRR of 29 percent with adjustments for both foreign exchange and unskilled labor benefits.

Increasing costs by 10 percent, holding benefits constant, decreases the FIRR to 28 percent. Decreasing benefits by 10 percent, with costs held the same, results in an FIRR of 27 percent.

c. Renewable Resource Management: Financial analysis of this cluster is based on program and overhead costs associated with incremental production and decreased soil loss benefits over a thirty year period. The financial rate of return for this activity if implemented as planned is 13 percent with a net present worth of -\$0.3 million (- .36 Crores Rupees). Economic analysis was based, as for other components, on costs adjusted to reflect the opportunity cost of alternate uses, with all prices taken net of government prices or subsidies. Adjusting the price of imported goods to reflect the opportunity cost of foreign exchange yields an EIRR of 14 percent, with adjusting for unskilled labor benefits alone increasing the EIRR to 14.5 percent. Adjusting for both factors results in an EIRR of 14 percent.

If estimated benefits to agricultural crop production in the hills from reduced soil loss alone are considered, the EIRR is nearly 19 percent. Reducing benefits by 10 percent or increasing costs by 10 percent, holding other factors constant, yields an FIRR of 12.4 percent.

3. Improvement in Farm Income

a. Crop Production: This component requires farm households to adopt new methods of growing crops. A financial analysis based on several models of farm households and several degrees of participation

indicated that selected higher yielding new technologies will more than compensate households for increased effort, cash outlays and assumption of apparent risk. (See Appendix G for discussion of technologies.)

In a Dang Valley where the average size of a farm is 1.5 hectares, owner-cultivators can expect to realize a 29 percent increase in net income per hectare with tenants realizing a relatively greater increase but a lower absolute return. This is based on full household participation in the project and farmgate prices. In the Hill Districts, based on the same assumption, the average household farming 0.5 ha. can expect to realize a 27 percent increase in net income (21% in high hills; 31% in low hills).

On an aggregate basis, with participation limited to one in every four households in the Zone and increases in net value of production phased over a six-year period, estimated annual incremental net value of production in agriculture would reach \$2.75 million (3.3 Crores Rupees) by 1986.

b. Livestock: Farm budget analyses indicate for Dang Valley an increase in the net income of affected farms of \$25 (NC Rs. 300). For farms in the Hill Districts where services are delivered, this should be \$23 (NC Rs. 270, or Rs. 325 in the high hills versus Rs. 220 in low hills). By the year 1987 the annual incremental net value of production from livestock will reach \$538,000 (64 Lakhs Rupees).

4. Employment Generation

a. Farming: An estimated 6.8 million work days of agricultural labor will be created during the life of the Project, approximately one million of which is in hired farm labor, primarily in Dang Valley.

b. Resource Management: During the life of the Project, approximately 1.1 million person-days of employment will be generated, about half in the form of semi-permanent local employment.

c. Rural Works: The Project will create approximately 1.5 million days of wage labor in its first three years of upgrading and stabilizing roads. Employment on small rural works should total about 650,000 person-days of unskilled and 75,000 person-days of skilled labor. Irrigation works under the Project should produce about 52,000 person-days of skilled and 105,000 person-days of unskilled days of employment. Project-supported building construction will generate about 100,000 person-days of skilled and 215,000 person-days of unskilled labor.

Using the shadow rate for labor of Rs. 6/day for unskilled and the rate of Rs. 20/day for skilled labor, the total value of employment generated by the Project will be approximately \$7.5 million (8.9 Crores Rupees).

C. Social Soundness

1. Socio-economic Environment. The overwhelming majority of the Rapati Zone's estimated population of 850,000 are rural poor, 99.5 percent live in rural areas and 85 percent subsist on agricultural landholdings classified as small, marginal, submarginal or are landless. Approximately 58 percent of this population has a reported annual per capita income of less than \$42. Although three percent of the population has a reported annual per capita income of \$250 or more, much of this income comes from non-agricultural sources, and the average reported per capita income of the five percent large farm households is only \$74 per year. All households supplement crop production with livestock and alternative sources of income including agricultural and construction labor, seasonal migration, employment in government services, and cottage industry.^{1/}

The population is divided into four major groups: higher-caste Hindus (45 percent), Magar (18 percent), Tharus (16 percent), and untouchable occupational castes (19 percent). The Tharus reside almost entirely in Dang District and the Magars are concentrated more in the northern areas. While all castes have a majority of very poor members, on the average Tharus and occupational castes have distinctly smaller landholdings and lower incomes than the higher castes. For historical and cultural reasons in addition to their economic weakness, these two groups are the most vulnerable to continued exclusion from the development process.

Women throughout the Zone conduct over 50 percent of the agricultural work in addition to nearly all of the food processing and preparation, the child care, and most of the fodder, fuelwood, and water collection. With a literacy rate only one-sixth that of men and rights to landed property mostly limited to temporary usufruct, women also constitute a group of disadvantaged individuals within the Zone, although their status and rights differ by household, income and ethnicity.

2. Social Feasibility of the Project. Behavioral changes required for the success of this project include the adoption of new technologies by individual households and the establishment of viable new forms of organized behavior for planning and managing common interests and resources and dealing with the government.

Traditional precedents for both kinds of changes are amply represented within the Zone. Technologies appropriate to the economic and ecological conditions of the local system will be adopted, if their adoption does not entail too much risk, and if transaction costs in obtaining them are not too high. Similarly, if local institutions --

^{1/} See Annex J, Social Soundness Analysis for an interpretation and qualification of the figures presented here from the Rapati Baseline Survey carried out by the Agricultural Projects Services Centre, Kathmandu.

whether newly created or enlarged in scope and responsibility -- are user-managed with equitable distribution of tangible benefits, are promoted through sensitive training, dialogue, and supervision, and are not stymied by local factions or opposition from the elite, precedents within and outside of the Zone demonstrate that their development is socially feasible.

Present inputs and services provided by the government in the Rapati Zone suffer from a severe scarcity of both supplies and personnel. In addition, the differences in status between the urban, educated, and almost invariably male government officials and the poor majority of villagers are large and relationships are hierarchically patterned. It has thus been difficult to change the rural residents' traditional scepticism about the official system. The high social and transactional costs resulting from this situation have also continued the tendency for government sponsored inputs and services to be channeled first to the rural elite who have easier access, lower costs, and can afford the risks that technological innovations usually entail.

The Project will overcome these constraints to a degree through the simultaneous application of complementary strategies. By substantially reducing the scarcity and improving the quality of inputs and services available, the Project plans to reduce potential opposition from the rural elite and increase general availability to the point that most members of the poor majority also benefit. Simultaneously, the Project targets a number of inputs directly to the disadvantaged groups through a variety of programs. These include: the Small Farmer Development Program, cottage industry, appropriate technology transfer, human resources development, and contract forestry. These strategies will be supported by recruitment of large numbers of local people of both sexes and different socio-economic backgrounds to serve as local extension agents and paraprofessionals. Extensive training programs will be provided at all levels and improvement in the conditions, support services, and incentives available to government officials serving in the Zone will be effected.

Coupled with strong project emphasis on increasing the level of participation in planning and implementing many project components, this strategy should serve to increase credibility and reduce social distance. In addition, the Project will direct certain new technologies into the traditional private channels where they have relatively high rates of farmer-to-farmer dissemination. This multi-pronged strategy should allow key thresholds currently constraining the pace of development to be crossed even if none of the individual strategies works exactly as planned -- so long as necessary adjustments are made on the basis of constant monitoring.

Analysis thus indicates that the Project is soundly designed in terms of the social factors involved to meet its stated objectives and have a measurable impact on the quality of life of almost all households in the Zone. While the Project is unlikely to restructure

present economic and social disparities within the Zone to any significant extent, it should not only lessen some of these disparities but also accelerate the development process by productively incorporating the labor, skills, and talent of the disadvantaged groups, including women. Finally, by increasing the population's "bureaucratic literacy" and degree of participation in the development process, the Project should lay the groundwork for development to be increasingly self-sustaining and, eventually, equitable.

D. Environmental Impact

The integrated approach to rural development utilized in this Project incorporates a variety of sub-activities which focus on increasing production and improving the quality of life of the population of the Rapati Zone. None of the Project's individual components involves actions at a scale to affect the physical environment significantly -- except forestry and road improvement where positive impacts are assured. The Project as a whole should have a positive influence on the human and physical environment of the Rapati Zone. At the same time, it will strengthen both local and national abilities to pursue and implement ecologically sound development policies and programs.

The Renewable Resource Management component of the Project concentrates on the preservation and improvement of community and national forests and establishes a unit of the Department of Soil and Water Conservation (DSWC) in the Rapati Zone in order to begin the process of systematic land-use planning. The Project-supported Appropriate Technology/Alternate Energy unit will undertake adaptive research and development of more energy efficient cooking stoves and small-scale water mills and oil presses. Support to the Gobar Gas and Agricultural Equipment Development Company (Pvt.) Ltd. is also provided to expand the quality and quantity of homestead and community methane gas plants in the lower altitudes.

The Livestock component includes measures for the initial quarantine and subsequent monitoring of the limited introduction of new animal breeding stock in the Zone in order to prevent the spread of animal diseases. Assistance to field crop production will exclude provision of prescribed pesticides and herbicides and follow procedures adopted by the Integrated Cereals Project (367-0114). With this exclusion, that project's I.E.E. recommended a negative determination.

The Rural Road component supports accelerating the upgrading and improvement of three existing, locally constructed, jeepable (and tractorable) roads totalling 200 km. in length. These three roads connect three middle hill district centers with the Dang Valley and the all-weather road under construction from Dang to the East-West Highway. Although the current road alignments benefit from sensible, if rugged, avoidance of unnecessary hill-side cut sections, there is need for widespread structural and biological stabilization and

drainage measures. In addition, more extensive protection work is required in some cross-drainages. Some limited realignment is required in landslide prone sections and sections where rapid climbing or descent presents dangers to road users. Both local and expatriate technical assistance will be provided under the project to assist the present excellent, underbudgeted, efforts being made by Department of Roads personnel working with local organizations and citizens to achieve more useful, environmentally sound road transportation. Road related activities should decrease the incidence of landslides, soil loss, erosion and increase the safety of road users. Training of local technicians and foremen in improved hill road construction, protection and maintenance techniques is also provided for.

Both "medium" and "minor" irrigation components include provision for interim contract technical assistance while establishing local technical capabilities to design, plan and implement productive and environmentally sound irrigation improvements. Minor projects fall within the HMG category of local schemes (under 50 hectares in hilly areas, under 500 hectares in the terai) and will consist of grants and technical assistance to local panchayats to improve existing systems and construct some new systems. It is expected that most individual schemes will fall at the smaller end of the range, averaging 10-20 hectares in command area in the hills. While local technicians are being hired and trained to carry out such schemes, contracted technical assistance, under the guidance and review of Project-funded and HMG engineers, will provide design implementation assistance. Plans for both improvement and new construction schemes will be reviewed by USAID or specifically designated project technicians prior to the release of sub-project funds for structural and environmental soundness. The level and thoroughness of review will be suitable to the size, cost and locale of the individual schemes.

Medium irrigation schemes will include support for a limited number of schemes generally between 50 to 100 hectares in the hills and several larger schemes in Dang district. These schemes, although subject to local determination of priority for construction, will be under the authority of the Department of Irrigation. Both departmental and contracted technicians, as necessary, will carry out full on-site design investigations and provide direct, or monitor, construction supervision. Each such scheme will be subject to review and approval on structural, economic and environmental bases before construction funds are released. Attention to tail works, drainage, watershed reconnaissances and planning and complementary environmental protection measures will increase as Department of Soil and Water Conservation capabilities are established, with Project support, in the Zone.

The Rural Works and Drinking Water components provide for building new and improved trails, bridges and village water systems

in conjunction with technical training for local people in the utilization of ecologically sound design, construction and maintenance practices.

This Project is seen as having no significant detrimental impact on the human or physical environment. Consideration of the Project's PID antedated the rule that I.E.E. determination be done prior to PID approval. A Negative Determination at the I.E.E. level is therefore recommended (Annex E), meaning that an Environmental Assessment should not be required.

E. Human Resources and Training Analysis

The development of human resources under this Project is seen as one of the major determinants of whether, in the long-run, project objectives are achieved. Training will be provided to people and technicians utilizing several different approaches. One of the constraints affecting the Project's ability to develop human resources is the current lack of trained officials and technicians. This problem exists not only in the Rapati Zone, but is prevalent elsewhere and often leads to competition among donors and HMG agencies for scarce manpower. As a means of overcoming this problem, measures have been incorporated into the project to provide, inter alia, on-the-job and in-service training and scholarship programs. In addition, incentive allowances, provision of adequate office space, housing, health services and schools will be financed in order to keep administrative and technical personnel adequately supported and motivated in the field.

A key element in motivating technical and senior administrative personnel of the HMG is the use of scholarship programs to provide them with upward mobility and professional advancement as a reward for performance. The adoption of this and other incentives is seen as a means by which the Project can effectively assist HMG to develop and retain adequate personnel assigned to the Project area. In addition, a similar strategy would be adopted for locally recruited paraprofessionals working in the Project area. Those paraprofessionals who perform well and exhibit a knack for extension-type work can expect to be selected for either long-term academic programs or for short-term non-academic programs. Tables I, II, III show Project plans for training.

To implement this program, one USDH person in USAID/RAD will assist the PCO in coordinating and monitoring participant and local training efforts. The Training Branch, now part of the USAID/N Program Office, will continue to support U.S., third-country and India participant training programs. Local training is expected to be implemented and monitored through the PCO office where a Technical Assistance and Training Unit is being established for this and other purposes.

TABLE I: PARTICIPANT TRAINING - ACADEMIC
(Person Months/Year)

<u>COMPONENT</u>	<u>FY 81</u>	<u>FY 82</u>	<u>FY 83</u>	<u>FY 84</u>	<u>FY 85</u>	<u>TOTAL P/MONTHS</u>
A. <u>Third-Country</u>						
Agriculture Extension and Training	-0-	-0-	-0-	36	60	96
Livestock Development and Animal Health	-0-	-0-	-0-	24	30	54
Renewable Resource Management	<u>48</u>	<u>-0-</u>	<u>-0-</u>	<u>24</u>	<u>-0-</u>	<u>72</u>
TOTAL/FY	48	0	0	84	90	222
B. <u>India</u>						
Agriculture Extension and Training	-0-	48	96	144	192	480
Livestock Development and Animal Health	24	48	96	168	192	528
Agriculture Development Bank	-0-	12	24	48	72	156
Agriculture Inputs Corporation	-0-	-0-	-0-	24	48	72
Medium Irrigation	-0-	12	24	48	48	132
Renewable Resource Management	-0-	-0-	12	24	36	72
Rural Industry	-0-	-0-	24	36	36	96
Education	-0-	-0-	24	48	108	180
Institutional Development	-0-	36	60	72	96	264
Project Coordination Office	<u>-0-</u>	<u>-0-</u>	<u>12</u>	<u>24</u>	<u>48</u>	<u>84</u>
TOTAL/FY	24	156	72	636	876	1968

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TABLE II: PARTICIPANT TRAINING - NON-ACADEMIC
(Person Months/Year)

<u>COMPONENT</u>	<u>FY 81</u>	<u>FY 82</u>	<u>FY 83</u>	<u>FY 84</u>	<u>FY 85</u>	<u>TOTAL P/MONTHS</u>
A. <u>Third Country</u>						
Agriculture Extension and Training	-0-	-0-	4.5	6.0	5.0	15.5
Livestock Development and Animal Health	6.0	6.0	6.0	6.0	6.0	30.0
Agricultural Development Bank	-0-	6.0	6.0	6.0	6.0	24.0
Medium Irrigation Management	6.5	-0-	-0-	9.3	-0-	15.8
Project Coordination Office	<u>6.0</u>	<u>6.0</u>	<u>6.0</u>	<u>-0-</u>	<u>-0-</u>	<u>18.0</u>
TOTAL/FY	18.5	18.0	23.5	28.3	18.0	106.3
B. <u>India</u>						
Agriculture Extension and Training	-0-	6.0	8.0	8.0	10.0	32.0
Livestock Development and Animal Health	3.0	4.5	4.5	6.0	7.5	25.5
Agriculture Development Bank	2.0	2.0	2.0	4.0	4.0	14.0
Agriculture Inputs Corporation	-0-	-0-	6.0	6.0	6.0	18.0
Medium Irrigation Renewable Resource Management	3.0	4.0	6.0	6.0	7.5	26.5
Rural Industry	6.0	12.0	12.0	18.0	24.0	72.0
Education	3.0	3.0	6.0	9.0	12.0	30.0
Institutional Development	-0-	3.0	6.0	9.0	12.0	30.0
Project Coordination Office	<u>-0-</u>	<u>3.0</u>	<u>8.0</u>	<u>8.0</u>	<u>12.0</u>	<u>31.0</u>
TOTAL/FY	20.0	40.5	61.5	77.0	98.0	297.0

TABLE III: LOCAL TRAINING
(Person days/Year)

<u>COMPONENT</u>	<u>FY 81</u>	<u>FY 82</u>	<u>FY 83</u>	<u>FY 84</u>	<u>FY 85</u>	<u>TOTAL P/DAYS</u>
<u>Agriculture Extension and Training</u>						
A. In-Service Training						
JT	294	322	322	378	448	1,764
JTA	740	820	940	1080	1320	4,900
B. Para-Professional Training						
Regional Base						
Agri. Assistants	1020	1170	1380	1320	1710	6,600
Leader Farmers	1500	4500	4500	3000	3000	16,500
District Base						
Agri. Assistants	500	1840	2230	2690	3130	10,390
Leader Farmers	900	1260	1500	1500	2250	7,410
<u>Livestock Development and Animal Health</u>						
A. In-Service Training						
Stock Chief	60	90	110	120	125	505
Stock Supervisors	210	300	348	372	396	1,626
Messengers	110	160	200	215	225	910
Livestock Assistants	100	150	200	250	300	1,000
B. Para-Professional Training						
Regional Base						
Leader Farmer	90	180	270	360	450	1,350
District Base						
Leader Farmer	200	200	200	200	200	1,000
<u>Agricultural Development Bank</u>						
<u>SFDP</u>						
A. Pre-Service Training						
Group Organizers	360	240	360	240	240	1,440
B. In-Service Training						
Group Organizers	16	120	200	320	400	1,056

(CONTINUED)

TABLE III: LOCAL TRAINING (Cont'd)

<u>COMPONENT</u>	<u>FY 81</u>	<u>FY 82</u>	<u>FY 83</u>	<u>FY 84</u>	<u>FY 85</u>	<u>TOTAL P/DAYS</u>
C. Program Training						
1. Group Leaders (Pre-Service)	360	680	848	1080	1280	4,248
2. Group Leaders (In-Service)	-0-	384	906	1632	2520	5,442
3. Other	420	580	740	800	860	3,400
<u>Medium Irrigation</u>						
A. In-Service	300	400	400	400	400	1,900
B. Program	700	600	600	600	600	3,100
<u>Renewable Resource Management</u>						
A. Contract Foresters	30	30	60	60	60	240
B. National Foresters	180	180	500	500	500	1,860
<u>Rural Industry</u>						
A. Cotton Crafts	2700	2700	2700	2700	2700	13,500
B. Woolen Crafts	900	1800	1800	1800	1800	8,100
C. Leather Crafts	600	900	300	300	300	2,400
D. Blacksmiths	600	1200	1200	1200	1200	5,400
E. Carpenters	-0-	900	900	900	300	2,100
F. Cane and Bamboo Crafts	-0-	500	600	600	600	2,300
<u>Institutional Development</u>						
A. In-Service Training						
1. Engineers	100	-0-	100	-0-	100	300
2. Overseers	100	200	300	300	-0-	900
3. Technicians (Local)	100	200	200	200	200	900
<u>Project Coordinator's Office</u>						
A. Zonal and District Training	-0-	2790	2790	2790	2790	11,160
B. Village Panchayat Training	1000	1000	1000	1000	1000	5,000

(CONTINUED)

TABLE III: LOCAL TRAINING (Cont'd)

<u>COMPONENT</u>	<u>FY 81</u>	<u>FY 82</u>	<u>FY 83</u>	<u>FY 84</u>	<u>FY 85</u>	<u>TOTAL P/DAYS</u>
<u>Education</u>						
A. In-Service Teachers						
1. One-Year Scholarships	10	20	30	30	30	120
2. Two-Year Scholarships	10	20	30	30	30	120
3. Workshops-Attendance						
Primary Teachers	150	150	300	300	300	1,200
Middle Teachers	100	100	200	200	200	800
Secondary Teachers	75	75	150	150	150	600
4. Student Scholarships						
Uniform	1500	1500	1500	1500	1500	7,500
Tuition, etc.	100	100	100	100	100	500
<u>Institutional Development</u>						
A. Pre-Service - Overseers						
1. Certificate	5	10	10	-0-	-0-	25
2. Diploma	-0-	5	-0-	-0-	-0-	5

Local people need to be better trained in a wide range of skills if they are to take an active part in the development process. A strong effort will be made to conduct and establish informal training as an ongoing project activity at the district and sub-district levels. The Project has included provision for the establishment of a training unit in each district. These units will organize and conduct training activities required to promote national programs in family planning, nutrition, hygiene and sanitation, literacy and the like. This approach is seen as the best means available for getting information, ideas and technology to people through exposure, practice and, in some cases, to facilitate the provision of inputs. Local women will be a primary target for this and other types of training: they are critical to the adoption of many food production, processing and storage technologies. In crop production, for example, women can influence the adoption of practices which have impact upon 50 percent of the basic operations. They will be trained alongside village men or separately as appropriate. Both men and women need to be prepared to train other villagers and to encourage them to adopt new practices.

The project will also assist in the design and conduct of more formal training programs for people who will assume paraprofessional roles in project activities. A combination of training at the regional, project, district and sub-district levels will be supported to prepare paraprofessional workers who are expected to contact and train others. Emphasis must be placed on developing curricula which are simple, capable of being given in short-initial and follow-up doses, and have a clear impact upon the problems and needs being addressed, such as agricultural and livestock management, cottage industries and the design of small-scale rural works projects.

Training activities cannot succeed in the project area without the support or creation of the basic infrastructure required by the responsible agencies. Examples of such facilities within the region containing the project area are the Women's Affairs Training Center in Surkhet, and the Panchayat Training Institute and the Agriculture Station in Nepalgunj. These centers are at varying states of development ranging from the more developed facilities at the Panchayat Training Institute with well-established workshops, dormitories and classrooms, to the non-existent facilities, except for field plot training sites, at the Agriculture Station. In general, the Project will, whenever possible, make use of and provide support to such facilities as a means of avoiding costly duplication of services and also to make maximum use of available manpower. Existing Peace Corps assistance to these regional facilities is expected to continue or in some cases be expanded.

F. Project Administration

1. His Majesty's Government of Nepal. The RAD Project will be administered in accordance with current HMG/N policies governing integrated rural development projects. These policies place primary

implementation responsibility for the Project with line agencies and departments of the government or local authorities, depending on the scale and complexity of the specific activities. Figure 1 summarizes the current status of the departments or agencies that will be involved in the Project, including their parent ministry and the status (existing or proposed) of offices and staff in different districts of Rapati Zone.

The lead HMG/N agency for the Project is the Ministry of Home Panchayat, acting through its Coordination Division (reference Figure 1). This Division serves as the operational secretariat for two central coordination committees for rural development, a ministerial level Panchayat Development Committee which is concerned with policy and a secretariat level Panchayat Development Central Coordination Committee, which is concerned with planning, evaluation, implementation and monitoring. This latter committee, which meets on the average of four or five times each year, is also responsible for the selection and appointment of Project Coordinators for intensive multi-district projects such as RAD.

A Project Coordinator and staff in the Project area are responsible for coordinating, monitoring and facilitating the implementation of the Project by district and sub-district offices of line agencies and by local authorities. As reflected in Figure 2, this Project Coordination Office (PCO) also acts as an operational secretariat for the Zonal Coordinating Committee (ZCC), chaired by the Zonal Commissioner (who is appointed by His Majesty the King). The ZCC represents the most directly concerned local body with responsibility for the entirety of the Project. Through quarterly meetings, it monitors and evaluates overall Project progress, attempts to identify and resolve implementation problems, and reviews annual plans and budgets developed by the five districts and the PCO before submission to Kathmandu.

Following policies set forth in the Integrated Panchayat Development Design (Ministry of Home Panchayat, November 1978), these annual District Development Plans will incorporate all development activities to be undertaken in a district during the planning period regardless of source of support. These activities are generally of three types: a) Central line ministries or agencies will have direct responsibility for larger scale, costlier types of activities (i.e. the Musikot Horticulture Farm, certain irrigation schemes) and for certain types of pilot activities (i.e. some Small Farmer Development Program activities) to be implemented by seconded site-specific or district line officers; (b) District offices of line ministries or agencies will implement or strongly support district, service center or village authorities in implementing a broad middle range of activities (i.e., agricultural extension and district training, animal health and breeding activities, community forestry plantations); c) District and village panchayats and local organizations will have the lead responsibility for smaller, less complex activities (i.e. trail upgrading, small bridge construction, school upgrading). Local resource contributions and participation

FIGURE 1: CENTRAL & PROJECT AREA PROJECT ADMINISTRATION

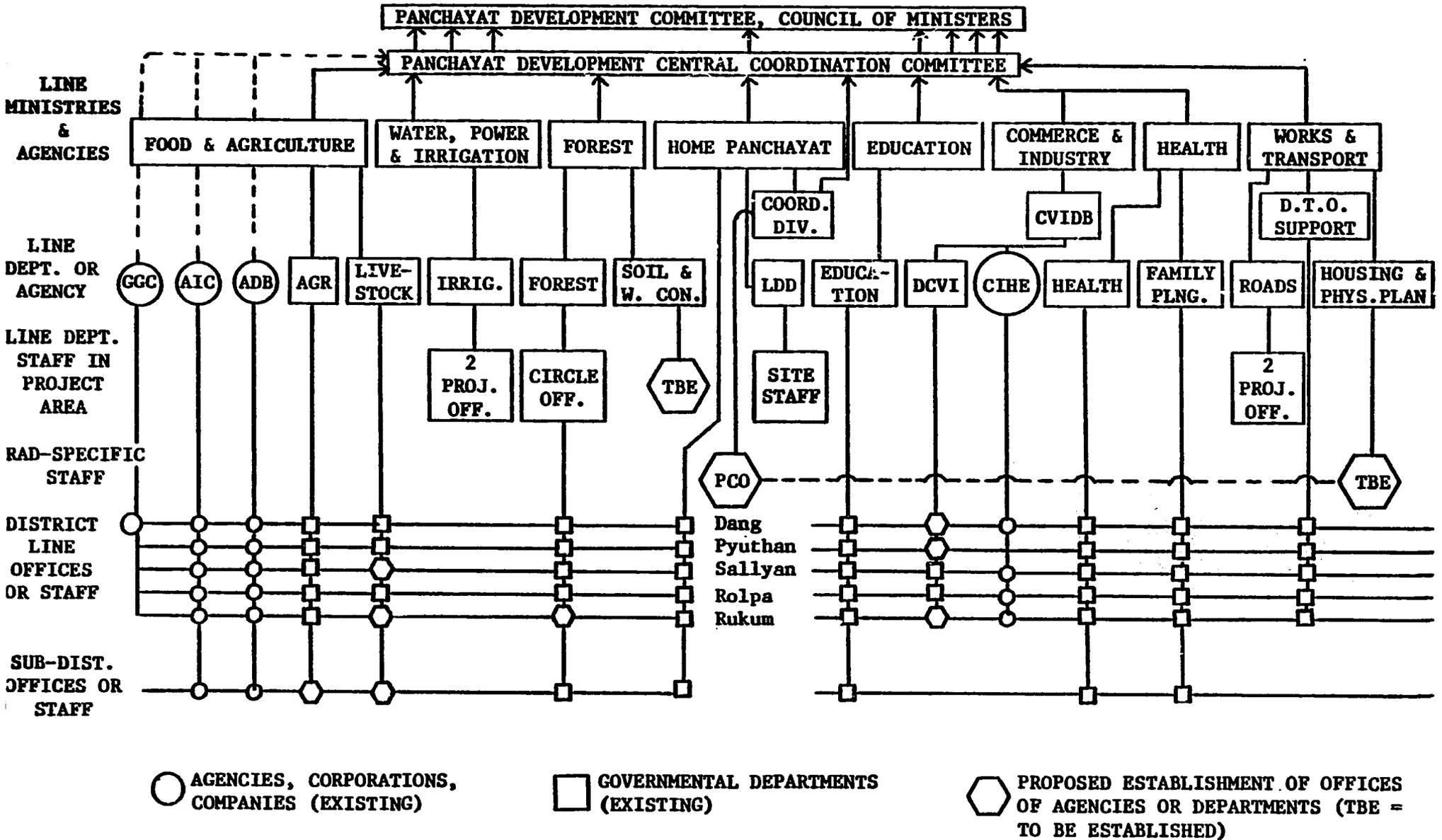
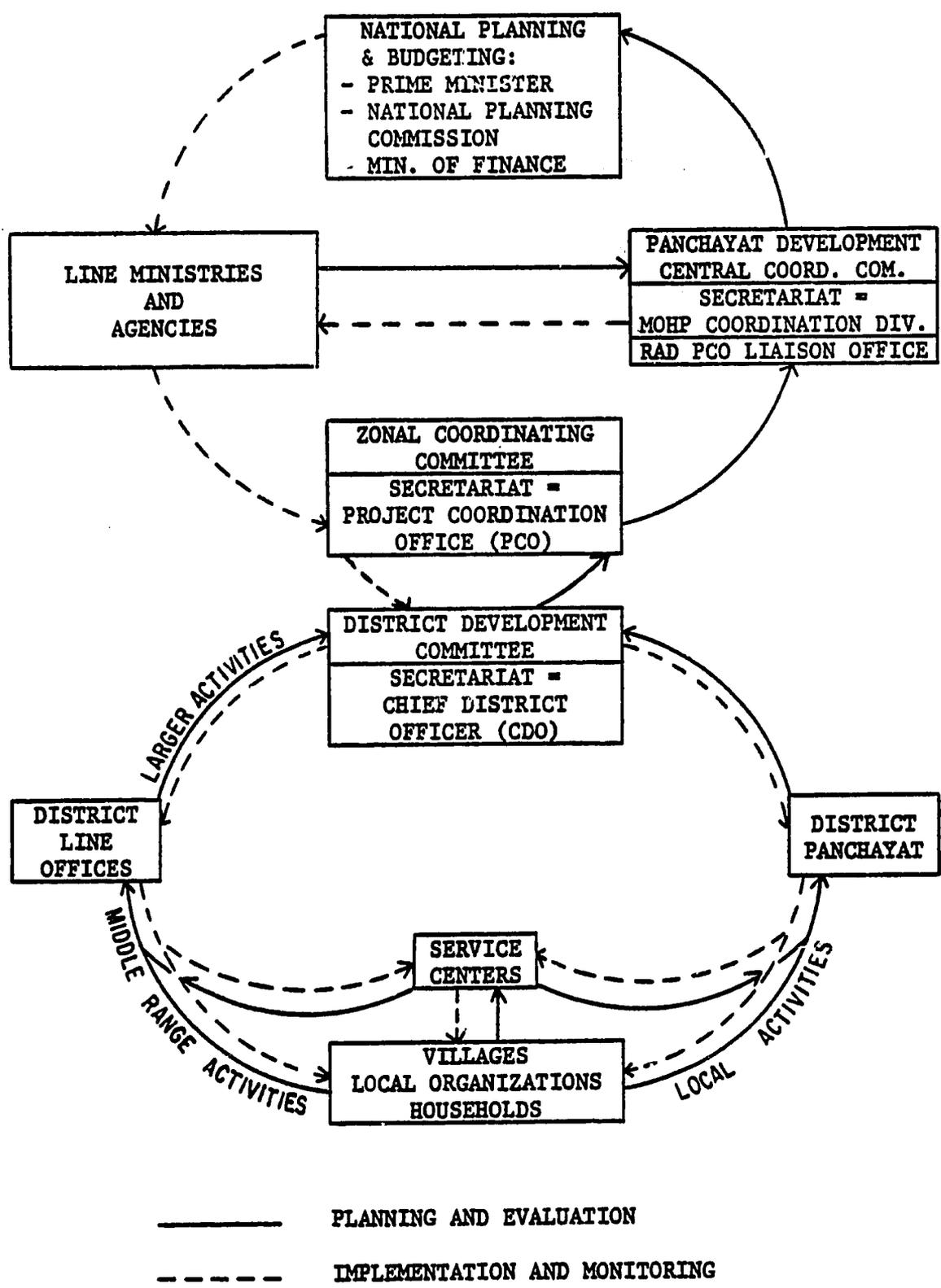
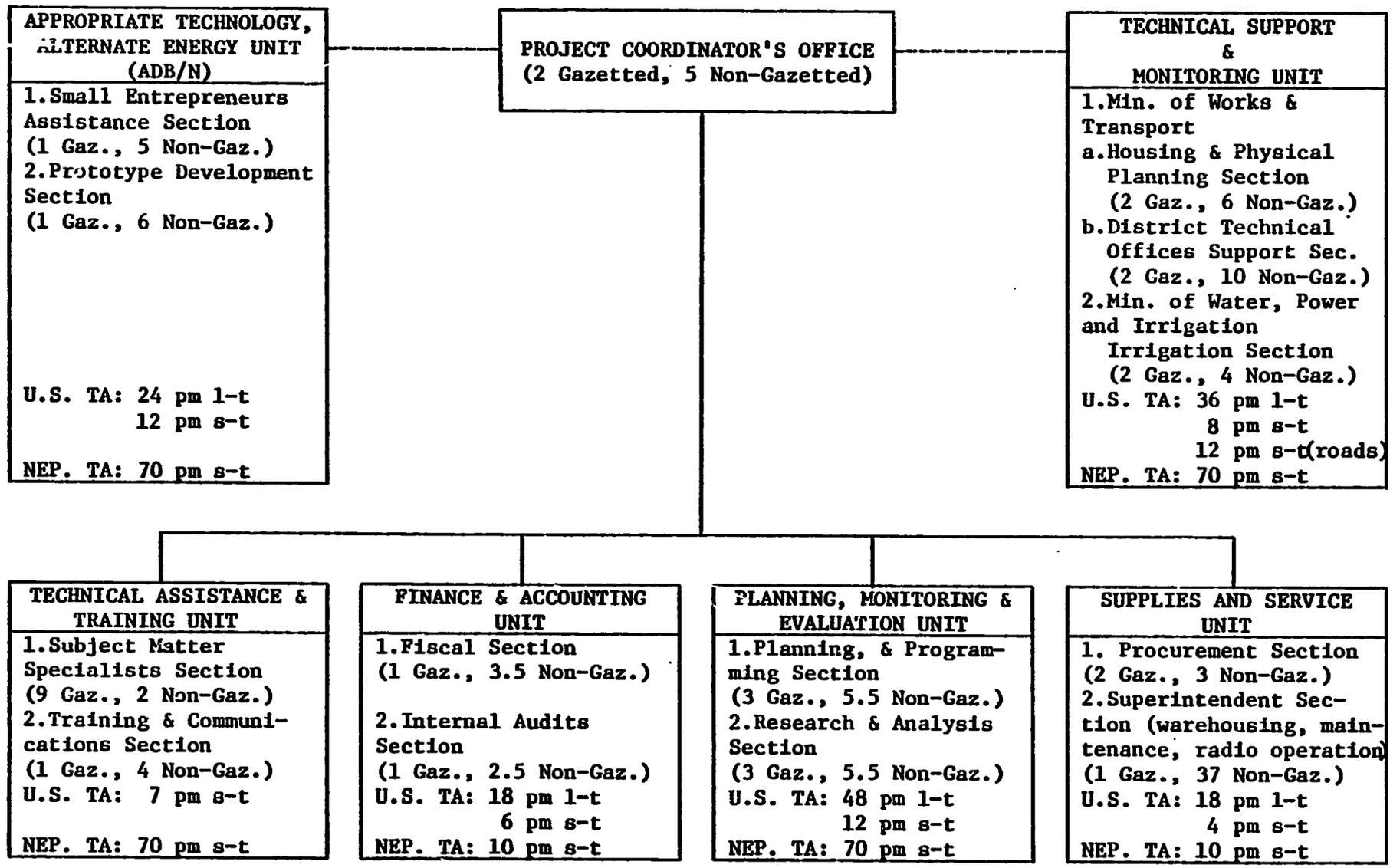


FIGURE 2: RAD PLANNING & IMPLEMENTATION PROCESS



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FIGURE 3: RAD PROJECT COORDINATION OFFICE (GHORAH, DANG DISTRICT)



will initially be more prominent in the latter categories. As district and local planning matures and exerts influence over a larger number of sectors, the distinction between these last two level of activities will weaken.

The achievement of effective District planning which incorporates local needs and priorities within available human and financial resources from both central and local levels will require the full participation of district-level line officers and technicians and District Panchayats, with strong guidance and coordination by the Chief District Officer (CDO). Active participation by the PCO in the District planning process in the initial years of the Project should give way to a review and monitoring role as the Project progresses.

This frequent and effective monitoring of Project implementation will be critical if the Project is to achieve its stated purposes. The clear allocation of responsibility for specific activities as stated in annual District Plans will provide the basis for such monitoring and coordination of implementation. As reflected in Figure 3, in addition to the Project Coordinator's Office (which currently exists in skeletal form) the Coordination Office will have three units primarily concerned with monitoring and effecting a more effective linkage between planning and implementation. These units -- Finance and Accounting, Planning, Monitoring and Evaluation, and Technical Assistance & Training -- will thus serve the dual function of monitoring overall progress in component activities by relevant implementing entities and of providing support and on-the-job training to concerned officers and individuals in basic functional skills. The three other units of the PCO - Appropriate Technology/Alternate Energy, Supplies and Services, and Technical Support and Monitoring - will also assist Districts in planning but will have a much more active role initially in implementation. As District capabilities in the skills and functions provided by these units are strengthened, a more passive monitoring role on their part will ensue. (Annex L presents a more detailed discussion of the PCO.)

The PCO will be supported by a Liaison Office in Kathmandu, which will assist in the preparation and submission of quarterly progress and financial reports, and monitoring and expediting of personnel, financial and other resources to the Rapati Zone. It will also serve as a link in providing the Coordination Division with necessary information to resolve problems or policy, issues at central levels. These issues would normally be raised to Kathmandu only after attempts at their resolution within the Project area have failed. The Project Coordinator and Office established in December, 1979, for the coordination of pilot activities and design will serve as the core of the expanded PCO, providing continuity in initiating proposed project activities.

To the fullest extent possible, the Project will utilize existing procedures for identifying, implementing and reporting on activities to be carried out under Project support. The major changes or additions to existing practices that are required relate to more

adequate pre-implementation planning and cost estimation, better technical review of proposed activities and improved project monitoring, accounting and evaluation. These improvements must be carried out in such a way as to ensure and promote local participation in planning and implementing development. The Project provides support for the expansion of staff, technical skills and operational capabilities required to achieve these changes. Provision for the training and development of technical and administrative staff of sectoral agencies, Panchayats and local organizations will also increase individual and institutional capabilities during the Project. The retention of implementation responsibility for project-supported activities by line departments will facilitate the contribution of Peace Corps volunteers in programs mutually agreed upon by HMG and Peace Corps.

2. USAID/Nepal. Overall responsibility for carrying out AID's assistance to and required monitoring of project implementation will reside in a Project Committee within the USAID Mission in Kathmandu. The Rural Area Development (RAD) Office, created for the development and implementation of this Project, will have direct responsibility for USAID's role in Project implementation. This office will be staffed by four (three existing, one proposed) U.S. direct hire General Development Officers and two Nepali professionals who will provide general capabilities and skills in fields not otherwise available in the Mission, or carry out coordinating functions with other Mission offices. Two of the USDH officers have worked on RAD Project design for the past two years; both Nepalis have been with the office for 9 months; and the third USDH is a nominated conversion to direct hire from his status as RAD PSC Training Advisor. The transition from design to implementation will thus occur with a continuity of management not often found in donor development projects.

In addition, the system established during the Project development phase wherein RAD calls on the technical and administrative resources in the rest of the Mission will be followed during Project implementation. The Project Development and Implementation Support Office (PDIS) will generally assist in drawing up Project documentation, and its Engineering section (one USDH, two Nepali engineers) will oversee the two major construction contracts and assist the PCO/Technical Support & Monitoring Unit in the monitoring of other construction activities. The Office of Agriculture and Resource Conservation (ARC, four USDH, two Nepali professionals) will provide technical advice in Farming Systems and Renewable Resource Management, as will the Office of Health and Family Planning (HFP) in that sector. This support and coordination is critical not only to RAD Project implementation, but also in view of the complementary nature of other USAID-assisted projects in the Zone. The sector offices' support will also greatly facilitate and reinforce the role of their counterpart HMG/N line agencies during Project implementation.

USAID/N support offices -- Administrative Management (AM), including Procurement, and Financial Management (FM) -- are adequately staffed and prepared to assist in Project administration much as they have during the Project development phase. It is expected that their

involvement will gradually decrease as the PCO Supplies & Services Unit and Finance & Accounting Unit become fully operational.

The presence of a resident Mission permits several modifications in monitoring, review and technical assistance arrangements established for other IRD projects in Nepal. General administrative assistance to the PCO will be provided by the RAD Office within USAID rather than through contracted technical assistance. In order to carry out this role, as well as necessary monitoring and review functions, the RAD Office staff will be expected to spend a considerable part of its time in the Rapati Zone.

Technical assistance provided to the PCO and associated units is limited to a few key fields in which HMG personnel are currently unavailable or field capabilities are weak. All relatively long-term TA personnel will be concerned with matters that will require them to be based in the Project area (see Annex L).

Overall technical relationships between USAID/N and HMG on project matters will be carried out through the Ministry of Home Panchayat, specifically with the Additional Secretary and the Coordination Division under his authority. Day-to-day dealings on project implementation will primarily be with the Project Coordinator and his office.

IV. FINANCIAL PLANS AND MANAGEMENT

A. Financial Plans

The total financial cost of the Project is estimated at \$33.674 million over five years. AID's contribution will be \$26.7 million in grant funding computed on the basis of detailed unit costs presented at Annex B. HMG will contribute goods, professional services, land, and local labor and resources valued at \$6.97 million, or 21 percent of the total. A waiver of Section 110 (a) of the FAA will be requested to allow for this short-fall in the required 25 percent contribution, based on Nepal's status as an RLDC. Recurrent costs estimated at \$1.5 million per annum in FY 80 dollars (which would be approximately \$2.9 million in FY 86 dollars) would have to be assumed by HMG/N at the end of the Project.

Table IV summarizes the estimated Project cost by types of input and by source of funds. Tables VI and VII summarize estimated annual Project expenditures by types of input (Table VI) and by component (Table VII). An inflation factor of 12 percent compounded annually has been added to both AID and HMG contributions. This rate reflects the anticipated inflationary rates in Nepal, India and the United States which are the three primary sources of Project goods and services. Physical contingency factors at varying rates based on previous experience in Nepal have been included within budget lines prior to applying inflation factors.

Table VII utilizes the same structure as the narrative description of Project components presented in Section II., B. A brief description of types of inputs reflected in Tables IV and VI follows. All estimated expenditures are given in FY 80 U.S. dollars, including the inflation factor.

1. Land. HMG/N will contribute a total of 9 hectares of non-agricultural land at an imputed total cost of \$0.075 million to support the construction activities discussed below. The 8,315 hectares of National Forest land to pass under local communities' control for Renewable Resource Management activities has not been included as a financial contribution. Although this land represents a substantial commitment on the part of the HMG/N, it is not possible to determine the real cost per hectare, and so this contribution has not been included in that part of the expenditures attributed to HMG/N.

2. Construction. A detailed analysis based on standard designs and/or unit costs of commodity requirements for all construction activities is presented at Appendix C, with the standard designs and unit costs at Appendices I and J.

a. Buildings: A total of 277 buildings, ranging from housing for technical assistance to 150 sq.ft. "visiting offices" for ADB/N loan officers, will be constructed at a total cost to AID of \$4.177 million. The HMG/N contribution of \$0.291 million is made up of local contributions for school upgrading. Estimates have been based on utilization of locally available materials -- mud brick, stone, slate -- where possible.

b. Rural Works: AID will contribute \$5.033 million and HMG/N and the local citizens \$2.752 million for the upgrading of three roads and for all construction undertaken in the drinking water, minor irrigation, and other rural works components of the Project. These totals have been based on targets for activity levels and unit costs for each type of activity developed through analysis of experience in Rapati Zone and elsewhere in Nepal. (See Appendices I & J.)

c. Other: AID will contribute \$2.111 million for the construction of livestock dips and stanchions and for land preparation and civil works associated with medium size irrigation activities and national and community nurseries and conservation demonstration plots.

3. Materials and Equipment. AID will contribute a total of \$2.352 million for necessary transportation, office equipment and other commodities over the Project period. A foreign exchange portion of \$1.154 million will cover purchase of vehicles and motorbikes and identified imported equipment for various components. Local costs will cover purchase of horses and bicycles for transport, basic office equipment, and local commodities for adaptive trials, demonstrations on farmer trials such as seed and saplings.

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**TABLE IV: SUMMARY COST ESTIMATE AND FINANCIAL PLAN
(1980 DOLLARS 1,000)**

SOURCE * INPUT CATEGORY	AID				HMG/N		TOTALS		
	LC	LC INF	FX	FX INF	LC	INF	AID & HMG/N	INF	GRAND TOTAL
A. LAND	-	-	-	-	60	15	60	15	75
B. CONSTRUCTION									
1) Buildings	2530	609	837	201	200	91	3567	901	4468
2) Rural Works	1918	641	1762	712	1944	808	5624	2161	7785
3) Other	1465	646	-	-	-	-	1465	646	2111
C. MATERIALS & EQUIPMENT	882	316	1003	151	5	-	1890	467	2357
D. OTHER PROGRAM INVESTMENT	529	124	20	7	-	-	549	131	680
E. CREDIT	943	147	-	-	-	-	943	147	1090
F. PERSONNEL	2084	939	-	-	1991	947	4075	1886	5961
G. TRAINING									
1) Local	1024	470	-	-	-	-	1024	470	1494
2) Participant	-	-	367	195	40	26	407	221	628
H. OPERATING & MAINTENANCE	2251	1100	-	-	622	225	2873	1325	4198
I. TECHNICAL ASSISTANCE									
1) Expatriate L-T	-	-	1590	404	-	-	1590	404	1994
2) Expatriate S-T	-	-	537	210	-	-	537	210	747
3) Nepalese S-T	61	25	-	-	-	-	61	25	86
GRAND TOTALS	13687	5017	6116	1880	4862	2112	24665	9009	33674

* LC = Local cost, or funds converted to Nepali currency rupees and expended by HMG/N. These currently include a substantial proportion of funds for goods (cement, re-bar) which will be purchased from India with Nepali rupees. Should procurement exigencies render this procedure inoperable, these funds will be retained by AID for direct dollar procurement and thus revert to Foreign Exchange.
 FX = Foreign Exchange, here signifying funds that will not be converted and will be direct dollar procurement.
 INF= Inflation calculated at 12 percent compounded annually.

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TABLE V: ESTIMATED FINANCIAL OBLIGATIONS BY AID PER INPUT CATEGORY
(DOLLARS 1,000)

	80-85 TOTAL	FY 80	FY 81	FY 82	FY 83	FY 84	FY 85
A. LAND	-	-	-	-	-	-	-
B. CONSTRUCTION							
1) Buildings	4177	566	1277	795	723	816	-
2) Rural Works	5033	350	764	1134	1795	990	-
3) Other	2111	85	192	376	785	673	-
C. MATERIALS & EQUIPMENT	2352	511	840	372	308	321	-
D. OTHER PROGRAM INVESTMENT	680	48	100	212	225	95	-
E. CREDIT	1090	330	510	211	12	27	-
F. PERSONNEL	3023	140	301	495	1002	1085	-
G. TRAINING							
1) Local	1494	59	114	253	533	535	-
2) Participant	562	15	16	52	197	282	-
H. OPERATING & MAINTENANCE	3351	90	249	590	1182	1240	-
I. TECHNICAL ASSISTANCE							
1) Expatriate	2741	300	626	895	712	208	-
2) Nepali	86	6	11	15	26	28	-
GRAND TOTAL	26700	2500	5000	5400	7500	6300	-
(PIPELINE)	-	(2475)	(1201)	(1190)	(3090)	(4564)	-

TABLE VI: ESTIMATED ANNUAL EXPENDITURES BY INPUT CATEGORY
(DOLLARS 1,000 INCLUDING INFLATION)

	PROJECT TOTALS			FY 80(36/37)		FY 81(37/38)		FY 82(38/39)		FY 83(39/40)		FY 84(40/41)		FY 85(41/42)	
	80-85 TOTAL	80-85 HMG/N	80-85 AID	HMG/N	AID	HMG/N	AID	HMG/N	AID	HMG/N	AID	HMG/N	AID	HMG/N	AID
A.LAND	75	75	-	-	-	38	-	15	-	8	-	9	-	5	-
B.CONSTRUCTION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1) Buildings	4468	291	4177	-	21	35	1405	45	796	56	686	70	707	85	562
2) Rural Works	7785	2752	5033	-	-	335	882	522	1135	769	1998	616	824	510	694
3) Other	2111	-	2111	-	-	-	213	-	377	-	529	-	498	-	494
C.MATERIALS & EQUIPMENT	2357	5	2352	-	-	1	1288	1	373	1	227	1	223	1	241
D.OTHER PROGRAM INVESTMENT	680	-	680	-	-	-	121	-	213	-	174	-	120	-	52
E.CREDIT	1090	-	1090	-	-	-	840	-	211	-	12	-	13	-	14
F.PERSONNEL	5961	2938	3023	3	1	271	350	443	496	575	624	734	730	912	822
G.TRAINING															
1) Local	1494	-	1494	-	-	-	140	-	254	-	334	-	351	-	415
2) Participant	628	66	562	-	-	2	39	2	53	7	84	25	162	30	224
H.OPERATING & MAINTENANCE	4198	847	3351	-	3	71	225	86	591	140	741	269	859	281	932
I.TECHNICAL ASSISTANCE															
1) Expatriate L-T	1994	-	1994	-	-	-	671	-	735	-	406	-	182	-	-
2) Expatriate S-T	747	-	747	-	-	-	86	-	162	-	268	-	138	-	93
3) Nepalese S-T	86	-	86	-	-	-	14	-	15	-	17	-	19	-	21
GRAND TOTAL	33674	6974	26700	3	25	753	6274	1114	5411	1556	5600	1724	4826	1824	4564

TABLE VII: ESTIMATED ANNUAL EXPENDITURES BY COMPONENT
(DOLLARS 1,000 INCLUDING INFLATION)

	PROJECT TOTALS			FY 80(36/37)		FY 81(37/38)		FY 82(38/39)		FY 83(39/40)		FY 84(40/41)		FY 85(41/42)	
	80-85 TOTAL	80-85 HMG/N	80-85 AID	HMG/N	AID	HMG/N	AID	HMG/N	AID	HMG/N	AID	HMG/N	AID	HMG/N	AID
A. FARMING SYSTEMS															
1) Ag. Ext. & Training	3268	742	2526	-	21	85	343	110	436	138	574	180	508	229	644
2) Input Storage	1667	772	895	-	-	19	71	64	109	113	179	266	303	310	233
3) Credit Access	387	105	282	-	-	10	66	20	68	22	34	25	50	28	64
4) Small Farmer Dev.	804	211	593	-	-	1	63	11	156	28	112	61	126	110	136
5) Livestock	1478	407	1071	-	-	39	199	62	167	84	168	106	276	116	261
6) Horticulture	529	27	502	-	-	3	63	4	99	6	122	7	130	7	88
7) Medium Irrigation	2321	178	2143	-	-	9	252	21	447	33	650	50	455	65	339
8) Credit	1040	-	1040	-	-	-	840	-	200	-	-	-	-	-	-
SUB-TOTAL	11494	2442	9052	-	21	166	1897	292	1682	424	1839	695	1848	865	1765
B. RENEWABLE RESOURCE MGMT.															
SUB-TOTAL	4019	822	3197	-	-	125	391	140	496	162	522	188	801	207	987
C. EMPLOYMENT & SKILLS DEV.															
1) Education	1399	292	1107	-	-	35	120	45	143	56	212	70	284	86	348
2) Rural Industry	1343	143	1200	3	4	22	294	23	274	29	230	31	205	35	193
SUB-TOTAL	2742	435	2307	3	4	57	414	68	417	85	442	101	489	121	541
D. RURAL WORKS															
1) Panchayat Road	3529	1029	2500	-	-	207	879	232	771	259	766	165	40	166	44
2) Drinking Water	1292	263	1029	-	-	24	99	28	112	61	243	70	274	80	301
3) Other Rural Works	1541	541	1000	-	-	56	104	93	174	105	195	156	283	131	244
4) Minor Irrigation	2029	1051	978	-	-	72	90	196	213	375	358	257	220	151	97
SUB-TOTAL	8391	2884	5507	-	-	359	1172	549	1270	800	1562	648	817	528	686
E. INSTITUTIONAL DEV.															
1) District Development	1749	383	1366	-	-	40	449	63	363	85	202	92	178	103	174
2) Project Coord. Office	2020	8	2012	-	-	6	1041	2	233	-	240	-	235	-	263
SUB-TOTAL	3769	391	3378	-	-	46	1490	65	596	85	442	92	413	103	437
F. TECH. ASST. & EVALUATION															
SUB-TOTAL	3259	-	3259	-	-	-	910	-	950	-	793	-	458	-	148
GRAND TOTAL	33674	6974	26700	3	25	753	6274	1114	5411	1556	5600	1724	4826	1824	4564
(Percentage Contributions By HMG/N & AID Annually)				(11)	(89)	(11)	(89)	(17)	(83)	(22)	(78)	(26)	(74)	(29)	(71)

4. Other Program Investment. The AID contribution of \$0.68 million will cover such costs as plantation establishment, securing breeding stock, feasibility and marketing studies for appropriate technology and energy, and some local travel.

5. Credit. AID will contribute \$1.04 million for credit for agricultural and livestock production, and small farmer group activities and \$0.05 million for rural industries over the Project period. It should be noted that these figures do not meet total projected credit needs in the Project area; USAID/N anticipates submitting a Rural Credit PID for consideration for FY 82 funding which will meet these shortfalls.

6. Personnel. HMG will contribute \$2.938 million in salaries and remote area allowances for line ministry personnel involved in implementation of the Project. AID will contribute a total of \$3.023 million comprising both incentive allowances for these personnel (est. \$1.6 million total) and full salaries and allowances for Project-dependent (i.e., Project Coordinator's Office) positions.

7. Training. A total of 15,137 person months of local training will be supported at a total cost to AID of \$1.494 million. HMG will contribute \$0.066 million and AID \$0.562 million for a total of 328 person months of participant (third country and U.S.) training. An additional 2,175 person months of participant training in India under PL 480 funding have been projected.

8. Operating and Maintenance. AID will contribute \$3.351 million and HMG \$0.847 million for various operating and maintenance costs, including fuel for vehicles and motorbikes, travel and daily allowance for personnel, charter and scheduled aircraft, transport subsidies for inputs, office rentals, etc.

9. Technical Assistance. Approximately 144 person months of long-term and 60 person months of short-term expatriate technical assistance, and 300 person months of non-component related Nepalese technical assistance, will be supported by \$2.8 million of AID funds. Additional local technical assistance is provided for in a wide range of subjects under specific programs.

Financial plans have been based on carefully considered phasing which reflects a balance between needs and existing and projected capabilities for expanded expenditures. The annual planning and budgeting to be carried out with line agencies under the project will provide for ongoing, documented, revision of projected financing within overall limitations. Should the evaluation of the project at the end of the third year indicate that progress has varied considerably from projections, funding levels for the remaining years of the project will be suitably revised. This would include recommendations to AID/W for reduced or additional funding as indicated by the progress made prior to the evaluation.

B. Financial Management

Each of the Project components has been budgeted for a five year period based on FY 80 unit costs inflated at 12 percent compounded annually. (See Annex B, for standard unit costs, and relevant appendices for more detail on each component.) With the exception of funds held by AID for direct dollar expenditures (i.e., Technical Assistance contracts, vehicles, certain construction materials), AID support to the Project will be channelled through the HMG/N budget system. Disbursals will be based on annual operational workplans and budgets developed each year, initially at the district level and concurred in by HMG/N ministries and by USAID/N. The exact amount of disbursals will be keyed to: a) the annual departmental/agency budget as approved by the Ministry of Finance and the Prime Minister; b) the quarterly expenditure estimates prepared in conjunction with annual work plans and detailed in Project Implementation Letters; and c) a reconciliation of the quarterly needs with previous quarters' expenditures. It is anticipated that although the overall Project budget, and departmental annual budgets for the initial Project year, are very tightly costed out, some items will be shifted, dropped, or added over the five-year life-of-project. The emphasis throughout the Project on local level participation in annual District Plans requires this flexibility. The detailed planning carried out by Project designers has laid the groundwork for this process; if, at the end of five years, these initial centrally-developed budgets have been rigidly followed and local decision-making has not occurred, the Project will have missed one of its primary objectives.

USAID/N has reviewed the various other possibilities for disbursement and accounting systems, including direct reimbursement and FAR, and finds that no such major deviations from long-established USAID/HMG procedures are possible at this time. Based on the analysis and recommendations of a consultant study, Project disbursing and accounting systems will follow (in most cases) the quarterly advance system used by HMG/N and designed with AID assistance in the early sixties. Use will be made, where appropriate and concurred in by the Ministry of Finance, of sub-project accounts for capital expenditure components. (For more information, see Appendix E.)

Modifications and/or support to alleviate some of the delays and problems inherent in this system will include the following measures: (a) Budgets tied to annual plans will be developed so that AID and HMG support discrete sub-headings within the HMG/N budget. This measure, coupled with the accepted practice of listing "Rapati IRD Project" as a separate line-item within each Departmental budget will alleviate problems of co-mingling experienced in other Mission projects and facilitate funding releases; (b) The Project contains funds for short-term local training of district level accountants, as well as 18 person months of long-term and 6 person months of short-term expatriate technical assistance in financial management and accounting during the five year period. These specialists will work with the PCO/Finance & Accounting Unit both in monitoring departmental/agency accounts and in

providing support and on-the-job training to local accountants, auditors, and other concerned individuals; and (c) It is recommended that funds for selected activities or components, including those managed by the ADB/N and those for district level rural works, be released directly to the implementing agency from the Ministry of Finance without having to pass through several layers (and, thus, delays) of ministerial accounting. Where possible, AID will encourage HMG/N to attempt direct first quarter releases to these and other agencies based on previously approved budgets. This latter step will eliminate the usual long lag as written requests are prepared, sent, and approved at the beginning of each year. Discussions will continue with HMG/N on the possibility of district or project area "treasuries" for decentralizing the release of funds.

In sum, USAID/N is aware of the problems involved in financial management of a Project of this complexity, and through the measures noted above and the systems described in the Administrative Analysis, anticipates increasingly smooth disbursing and accounting during the life of the Project. The Project plans, as summarized elsewhere in the Project Paper, have resulted in the reasonably firm expenditure estimates presented above, thus satisfying the requirements and intent of Section 611 (a)(1) of the FAA. Plans prepared annually at the district level and subject to HMG and USAID/N review and approval will provide the basis for operational expenditures.

V. IMPLEMENTATION PLAN

A. Pre-Implementation Activities

Under Design Project (367-0133) funding, a Project Coordinator has been appointed and is recruiting initial staff and establishing his office at Ghorahi in Dang District. The Coordinator and the USAID/RAD staff will spend March through June, 1980 working with concerned line ministries and agencies to establish firm annual work plans for the coming Nepalese fiscal year (beginning July, 1980). Although these first plans will thus be developed primarily at the center and will not benefit from lengthy district reviews, they are necessary in order to get first-year funding into the HMG/N budget and thus assure reliable and timely financial flows for initial Project activities.

During this period, the concerned ministries and agencies will also begin personnel recruitment for identified incremental positions and land acquisition for buildings. The latter will be done at the district level in collaboration with the Zonal Coordinating Committee, Chief District Officers, and District Panchayats. It is also expected that areas of possible Peace Corps involvement, in addition to education and rural construction programs already active in the Zone, will be discussed by HMG and Peace Corps. USAID will use some remaining Design Project funds to contract for local architecture and engineering firms to prepare final designs of the Project Coordination Office (including quarters for PCO staff and advisors), the Regional Agricultural Training Center at Nepalgunj, and service centers. Following approval

of these final designs by USAID engineers, construction contracting and commodity procurement will thus begin early enough to allow for a full work season in (U.S.) FY 1981. (See Appendix I for standard building designs.)

Some Design Funds will also be used for contracting for initial technical assistance.

Training will also be continued under Design Project funds for positions related to future Project implementation. Recruitment for participant training and planning for local training under the new Project will be initiated, utilizing the services of the current RAD PSC Training Advisor.

B. Project Implementation

The initial Project Agreement will be signed a few weeks before the beginning of the Nepalese Fiscal Year (July 15-16, 1980). Once all Conditions Precedent in the Grant Agreement have been satisfied, and the HMG/N Annual Budget approved, USAID and the Coordination Division will issue joint Implementation Letters to cover all first annual plans. Issuance of these Letters will be followed closely by the first quarter releases. This action will begin a quarterly cycle, to be closely monitored by the Project Coordinator, of release, expenditure and reporting which will continue throughout the Project.

USAID will request AID/W to advertise for long-term expatriate technical assistance (See Annex L) that is expected to be in Nepal no later than January, 1981. The advisors will thus be on hand to assist the PCO with some of the planning for Year Two of the Project. AID will undertake contracting of the technical assistance due to the difficulties HMG/N finds in handling foreign exchange payments; it has been determined that a waiver under Policy Determination 68 is being granted for these purposes. AID will request HMG to review proposals and personnel prior to final selection.

USAID will also undertake direct procurement of 25 four-wheel drive diesel vehicles and 2 four-wheel drive pickup trucks from the U.S., 37 trail motorbikes of Japanese origin and 3 personnel vans from India. These latter are deemed most appropriate to conditions in Far Western Nepal; therefore, the Mission will request a waiver of source/origin for their procurement. AID is undertaking these procurements in bulk, again to alleviate HMG/N problems and delays in relatively small procurements involving foreign exchange; the waiver under PD 68 includes these items.

A detailed implementation schedule is found at Annex M.

C. Procurement

1. Services. U.S. technical assistance proposed for the Project will be procured through three separate actions carried out by USAID/N.

Justification for USAID handling of these contractual actions is included in the P. D. 68 Determination (Annex I).

1. Long and short term technical assistance for the Project Coordination Office and associated line agency units in Planning, Monitoring and Evaluation (48 pm), Rural Construction (36 pm), Procurement and Logistics (18 pm) and Financial Management and Accounting (18 pm) and 31 months of short term technical assistance in these fields plus 6 months in technical training will be let as one contract.

2. Long-term technical assistance in Technology Development and Transfer (24 pm) and 12 pm of short-term technical assistance in the same field will be let as a separate contract, suitable for small or minority owned business set aside.

3. 12 pm of assistance of a Geological Engineer, to be spread over the initial three years of the project will be sought under a PASA arrangement with USDA.

The proposed arrangement for securing technical assistance has been arrived at after careful considerations of the intended purposes of the technical assistance, the strengths and weaknesses of contracting for all services from a single source, and the need to ensure clear HMG direction of the project. It is felt that the arrangement arrived at takes into account relative expertise from various sources known to exist, including the experience of small or minority owned firms, and ensures that the necessary technical support to the Project Coordination Office will be provided. Within current HMG rural development policies and the proposed role of the PCO primarily as a coordinating rather than an implementing unit, the proposed technical assistance positions will be able to carry out their intended individual roles as part of a larger team under the direction of the Project Coordinator. Given the relatively new and still evolving role of the Project Coordinator in relation to both line agencies and local officials and organizations, it is essential that technical assistance personnel do not usurp or exert undue influence in the overall direction of the Project.

Several small firms are known to possess both expertise and experience in the area of technology development and transfer, thus the Mission has determined that this assistance to the ATU unit of the PCO be specifically set aside for competitive bidding by qualified firms.

The Mission has had successful previous experience with securing the type of geological engineering services required for the present Project under PASA arrangements and proposes to continue these procedures. This will be coordinated with the use of similar services for the Mission's Landslide and Soil Stabilization Project (367-01.38). These services are required in a series of relatively short term visits and will be provided to a distinct sub-project implemented

under the auspices of a single department (Department of Roads). Lack of a corporate or institutional affiliation with another Project contractor would not be a problem.

Local technical assistance will be contracted for by the PCO acting on behalf of appropriate units, and at times at the request of line agencies or departments. The successful carrying out of this crucial responsibility will require that the Project Coordinator be delegated adequate contracting authority or that suitable and timely procedures for such contracting be worked out. If this cannot be accomplished and local technical assistance is found to be delayed or hampered in being contracted, this responsibility will have to be shifted to either USAID/N or expatriate contractors.

2. Commodities. Unless AID otherwise agrees in writing, commodities and services procured under the funds made available by AID under this Project will have their source and origin in countries prescribed under AID Geographic Code 941 and the host country. The following waivers to cover exceptions to this policy are being requested (See Annex I):

- A waiver of Section 636(i) of the FAA to allow the procurement of 3 personnel vans from India and of 37 light trail bikes from Japan, in order to facilitate transport in Rapati Zone with vehicles/bikes suited to the terrain that can be repaired there by local mechanics; and

- A waiver of the AID requirement that proposed procurement be advertised in the Commerce Business Daily or AID Financed Export Opportunities Bulletins (AFEOB). Nepal's access to Indian markets, the availability from that source of most commodities needed by the Project, the long leadtime from the United States, and the high cost of ocean transportation all combine to make solicitation of offers from U.S. sources a non-productive exercise which would unduly delay Project implementation. (See Annex I.)

When required commodities are not available locally or in India at reasonable prices, Implementation Letters will call for procurement from other Code 941 countries, including the United States.

The kinds of commodities required for the Project will generally be basic materials like cement, lumber, pipes needed for labor intensive rural works, and hand tools, agricultural equipment, and seeds. It is intended that procurement for local level rural works projects will be consolidated under a procurement and logistics unit of the PCO. This is felt to be necessary due to the recurring shortages of basic construction materials in Nepal and India. Technical assistance for this unit is provided in the Project.

Where more complex international procurement is called for, it will be undertaken by line department organizations which are familiar with procedures required by international donors. The Procurement Requirements Analysis (See Appendix C) shows the

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organizations which will probably be designated in Implementation Letters as the authorized procurement agents for commodities required for project activities. Those agents will follow the procedures prescribed by AID Handbook 11, Chapter 3 and in Implementation Letters by the Mission.

VI. EVALUATION PLAN

Evaluation of this project will be integral to its implementation in that: (a) the base line survey conducted under its preceding design project has informed the designation of targets, inputs and outputs, provided selective pre-project socioeconomic measures, and will be systematically updated and used as a basis for comparison and monitoring; (b) a multi-purpose information system will be incorporated into the functions of the Project Coordination Office (See Appendix B); and (c) two joint HMG-USAID evaluations are planned, one at the end of the third year of the Project and one after five years of the Project. These evaluations will draw upon Project and departmental information sources, monitoring reports and evaluations, and utilize consultants and special studies as required. In addition to assessing the project in terms of meeting its basic purposes (See Logical Framework, Annex C), specific measurable criteria relating to operational components of the project will be identified in advance of these evaluations.

Monitoring will be carried out by the Project Coordination Office (PCO) and be made available in quarterly summary reports, ad hoc reports and Project and district files. The Planning, Monitoring and Evaluation Unit (PMEU) of the PCO will be responsible for carrying out specific and general evaluations of two types during the life of the Project: measurement of target performance and measurement of development impact. Impacts of special importance will be categorized as: direct (production, nutrition, institution building, for example), indirect (spread effects and non-quantifiable benefits), and considered as to their distribution and continuation as well as delivery per se. Non-project funds (e.g., from HMG/USAID "Population Policy" Project) will also be used to monitor changes: (a) overall contraceptive prevalence in the Rapati Zone; (b) age at marriage and fertility of women employed in cottage industry and other off-farm employment supported by the project; and (c) other variables which may affect population change in the Rapati Zone.

The PMEU will also be responsible for special studies concerning issues that either cannot be resolved by the built-in processes of monitoring, impact evaluation and the tracking of critical constraints to development, or which suggest new initiatives under the Project or in the Zone which were not anticipated or were premature during the Project's design.

VII. CONDITIONS PRECEDENT, COVENANTS AND UNDERSTANDINGS WITH HMG/N

In addition to the two standard conditions precedent required in

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grant agreements, the Grant Agreement will contain the following Conditions Precedent to First Disbursement: (a) HMG/N appoints a qualified Project Coordinator agreeable to USAID for the Project, (b) HMG/N presents in a clear format, agreed to by USAID, the budgetary allotments and lines of authority applicable to Project funded activities in the first year, and (c) agreements satisfactory to USAID have been made between HMG/N and the AIC, ADB/N and other semi-autonomous implementing agencies responsible for activities under the Project, including arrangements for the transfer of funds and the provision of credit funds on an acceptable basis.

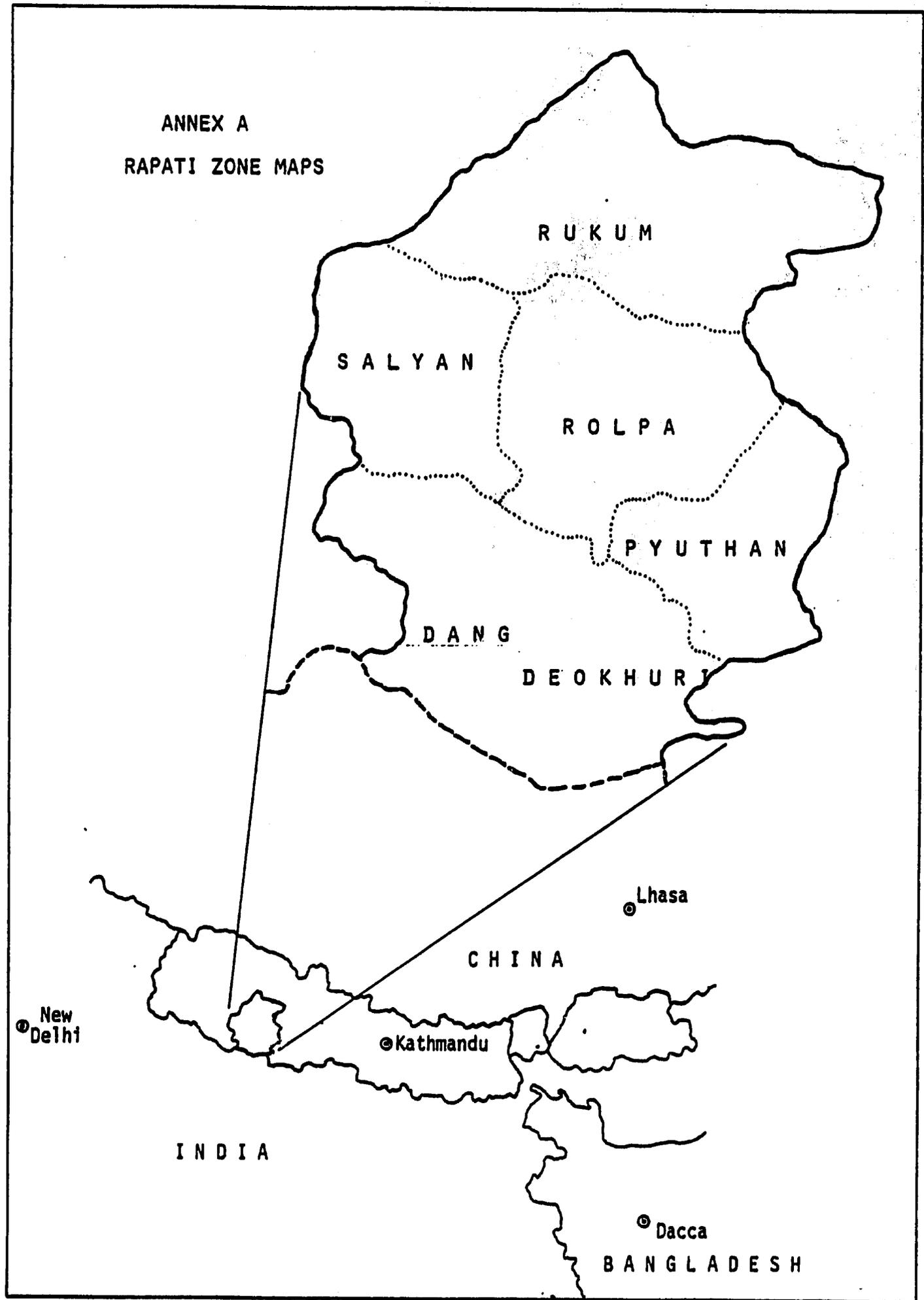
One Condition Precedent to Additional Disbursements will be included, as follows: prior to disbursement for any construction (i.e., buildings, rural works including roads, and other as specified by AID) activities, HMG/N will furnish to AID in form and substance satisfactory to AID final plans, cost estimates, specification, provisions for engineering supervision and contracts or other arrangements for construction work as specified in Implementation Letters.

Five Covenants will be included in the Grant Agreement; essentially they commit HMG/N (a) to provide funds and other contributions, including land, on a timely basis according to annual Project budgets agreed to by USAID, (b) to provide qualified personnel and the necessary positions to implement the Project on schedule, (c) to support the Project's monitoring and evaluation program in terms of providing relevant information and access to responsible officials, (d) to budget and provide recurring costs after the completion of the Project, and (e) the Project Coordinator's position will be filled continuously during the life of the Project, governed by a mutually-agreed upon set of terms of reference, and that the Project Coordinator will be resident in Rapati Zone.

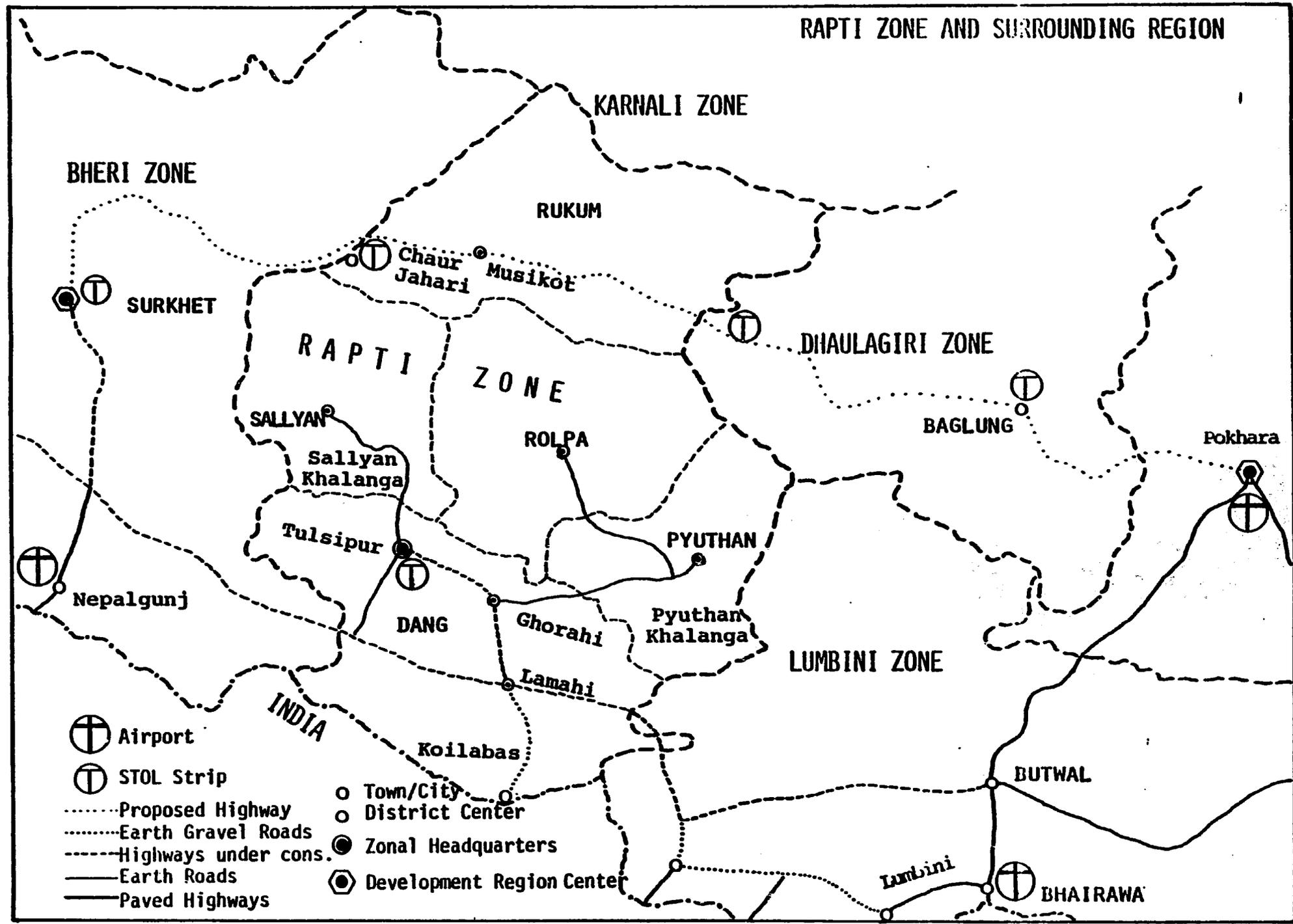
It is understood that HMG/N will fund 21 percent or more of the Project's total costs on a schedule agreed to by USAID. It is understood that HMG/N will maintain a separate or separable accounting system for all funds, USAID's and its own, expended on behalf of the Project. These will be audited by HMG/N and independent auditors within 12 months of the end of each HMG/N fiscal year during the life of the Project with reports submitted to HMG/N and USAID at least annually. It is understood that HMG/N will follow procurement practices consonant with the policies of and agreed to by AID.

It is further understood that a District Development Plan for each district in the Rapati Zone will be prepared regularly and that these, submitted to USAID for review and approval of project-supported portions at least yearly, will take into account agreed upon implementation schedules of the Project and result in timely budgetary allocations in amounts sufficient for the Project.

ANNEX A
RAPATI ZONE MAPS



RAPTI ZONE AND SURROUNDING REGION



BHERI ZONE

KARNALI ZONE

RUKUM

SURKHET

RAPTI ZONE

DHAULAGIRI ZONE

SALLYAN
Sallyan
Khalanga

BAGLUNG

Pokhara

ROLPA

PYUTHAN

Nepalgunj

Tulsipur

DANG

Ghorahi

Pyuthan
Khalanga

LUMBINI ZONE

INDIA

Lamahi

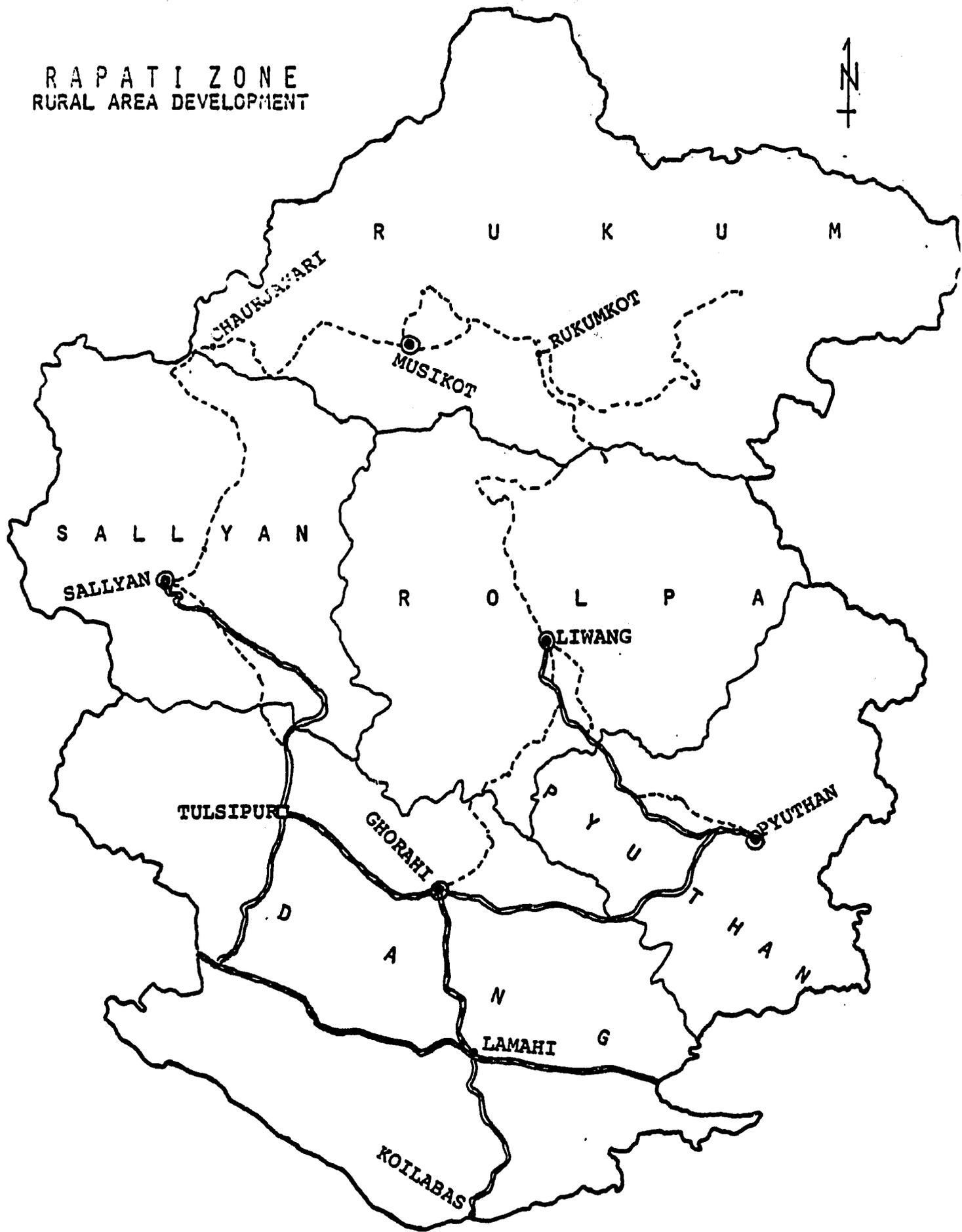
Koilabas

BUTWAL

Lumbini

BHAIRAWA

RAPATI ZONE
RURAL AREA DEVELOPMENT



ANNEX B: FINANCIAL AND ECONOMIC ANALYSIS

A. Overview

The Cost Benefit analysis of the Project has been based on the benefits of two components of the Project -- Farming Systems and Renewable Resource Management -- assessed against the costs of the total Project. The foregoing of benefit calculations for social service, infrastructure and local institution building components of the project (approximately 54 percent of total project costs and AID supported costs) is based on the judgement that the extremely tenuous assumptions such analyses require seriously detract from the value of quantifying these benefits. Therefore, certain categories of benefits normally quantified, have been described qualitatively here.

The analytical assumptions used are consistently conservative and reflect closely the subsistence economics of the Project area. With the minor exceptions noted under specific components, the five year Project period has been taken as the limit on new investments or expansion of programs initiated under the Project. Continuing or recurring costs have been assumed to be the minimum levels required to sustain activities begun under the Project, rather than to expand programs over what should be the fifteen to twenty year development period of many Project activities.

The phasing of both directly productive and socially beneficial components have been based on considerations of the feasibility of expanding or establishing facilities and staffing rather than on strict economic optimization. Derived estimates of benefit levels and total beneficiaries from Project activities are constrained by this phased expansion to reflect consistent targeting of Project inputs toward the hill districts and poorer groups within the Project area. Less cautious assumptions of the phasing and distribution of inputs would result in the absorption of a disproportionate share of Project inputs within Dang District.

1. Financial Costs

Program costs are described briefly in the Financial Plan section of this paper, (IV), and presented in more detail in the appendices. Since most Project-supported programs are expansions of existing efforts within the Project area, the costs assigned to the Project are incremental. These incremental costs do, however, include for many programs, supplementary allowances and operating expenses for existing staff and facilities within the Zone. Costs reflected as HMG contributions include those associated with the expansion or increments to programs. In sectors where other donor-supported efforts are on-going or proposed, the costs (and the benefits) of these have been excluded from analyses either as independent contributions or part of HMG contributions.

Where major subsidies are known to exist, such as in the transportation of inputs, particularly fertilizer, these have been included as costs.

2. Economic Costs

Prices used in the financial analysis of the project have been farmgate and market prices, with labor given prices or values imputed from market levels. No taxes on commodities or land have been included so none have to be removed to reflect economic prices. Two corrections have been made in analysing economic costs of the project, one for employment benefits to unskilled labor and another to reflect more accurately the opportunity cost of foreign exchange.

The correction for unskilled labor reflects the fact that unskilled labor under the project is costed at an average daily wage of 10 NRs. In the absence of the project, non-peak season agricultural labor would more likely receive a wage of 5 - 6 NRs. per day. The additional benefits to laborers receiving the additional 4 - 5 NRs. per day is reflected in the economic analysis by using the lower opportunity cost level.

The correction for foreign exchange reflects the fact that foreign currency generally has a scarcity value which exceeds the official exchange rate of 11.90 NRs. per 1.00 U.S. Dollar. Based on usage in other project analyses and recommendations of the National Planning Commission, an economic cost of foreign exchange of 14.90 NRs. per 1.00 U.S. Dollar has been used.

3. Benefits

For components where benefits have been calculated, both the identification and valuation of benefits have been based on the assumption that the subsistence nature of the Project area's economy will continue throughout the life of the Project. Thus benefits have generally been limited to project generated outputs which will be consumed by producers or within the immediate locale and valued accordingly. Exceptions to this are the existing marketing of surplus grain (in normal crop years) from Dang and goods which are already marketed out of the hills. Thus incremental milk production in the hills has been projected at less than technically achievable levels due to the lack of markets and the lower return received by the producers if processed into ghee.

The same levels of benefit costing have been used for both economic and financial analyses based on the judgement that the use of farmgate or equivalent prices accurately reflects the social value placed on incremental production.

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B. Clusters and Components

1. Farming Systems

The benefits quantified from this component are incremental field crop and livestock production. Benefits from other programs within this component have not been quantified but are identified below:

a. Crop Production (including potatoes)

Incremental benefits from field crop production increases attributable to the Agriculture Extension and Training, Input Storage, Credit Small Farmer Development Programs and Medium and Minor Irrigation programs are based upon improved inputs, better cultivation practices, increases in size and management efficiency of irrigated areas, greater credit availability and increased extension services. Quantified benefits are from increased yields and cropping intensities, and shifts among crop varieties. They do not assume an overall increase in cultivated area. Benefits have been estimated for three different altitude zones in the project area, under the varying conditions described in the Technical Analysis appendix for farming systems.

The major crops for which benefits have been calculated are paddy, maize, wheat and potatoes. Relatively full packages of new inputs -- seeds, fertilizers and pesticides -- have been assumed to be viable only on irrigated land. Benefits from rainfed and partially irrigated lands have assumed improved seed as a minimum input coupled with improved cultivation practices.

The adoption of improved inputs and practices has been phased in accordance with the expansion of extension personnel and paraprofessionals, assuming conservative adoption rates. This has resulted in benefit estimates being based on approximately 25 percent of farm households in the Zone adopting and benefiting from a mix of improved inputs and practices during cropping seasons after year five (FY 86).

Benefit calculations have not included additional paid employment provided by intensified agriculture, although additional labor needs have been included in production cost estimates.

Increased production from expanded and improved irrigation, and additional credit supported under the project, are taken into account in the general analysis of field crop production increases, utilizing the same assumptions as for the adoption of improved practices and inputs.

b. Livestock

Programs under this component have been designed to complement and expand the benefits expected from the national strengthening

of livestock production and veterinary programs to be carried out with Asian Development Bank support. The strengthening of facilities in two hill districts not covered under the ADB supported project, and the provision of sub-district level services in all districts will provide benefits in health care, improved breeding and stock, credit and extension services. Benefits in districts where the ADB-supported program will operate have been apportioned based upon an examination and interpretation of the benefit analyses produced for the ADB project.

Benefits from livestock, as in field crops, have been consciously limited in view of the fragile market for rapid increases in livestock products in the Zone, and the need to coordinate fodder production schemes with livestock production. Most of the benefits assumed have come from widespread but small improvements in animal management, health and nutrition leading to increases in milk and manure production from an estimated 25 to 30 percent of the buffalo and cows, and increases in meat and wool production from a similar proportion of sheep and goats.

A significant portion of increased field crop production estimated for Dang is in fodder crops to provide for improved livestock production without further aggravating deforestation and overgrazing.

c. Horticulture

With the exception of potato production, included under field crops above, the potential benefits from horticulture programs to be supported under the Project have not been quantified. Fruit and nut production, to be supported primarily on small plots, show benefits only after several years, and will primarily be utilized for consumption purposes and result in nutritional benefits. Larger production units will depend upon marketing development which cannot be assured during the life of the Project. The development of widespread household vegetable plots is intended to produce nutritional benefits. In cases where towns of other population concentrations provide local markets, there may be some cash income generated as well.

2. Renewable Resource Management

The renewable resource activities described in the project paper yield two principal economic benefits -- incremental production of forest products and decreased loss of topsoil. Indirect benefits, with the exception of limited estimates of increased cropland productivity, have not been quantified. Component activities involving forest planting, protection and improvement have had the following forest products quantified -- fuelwood, timber, leaf fodder, grass fodder, fruits, nuts and thatch. Decreased soil loss is attributed to the Soil and Water Conservation program. The incremental amounts and value of each of these products over both the five year project period for which AID funds are provided and the

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thirty year period over which project costs and benefits have been analysed are summarized in the tables included in this Annex.

Current benefit estimates are based on HMG continuing investment and operating costs through the eighth year of the activity, and operating costs after this period for the full period of analysis. If further investments are made by HMG or with continuing donor assistance after the initial project assistance terminates, the expanded infrastructure developed under the project would provide for substantially increased benefits.

Although incremental production figures are large, they are only a small part of total demand. By the thirtieth year, incremental fuelwood production would only supply the total needs of approximately 1.5 percent of the households in the areas within the vicinity of forest activities.

Benefits which have not been quantified include an estimated 1 million person days of employment in tree planting, maintenance, nursery establishment and the construction of offices and quarters. Increased fuelwood production will reduce the use of dung and agricultural wastes for fuel, allowing their use for fertilizer. The increased proximity of forested areas will reduce the time required for fuelwood collection and leaf fodder.

3. Employment and Skills Development

The major emphasis of this component is on increasing the number of educated and skilled persons in the Zone through formal education, nonformal education and cottage industry and appropriate technology development programs. No benefits have been quantified for the education components of the Project, although the long term benefits for local development and self-reliance will be considerable.

Benefits have not been quantified for cottage industry and technology development components due to the current lack of specification of activities to be funded under these programs. As described elsewhere in the paper, uncertainties of marketing potential and evolving policies have resulted in a program which will start in a limited number of rural craft and industry areas. These activities will be expanded on the basis of project funded investigations of the feasibility (production and marketing) of other rural industries and skill development programs.

As currently structured, the cottage industry program will provide training and more productive employment for approximately 900 persons. It is expected that the number of persons engaged in rural industries who will benefit from this training will be considerably greater. The technology development program will provide both employment benefits for an unknown number of persons, and considerable productivity increases in a range of small technologies. One of these the adaptive testing and promotion of improved stoves will yield savings in domestic fuelwood consumption.

4. Rural Works

No benefits have been quantified from three components of this cluster -- road stabilization and improvement, drinking water systems, and other rural works. Benefits from minor irrigation have been included under Farming Systems. Although the benefits of the road improvement and stabilization activity could be estimated through conventional techniques, it is unlikely that these would yield a positive economic return given the limited traffic expected to use the roads. The additional environmental benefits of reducing the erosion and landslide potential in the corridors of these existing roads are difficult to accurately quantify. The road investments to be made, through labor intensive methods building on the existing construction management of the projects, are justified both by the environmental gains and the socio-economic benefits of accessing three district centers in the hills north of Dang. In addition, an estimated 1.5 million days of wage labor will be provided by work on the roads. Additional labor will be provided for selected phases of project work on a voluntary basis by local communities, continuing current practices.

The benefits of drinking water projects to be constructed under the project are primarily to improve health; provide savings in the time required to carry water and, in some projects, to encourage ancillary gardening development. These have not been quantified for the estimated 40 projects to be supported under the program. These benefits, particularly time savings will accrue primarily to women.

Expected benefits from other rural works activities will primarily be time savings, reduction in personal risk, and some reduction in transport costs if most of these funds are used for trail improvements and bridge construction as planned. All of these rural works activities will create some paid employment for skilled laborers, who normally do not volunteer their time to local projects.

5. Institutional Development

The institutional development component of the project provides support for increased staff, improved facilities and training at the district and sub-district levels. In addition, the Project Coordination Office has been included in this component. None of these activities are expected to have quantifiable benefits. The major benefits of the component are intended to be improved individual and collective skills in planning, implementing and evaluating both project supported and other local development activities. Improvements in these local skills will be critical for the successful implementation of most Project activities.

C. Financial and Economic Analyses

The tables which follow present the summary results of the analyses carried out for each of the productive components, and the

overall analysis of the Project. The overall analysis of the project weighs all Project related costs against the benefits quantified only for the farming systems and renewable resource management clusters. In addition to costing assumptions previously discussed, the following assumptions have been used in the analyses carried out.

Both inputs and outputs have been priced at farm or local level, not at border prices. The analyses have assumed constant prices for both inputs and outputs. It is estimated that the incremental production of various activities will not represent a large enough portion of total production in the Zone to appreciably affect price levels.

The results of the analyses carried out are summarized at the beginning of each group of tables presented. More details on these analyses are presented in Appendix A.

Attachments

Financial and Economic Analysis Tables

- B-1 : Estimated Annual Net Financial Benefits and Overall Financial Rate of Return on Total Project
- B-2 : Estimated Annual Net Financial Benefits and Financial Rate of Return on Total Project
- B-3 : Total Annual Program Costs for Productive and Non-Productive Segments of Project
- B-4 : Estimated Annual Net Financial Benefits and Overall Rate of Return on Crop and Horticulture Production Clusters
- B-5 : Estimated Annual Net Financial Benefits and Overall Financial Rate of Return on Livestock Program
- B-6 : Estimated Annual Net Financial Benefits and Overall Financial Rate of Return on Farming Systems
- B-7 : Estimated Annual Net Financial Benefits and Overall Financial Rate of Return on Renewable Resources Cluster
- B-8 : Estimated Annual Net Economic Benefits and Rate of Return on Overall Project
- B-9 : Estimated Net Economic Benefits and Rate of Return for Crop and Horticulture Production
- B-10 : Estimated Annual Net Economic Benefits and Rate of Return on Livestock
- B-11 : Estimated Net Economic Benefits and Economic Rate of Return for Farming Systems Clusters
- B-12 : Estimated Annual Net Economic Benefits and Rate of Return on Renewable Resource Management

Financial Unit Costs Used in Project Budgets & Analyses

Table B-1: Estimated Annual Net Financial Benefits and Overall Financial Rate of Return on Total Project

(Millions NRs.)

<u>Year</u>	<u>Costs</u>	<u>Benefits</u>			<u>Net Benefits</u>
		<u>F.S.</u>	<u>RRM</u>	<u>Total</u>	
1980	0.3	0	0	0	- 0.3
1	74.7	3.5	-.05	3.5	-71.2
2	61.9	12.5	-.2	12.3	-49.6
3	60.6	24.0	-.3	23.7	-36.9
4	49.5	38.6	-.08	38.5	-11.0
1985	43.1	40.4	.50	40.9	- 2.2
6	17.9	42.0	1.2	43.2	25.3
7		42.7	2.0	44.7	26.8
8		42.9	3.3	46.2	28.3
9		43.1	4.8	47.9	30.0
1990		43.1	6.5	49.6	31.7
1		43.2	9.1	52.3	34.4
2		43.2	9.2	52.4	34.5
3		43.4	10.9	54.3	36.4
4		43.4	11.8	55.2	37.3
1995		43.5	12.6	56.1	38.2
6		42.8	13.2	56.0	38.1
7		42.8	13.7	56.5	38.6
8		42.8	14.7	57.5	39.6
1999	17.9	42.8	15.4	58.2	40.3

Net Present Value at 15 percent

-36.2 Million NRs. (\$ -3.0 Million)

FIRR

10%

(NPV at 11 percent = -6.22)

With Additional Credit

**Table B-2: Estimated Annual Net Financial Benefits and
Financial Rate of Return on Total Project**

(Millions NRs.)

<u>Year</u>	<u>Program Costs</u>	<u>Benefits</u>			<u>Net Benefits</u>
		<u>F.S.</u>	<u>RRM</u>	<u>Total</u>	
1980	0.3	0	0	0	- 0.3
1	74.7	3.5	-.05	3.5	-71.2
2	61.9	12.5	-.2	12.3	-49.6
3	60.6	24.0	-.3	23.7	-36.9
4	52.5	38.6	-.08	38.5	-14.0
1985	46.6	55.9	.5	56.4	9.8
6	21.5	64.1	1.2	65.3	43.8
7	19.8	64.8	2.0	66.8	47.0
8	↓	65.0	3.3	68.3	48.5
9		65.2	4.8	70.0	50.2
1990		65.2	6.5	71.7	51.9
1		65.3	9.1	74.4	54.6
2		65.3	9.2	74.5	54.7
3		65.5	10.9	76.4	56.6
4		65.5	11.8	77.3	57.5
1995		65.5	12.6	78.2	58.4
6		64.9	13.2	78.1	58.3
7		64.9	13.7	78.6	58.5
8	64.9	14.7	79.6	59.8	
1999	19.8	64.9	15.4	80.3	60.5

Net Present Value at 15 Percent = 17.12 Million NRs. (\$1.44 million).

EIRR = 17% (= -0.99 NPV)

Table B-3: Total Annual Program Costs for Productive and Non-Productive Segments of Project
(NRs. in Millions, No Inflation Included)

Year	Farming Systems												Sub- Total Farming Systems
	Agricultural Crops Production									Livestock			
	Ag. Ext. & Trng.	AIC	ADB/N	SFDP	Credit	Horti- culture	"Medium" Irrigation	Minor Irrigation	Sub- Total	Ext. & Health	Credit	Sub- Total	
1980	0.3	0	0	0	0	0	0	0	0.3	0	0	0	0.3
1981	4.5	1.0	.8	.7	4.7	.7	2.8	1.7	16.8	2.5	4.2	6.7	23.6
1982	5.2	1.6	.8	1.6	.4	1.0	4.4	3.9	18.9	2.2	1.5	3.7	22.6
1983	5.9	2.6	.5	1.2	-	1.1	5.8	6.2	23.3	2.1	-	2.1	25.4
1984	5.2	4.3	.6	1.4	-	1.0	3.8	3.6	19.9	2.8	-	2.8	22.8
1985	5.9	3.7	.6	1.7	-	.6	2.7	1.7	16.9	2.6	-	2.6	19.4
1986	1.8	2.1	.3	1.4	-	.1	.3	.4	6.4	1.8	-	1.8	8.2
1987	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
1999	1.8	2.1	.3	1.4	-	.1	.3	.4	6.4	1.8	-	1.8	8.2

Year	Renewable Resource Management				Sub- Total Productive Components
	Soil & Water Conservation	Community Forest	National Forest	Sub-Total	
1980	-	0	0	0	0.3
1981	0.3	2.8	2.4	5.5	29.0
1982	1.2	2.8	2.0	6.0	28.6
1983	.8	3.2	1.8	5.8	31.2
1984	1.1	4.1	2.3	7.5	30.2
1985	1.1	4.7	2.3	8.1	27.6
1986	.3	2.8	.6	3.7	11.9
1987	↓	2.4	↓	3.3	11.5
1988	↓	1.5	↓	2.4	10.6
1989	↓	.9	↓	1.8	10.0
1990	↓	↓	↓	↓	↓
1999	.3	.9	.6	1.8	10.0

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Table B-3: (Cont'd)

Year	Other Components								Sub-Total Other Components
	Employment & Skills Development		Rural Works			Institutional Dev.		Technical Asst.	
	Education	Rural Industry	Panchayat Roads	Drinking Water	Other Rural Works	District Development	PCO		
1980	0	0.007	0	0	0	0	0	0	0.007
1981	1.6	3.3	11.5	1.3	1.7	5.2	11.1	9.7	45.4
1982	1.8	2.8	9.5	1.3	2.5	4.0	2.2	9.0	33.1
1983	2.3	2.2	8.7	2.6	2.5	2.4	2.0	6.7	29.4
1984	2.7	1.8	1.5	2.6	3.3	2.0	1.8	3.5	19.2
1985	2.9	1.5	1.4	2.6	2.5	1.9	1.8	1.0	15.6
1986	1.2	.6	1.4	0.5	0.4	1.4	.5	-	6.0
1987	1.2	.6	1.6	0.6	0.5	1.4	.5	-	6.4
1988	↓	↓	↓	↓	↓	↓	↓	↓	↓
1989	↓	↓	↓	↓	↓	↓	↓	↓	↓
1990	↓	↓	↓	↓	↓	↓	↓	↓	↓
1991	↓	↓	↓	↓	↓	↓	↓	↓	↓
1992	↓	↓	↓	↓	↓	↓	↓	↓	↓
1993	↓	↓	↓	↓	↓	↓	↓	↓	↓
1994	↓	↓	↓	↓	↓	↓	↓	↓	↓
1995	↓	↓	↓	↓	↓	↓	↓	↓	↓
1996	↓	↓	↓	↓	↓	↓	↓	↓	↓
1997	↓	↓	↓	↓	↓	↓	↓	↓	↓
1998	↓	↓	↓	↓	↓	↓	↓	↓	↓
1999	1.2	.6	1.6	0.6	0.5	1.4	.5	-	6.4

Table B-4: Estimated Annual Net Financial Benefits and Overall Rate of Return on Crop and Horticulture Production Clusters

(Millions of NRs.)

<u>Year</u>	<u>Costs</u>	<u>Benefits</u>	<u>Net Benefits</u>
1980	0.3	0	- 0.3
1	16.8	3.7	-13.1
2	18.9	11.5	- 7.4
3	23.3	21.5	- 1.8
4	19.9	34.5	14.6
1985	16.9	34.5	17.6
6	6.4	34.5	28.1
7			
8			
9			
1990			
1			
2			
3			
4			
1995			
6			
7			
8			
1999	6.4	34.5	28.1
NPV at 15 Percent		(\$ 5.75 Million)	68.3
NPV at 50 Percent			- 0.19
FIRR			49%

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Table B-5: Estimated Annual Net Financial Benefits and Overall Financial Rate of Return on Livestock Program

(Millions of NRs.)

<u>Year</u>	<u>Costs</u>	<u>Benefits</u>	<u>Net Benefits</u>
1980	0	0	0
1	6.76	-.17	-6.93
2	3.70	1.05	-2.65
3	2.13	2.54	.41
4	2.89	4.11	1.22
1985	2.55	5.92	3.77
6	1.8	7.48	5.68
7		8.20	6.40
8		8.45	6.65
9		8.56	6.76
1990		8.57	6.77
1		8.73	6.93
2		8.65	6.85
3		8.87	7.07
4		8.86	7.06
1995		8.95	7.15
6		8.30	6.5
7		8.30	6.5
8		8.30	6.5
1999	1.8	8.30	6.5

Net Present Value at 15 percent = 11.8 Million NRs. (\$.99 Million)

FIRR = 31 percent

(NFV at 32 percent = -.19 Million NRs.)

Table B-6: Estimated Annual Net Financial Benefits and Overall Financial Rate of Return on Farming Systems

(Millions of NRs.)

<u>Year</u>	<u>Benefits</u>	<u>Costs</u>	<u>Net Benefits</u>
1980	0	0.3	- .3
1	3.5	23.6	-20.1
2	12.5	22.6	-10.1
3	24.0	25.4	- 1.4
4	38.6	22.8	15.8
1985	40.4	19.4	21.0
6	42.0	8.2	33.8
7	42.7	↓	34.5
8	42.9		34.7
9	43.1		34.9
1990	43.1		34.9
1	43.2		35.0
2	43.2		35.0
3	43.4		35.2
4	43.4		35.2
1995	43.5		35.3
6	42.8		34.6
7	42.8		34.6
8	42.8		34.6
1999	42.8	8.2	34.6

Net Present Value at 15 Percent = 77.8 million NRs. (\$6.5 Million)

FIRR = 44 percent

Table B-7: Estimated Annual Net Financial Benefits and Overall Financial Rate of Return on Renewable Resources Cluster

(Millions NRs.)

<u>Year</u>	<u>Costs</u>	<u>Benefits</u>	<u>Net Benefits</u>
1980	0	0	0
1	5.5	-.05	-5.6
2	6.0	-.17	-6.2
3	5.8	-.26	-6.1
4	7.5	-.08	-7.6
1985	8.1	.5	-7.6
6	3.7	1.2	-2.5
7	3.3	2.0	-1.3
8	2.4	3.3	0.9
9	1.8	4.8	3.0
1990		6.5	4.7
1		9.1	7.3
2		9.2	7.4
3		10.9	9.1
4		11.8	10.0
1995		12.6	10.8
6		13.2	11.4
7		13.7	11.9
8		14.7	12.9
9		15.4	13.6
2000		15.2	13.4
1		15.6	13.8
2		16.1	14.3
3		16.3	14.5
4		18.1	16.3
2005		19.5	17.7
6		19.1	17.3
7		19.9	18.1
8		18.0	16.2
2009	1.8	15.2	13.4

Net Present Value at 15 Percent = -3.59 million NRs. (-\$.3 Million)

FIRR 13%

(NPV at 13% = 0.96 million NRs.)

Table B-8: Estimated Annual Net Economic Benefits and Rate of Return on Overall Project

(Millions of NRs.)

<u>Year</u>	<u>Market Price</u>			<u>Foreign Exchange Corrected</u>		<u>Unskilled Labor Corrected</u>		<u>FE & Labor Corrected</u>	
	<u>Benefits</u>	<u>Costs</u>	<u>Net Benefits</u>	<u>Costs</u>	<u>Net Benefits</u>	<u>Costs</u>	<u>Net Benefits</u>	<u>Costs</u>	<u>Net Benefits</u>
1980	0	0.3	- 0.3	0.3	- 0.3	0.3	- 0.3	0.3	- 0.3
1	3.5	74.7	-71.2	82.8	-79.3	72.1	-68.6	80.2	-76.7
2	12.3	61.9	-49.6	67.1	-54.8	58.4	-46.1	63.6	-51.3
3	23.7	60.6	-36.9	65.2	-41.5	56.5	-32.8	61.1	-37.4
4	38.5	49.5	-11.0	52.6	-14.1	46.7	- 8.2	49.8	-11.3
1985	40.9	43.1	- 2.2	45.4	- 4.3	40.6	0.3	42.9	- 2.0
6	43.2	17.9	25.3	18.4	24.8	16.2	27.0	16.7	26.5
7	44.7	↓	26.8	↓	26.3	16.2	28.5	16.7	28.0
8	46.2	↓	28.3	↓	27.8	16.3	29.9	16.8	29.4
9	47.9	↓	30.0	↓	29.5	↓	31.6	↓	31.1
1990	49.6	↓	31.7	↓	31.2	↓	33.3	↓	32.8
1	52.3	↓	34.4	↓	33.9	↓	36.0	↓	35.5
2	52.4	↓	34.5	↓	34.0	↓	36.1	↓	35.6
3	54.3	↓	36.4	↓	35.9	↓	38.0	↓	37.5
4	55.2	↓	37.3	↓	36.8	↓	38.9	↓	38.4
1995	56.1	↓	38.2	↓	37.7	↓	39.8	↓	39.3
6	56.0	↓	38.1	↓	37.6	↓	39.7	↓	39.2
7	56.5	↓	38.6	↓	38.1	↓	40.2	↓	39.7
8	56.5	↓	38.6	↓	38.1	↓	40.2	↓	39.7
1999	56.5	17.9	38.6	18.4	38.1	16.3	40.2	16.8	39.7
NPV at 15 percent (Million NRs.)			-36.1	-51.9		-23.0		-41.33	
EIRR			10%	9%		12%		10%	

Table B-9: Estimated Net Economic Benefits and Rate of Return for Crop and Horticulture Production

(Millions of NRs.)

Year	<u>Market Prices</u>			<u>Foreign Exchange Corrected</u>		<u>Unskilled Labor Corrected</u>		<u>FE & Labor Corrected</u>	
	<u>Benefits</u>	<u>Costs</u>	<u>Net Benefits</u>	<u>Costs</u>	<u>Net Benefits</u>	<u>Costs</u>	<u>Net Benefits</u>	<u>Costs</u>	<u>Net Benefits</u>
1980	0	0.3	- 0.3	0.3	- 0.3	0.3	- 0.3	0.3	- 0.3
1	3.7	16.8	-13.1	19.1	-15.4	16.2	-12.5	16.5	-14.8
2	11.5	18.9	- 7.4	20.5	-10.0	17.7	- 6.2	19.3	- 7.8
3	21.5	23.3	- 1.8	25.2	- 3.7	21.5	0	23.4	- 1.9
4	34.5	19.9	14.6	21.2	13.3	18.7	15.8	21.1	13.4
1985	34.5	16.9	17.6	18.0	16.5	16.2	18.3	17.3	17.2
6	34.5	6.4	28.1	6.6	27.9	6.0	28.5	6.2	28.3
7	↓	↓	↓	↓	↓	↓	↓	↓	↓
8	↓	↓	↓	↓	↓	↓	↓	↓	↓
9	↓	↓	↓	↓	↓	↓	↓	↓	↓
1990	↓	↓	↓	↓	↓	↓	↓	↓	↓
1	↓	↓	↓	↓	↓	↓	↓	↓	↓
2	↓	↓	↓	↓	↓	↓	↓	↓	↓
3	↓	↓	↓	↓	↓	↓	↓	↓	↓
4	↓	↓	↓	↓	↓	↓	↓	↓	↓
1995	↓	↓	↓	↓	↓	↓	↓	↓	↓
6	↓	↓	↓	↓	↓	↓	↓	↓	↓
7	↓	↓	↓	↓	↓	↓	↓	↓	↓
8	↓	↓	↓	↓	↓	↓	↓	↓	↓
1999	34.5	6.4	28.1	6.6	27.9	6.0	28.5	6.2	28.3
NPV at 15 percent			68.3		62.2		72.5		66.5
EIRR			49%		42%		54%		46%

Table B-10: Estimated Annual Net Economic Benefits and Rate of Return on Livestock

(Millions of NRs.)

Year	<u>Market Prices</u>			<u>Foreign Exchange Corrected</u>		<u>Unskilled Labor Corrected</u>		<u>FE & Labor Corrected</u>	
	<u>Benefits</u>	<u>Costs</u>	<u>Net Benefits</u>	<u>Costs</u>	<u>Net Benefits</u>	<u>Costs</u>	<u>Net Benefits</u>	<u>Costs</u>	<u>Net Benefits</u>
1980	0	0	0	0	0	0	0	0	0
1	-0.17	6.76	-6.93	6.93	-7.10	6.72	-6.89	6.89	-7.06
2	1.05	3.70	-2.65	3.85	-2.80	3.67	-2.62	3.82	-2.77
3	2.54	2.13	.41	2.27	.27	2.09	.45	2.23	.31
4	4.11	2.89	1.22	3.13	.98	2.85	1.26	3.09	1.02
1985	5.92	2.55	3.77	2.73	3.19	2.52	3.40	2.70	2.22
6	7.48	1.8	5.68	1.85	5.63	1.78	5.70	1.83	5.65
7	8.20		6.40		6.35		6.42		6.37
8	8.45		6.65		6.60		6.67		6.62
9	8.56		6.76		6.71		6.78		6.73
1990	8.57		6.77		6.72		6.79		6.74
1	8.73		6.93		6.87		6.95		6.90
2	8.65		6.85		6.79		6.87		6.82
3	8.87		7.07		7.01		7.09		7.04
4	8.86		7.06		7.00		7.08		7.03
1995	8.95		7.15		7.09		7.17		7.12
6	8.30		6.5		6.44		6.52		6.47
7	8.30		6.5		6.44		6.52		6.47
8	8.30		6.5		6.44		6.52		6.47
1999	8.30	1.8	6.5	1.85	6.44	1.78	6.52	1.83	6.47
Net Present Value at 15% (Million NRs.)			11.8	10.94		11.74		10.68	
EIRR			31%	29.5%		31%		29%	

Table B-11: Estimated Net Economic Benefits and Economic Rate of Return for Farming Systems Clusters

(Millions of NRs.)

Year	Market Prices			Foreign Exchange Corrected		Unskilled Labor Corrected		FE & Labor Corrected	
	Benefits	Costs	Net Benefits	Costs	Net Benefits	Costs	Net Benefits	Costs	Net Benefits
1980	0	0.3	- 0.3	0.3	- 0.3	0.3	- 0.3	0.3	- 0.3
1	3.5	23.6	-20.1	23.0	-19.5	26.1	-22.6	25.5	-22.0
2	12.5	22.6	-10.1	21.4	- 8.9	24.3	-11.8	23.1	-10.6
3	24.0	25.4	- 1.4	23.6	0.4	27.4	- 3.4	25.6	- 1.6
4	38.6	22.8	15.8	21.6	17.0	24.4	14.2	23.2	15.4
1985	40.4	19.4	21.0	18.7	21.7	20.7	19.7	20.0	20.4
6	42.0	8.2	33.8	7.9	34.1	8.3	33.7	8.0	34.0
7	42.7	↓	34.5	↓	34.8	↓	34.4	↓	34.7
8	42.9	↓	34.7	↓	35.0	↓	34.6	↓	34.9
9	43.1	↓	34.9	↓	35.2	↓	34.8	↓	35.1
1990	43.1	↓	34.9	↓	35.2	↓	34.8	↓	35.1
1	43.2	↓	35.0	↓	35.3	↓	34.9	↓	35.2
2	43.2	↓	35.0	↓	35.3	↓	34.9	↓	35.2
3	43.4	↓	35.2	↓	35.5	↓	35.1	↓	35.4
4	43.4	↓	35.2	↓	35.5	↓	35.1	↓	35.4
1995	43.5	↓	35.3	↓	35.6	↓	35.2	↓	35.5
6	42.8	↓	34.6	↓	34.9	↓	34.5	↓	35.8
7	42.8	↓	34.6	↓	34.9	↓	34.5	↓	35.8
8	42.8	↓	34.6	↓	34.9	↓	34.5	↓	35.8
1999	42.8	8.2	34.6	7.9	34.9	8.3	34.5	8.0	35.8
NPV at 15 percent (Millions NRs.)			77.8	85.7		74.1		78.3	
EIRR			44%	47%		40%		42%	

**Table B-12: Estimated Annual Net Economic Benefits and Rate of Return on Renewable Resource Management
(Millions of NRs.)**

Year	Market Prices			Foreign Exchange Corrected		Unskilled Labor Corrected		FE & Labor Corrected		
	Benefits	Costs	Net Benefits	Costs	Net Benefits	Costs	Net Benefits	Costs	Net Benefits	
1980	0	0	0	0	0	0	0	0	0	
1	-.05	5.5	-5.6	5.8	-5.8	5.3	-5.3	5.6	-5.6	
2	-.17	6.0	-6.2	6.2	-6.4	5.7	-5.9	5.9	-6.1	
3	-.26	5.8	-6.1	6.0	-6.3	5.3	-5.6	5.5	-5.8	
4	-.08	7.5	-7.6	7.8	-7.9	6.7	-6.8	7.0	-7.1	
1985	.5	8.1	-7.6	8.4	-7.9	7.1	-6.6	7.3	-6.8	
6	1.2	3.7	-2.5	3.8	-2.6	3.1	-1.9	3.2	-2.0	
7	2.0	3.3	-1.3	3.4	-1.4	2.8	-0.8	2.9	-0.9	
8	3.3	2.4	0.9	2.5	0.8	2.0	1.3	2.1	1.2	
9	4.8	1.8	3.0	1.8	3.0	1.5	3.3	1.6	3.2	
1990	6.5		4.7		4.7		5.0		4.9	
1	9.1		7.3		7.3		7.6		7.5	
2	9.2		7.4		7.4		7.7		7.6	
3	10.9		9.1		9.1		9.4		9.3	
4	11.8		10.0		10.0		10.3		10.2	
1995	12.6		10.8		10.8		11.1		11.0	
6	13.2		11.4		11.4		11.7		11.6	
7	13.7		11.9		11.9		12.2		12.1	
8	14.7		12.9		12.9		13.2		13.1	
9	15.4		13.6		13.6		13.9		13.8	
2000	15.2		13.4		13.4		13.7		13.6	
1	15.6		13.8		13.8		14.1		14.0	
2	16.1		14.3		14.3		14.6		14.5	
3	16.3		14.5		14.5		14.8		14.7	
4	18.1		16.3		16.3		16.6		16.5	
2005	19.5		17.7		17.7		18.0		17.9	
6	19.1		17.3		17.3		17.6		17.5	
7	19.9		18.1		18.1		18.4		18.3	
8	18.0		16.2		16.2		16.5		16.4	
2009	15.2	1.8	13.4	1.8	13.4	1.5	13.7	1.6	13.6	
NPV at 15 Percent (Million NRs.)			-3.6			-4.4			-1.0	-2.0
EIRR			13%			13%			14.5%	14%

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FINANCIAL UNIT COSTS USED IN PROJECT BUDGETS & ANALYSES
(ALL COSTS IN 1980 N.C. RUPEES)

- A. **Land:** Non-prime agricultural land, suitable for most offices and quarters near a populated area, is costed at Rs. 5,000/Ropani = Rs. 100,000/Hectare = Rs. 10/sq.m. = Rs. 1/sq.ft.
- B. **Construction:** All unit costs for construction are described in detail in Appendices I. Rural Works & Construction and J. Road Rehabilitation and Improvement. Labor costed at Rs. 10/day for unskilled and Rs. 20/day for skilled are included within unit costs.
1. Buildings were costed on the basis of estimated plinth area required using the unit costs of Rs. 180/sq.ft. for Dang District, Rs. 200/sq.ft. for Salyan and Pyuthan Districts, Rs. 220/sq.ft. for Rolpa District, and Rs. 240/sq.ft. for Rukum District.
 2. Rural Works were costed using average unit costs of Rs. 250,000 per gravity flow drinking water system, Rs. 12,000/hectare for medium irrigation and Rs. 5,000/hectare for minor irrigation, Rs. 1,800/meter for wooden cantilever bridges, Rs. 1,500/k. for trail upgrading, Rs. 7,000/m. for suspended & suspension bridges, and costs as in 1. for locally constructed buildings.
 3. Other construction costs vary considerably; this category includes costs of livestock dips (@ Rs. 15,000) and stanchions (@ Rs. 10,000), divisional and community nursery construction (@ Rs. 65,000), and conservation demonstration plots (@ Rs. 10,000). Average project costs for this category and 2. above based on costs for middle Hill districts, with Dang and Rukum projects balancing the average above and below.
 4. Physical contingency factors at varying rates are included in all construction estimates.
- C. **Materials & Equipment**
1. **Transport:** U.S. 4-wheel drive diesel vehicles @ Rs. 165,000 (including 10% for spare parts); U.S. 4-wheel drive diesel pick-up trucks @ Rs. 250,000 (including 10% for spare parts); Japanese light trail bikes (90 cc) @ Rs. 11,000; Nepalese vehicle trailers @ Rs. 12,000; Indian diesel personnel vans @ Rs. 110,000 (including 10% spare parts); Nepalese horses @ Rs. 5,000; Bicycles @ Rs. 1,000.
 2. **Office furniture and equipment:** Office furniture for unspecialized gazetted and non-gazetted offices are costed at Rs. 6,000 per office (local manufacture and purchase assumed). Office equipment is costed at Rs. 15,000 per office for standard equipment (i.e. 2 Devanagri typewriters

@ Rs. 5,000 plus one Indian adding machine @ Rs. 3,000 plus miscellaneous equipment estimated at Rs. 2,000).

3. Special equipment (drafting, surveying, training) and special materials (teaching, agricultural) have been costed individually.
- D. Other Program Investment: This category also includes costs which cannot be aggregated in easily identifiable units, such as plantation establishment, livestock breeding stock, some local travel, and feasibility and marketing studies for rural industry, appropriate technology and energy development programs.
 - E. Credit: This item is based on analyses of ADB/N (regular and small farmer programs) and Cottage Industries lending and cannot be easily broken out easily into unit costs due to varying terms per type of loan.
 - F. Personnel: Personnel costs to HMG and AID are based on the following annual salaries per civil service grade plus HMG/N Remote Area Allowances of 25% of base salary for Dang, 35% for Salyan and Pyuthan, and 60% for Rolpa and Rukum, and USAID/N Project Incentive Allowances at average rates of 25% of base salary for gazetted officers and 35% of base salary for non-gazetted officers. Annual salaries: Gazetted Technical I, Rs. 22,020; II, Rs. 16,140; III, 10,200; Gazetted Administrative I, Rs. 19,500; II, Rs. 14,880; III, Rs. 9,120; Non-gazetted Technical I, Rs. 8,400; II, Rs. 4,380; III, Rs. 3,480; IV, Rs. 2,820; Non-Gazetted Administrative I, Rs. 5,640; II, Rs. 3,780; III, Rs. 2,700; IV, Rs. 2,280; and V, Rs. 2,160.
 - G. Training
 1. Local: Average at Rs. 50/day/trainee for Rapati Zone and other rural areas plus any special costs for trainers (i.e. honoraria, TA/DA) if required.
 2. Participant:
 - a. U.S. Academic: \$1,600 per month plus \$2,500 for round trip air transportation (Calculate \$300 average for HMG contribution for air travel to nearest point outside Nepal).
 - b. U.S. Non-Academic: \$3,100 per month plus \$2,500 for round trip air transportation (Calculate \$300 average for HMG contribution).
 - c. Third Country Academic (excluding India): \$700 per month plus \$1,100 for round trip air transportation (Calculate \$300 average for HMG contribution).

- d. Third Country Non-Academic (excluding India): \$2,650 per month plus \$1,100 for round trip air transportation (Calculate \$300 average for HMG contribution).
- e. India academic: \$160 per month (Calculate \$300 average for HMG contribution).
- f. India Non-Academic: \$450 per month (Calculate \$300 average for HMG contribution).

H. Operating & Maintenance: Includes specific unit costs for operation and maintenance of all transport items, ranging from Rs. 7,500/year for POL and Rs. 7,500/year for maintenance for a four-wheel drive vehicle to Rs. 1,500/year for horse maintenance. Also includes travel allowance/daily allowance for HMG/N and PCO personnel costed at Rs. 2,500/year/position (excluding administrative non-gazetted III, IV and V), estimated costs for chartered and scheduled aircraft for PCO personnel (including Technical Assistance). On the HMG/N side, includes transport subsidies paid for agricultural inputs, office rental, etc., at varying rates. Maintenance and repair costs of buildings, construction and rural works projects estimated at varying rates.

I. Technical Assistance

1. Nepali Consultants = \$300/month (Rs. 3,500/month)

2. Other

Long Term: \$133,100 for initial year and \$115,500/yr. thereafter.

Short Term: \$7,500 per month plus \$2,500 for round trip airfare.

2/1/18

ANNEX C
LOGICAL FRAMEWORK

ANNEX C

**PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK**

Life of Project: From FY 80 to FY 85
Total U. S. Funding: \$26.7 million
Date Prepared: 3/80

Project Title & Number: Rural Area Development - Rapti Zone (367-0129)

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p><u>Program or Sector Goal:</u></p> <p>To assist HMG to promote development in such a way as to meet the basic needs of Nepal's poor majority, with special attention to the large, previously by-passed population in the "Middle Hills."</p>	<p><u>Measures of Goal Achievement:</u></p> <p>1.HMG will be able to implement and sustain development and social service projects such as the Rapti Project.</p>	<p>1.Public Records.</p> <p>2.For Rapti Project, achievement of indicators below.</p>	<p><u>Assumptions for Achieving Goal Targets:</u></p> <p>1.That HMG maintains current policies favoring development benefits for the rural poor, particularly in the hills.</p> <p>2.That AID maintains current policies supporting rural development efforts in spite of slow results.</p>
<p><u>Project Purposes:</u></p> <p>1.To increase measurable aspects of the quality of life, including income and production levels, of families in the Rapti Zone.</p>	<p><u>Conditions that will indicate purpose has been achieved:</u></p> <p>1.Food production and consumption qualitatively and quantitatively increased.</p> <p>2.Employment opportunities and average labor productivity increased.</p>	<p>1.Baseline Study Compared to:</p> <p>a.information & monitoring system reports (PCO & MOFA)</p> <p>b.ad hoc studies (PCO)</p> <p>c.HMG/N Food & Agricultural Marketing Service Department Annual Reports (MOFA).</p>	<p><u>Assumptions for Achieving Purpose:</u></p> <p>1.HMG policies continue to support decentralization of authority and responsibility to district and local levels.</p>

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>2.To improve local demand for, and control of, national level delivery systems for improved agriculture, health, education, resource management, and family planning.</p>	<p>3.Capacity of village and district governments and other local groups to plan, implement and evaluate development activities strengthened.</p> <p>4.Availability and use of national delivery systems increased.</p>	<p>2.Baseline Study Compared to:</p> <ul style="list-style-type: none"> a.information & monitoring reports (PCO & MCI) b.<u>ad hoc</u> studies (PCO) c.Rural works activities quarterly reports. <p>3.a.Annual District Plans</p> <ul style="list-style-type: none"> b.District & Village Project portfolios c.SFDP reports d.PCO/PMEU <u>ad hoc</u> studies <p>4.Baseline Study & departmental records compared to:</p> <ul style="list-style-type: none"> a.Annual District Plans b.Departmental records c.PCO/PMEU <u>ad hoc</u> studies 	<p>2.That economic and social programs in the Zone are supported by improved domestic revenue generation policies and measures.</p>

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p><u>Outputs</u></p> <ol style="list-style-type: none"> 1. Field crop, livestock and horticulture production increased. 2. Food available for consumption per capita increased. 3. Hectares of land under new or improved irrigation. 4. Hectares of land under protected forest. 5. Hectares of critically eroded land treated. 6. Multipurpose nurseries established. 7. People trained in improved rural industry and manufacture and marketing. 8. Energy efficient technology/industries operational. 9. Adult education/functional literacy programs operational. 10. Teachers trained, long or short term, increased. 11. Disadvantaged students attending local schools increased. 	<p><u>Magnitude of Outputs by End of Project</u></p> <ol style="list-style-type: none"> 1. Field crops increased by 27%; 5% decrease in adult mortality rate for cattle; 5% decrease in lambing and kidding mortality rates; land in orchards increased by 1,000 ha. by 1986. 2. 35% increase in cereal crops for Dang; 19% increase for low hills; 17% for high hills by year 5. 3. 1,250 ha. of medium and 3,160 ha. of minor irrigation schemes or improvements by 1986. 4. 915 ha. of community forest; 104 ha. of contract forest; 6,900 ha. of panchayat protected forest; & 590 ha. of national forest planted, protected by 1986. 5. 400 ha. of land treated. 6. 60 community nurseries and 7 Departmental nurseries by 1986. 7. 890 by 1986. 8. 9 pilot technology activities undertaken; 200 bio-gas plants installed by 1986. 9. 500 by 1985. 10. 240 teachers trained long-term (120 women) and 2600 teachers participate in short-term workshops by 1986. 	<p><u>Means of Verification</u></p> <ol style="list-style-type: none"> 1. Baseline study and departmental records compared to: <ol style="list-style-type: none"> a. PCO/PMEU monitoring reports and studies. b. MOFA records. c. Ad Hoc studies. 2. Same as No. 1. 3. a. DCO and DOI records. <ol style="list-style-type: none"> b. Annual District Plans. 4. a. MOF and PCO records. <ol style="list-style-type: none"> b. Annual District Plans and Quarterly Reports. 5. & 6. Same as No. 4. 7. a. PCO and DCVI records. <ol style="list-style-type: none"> b. PCO/PMEU ad hoc reports. 8. PCO/ATU records & reports. 9. a. DEO records. <ol style="list-style-type: none"> b. Annual District Plans and PCO Quarterly Reports. 10. a. DOE & DEO records. <ol style="list-style-type: none"> b. PCO Quarterly reports. 11. a. DEO records. <ol style="list-style-type: none"> b. PCO Quarterly Reports. 12. Observation of road usage. 13. a. Annual District Plans. <ol style="list-style-type: none"> b. PCO Quarterly Reports. 14. a. Annual District Plans. <ol style="list-style-type: none"> b. PCO Quarterly Reports. 	<p><u>Important Assumptions</u></p> <ol style="list-style-type: none"> 1. HMC/N maintains pricing policies moderately favorable to food producers. 2. Inputs from external sources (fertilizer, some seed) provided in timely fashion and adequate quantities. 3. HMC/USAID-Projects HAPS, ICP and SPIS support Rapti Zone efforts through new and improved agricultural research. 4. ADB livestock development project carried out in complementary fashion. 5. Northern East-West Highway construction supported by PRC progresses, thus providing incentive to High Hills farmers to increase production.

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>12. Panchayat Roads upgraded.</p> <p>13. Rural Works undertaken by local communities.</p> <p>14. District level planning, evaluation, technical, social services and training systems improved and operational.</p>	<p>11. 8,000 scholarships given by 1985.</p> <p>12. 200 kms. open to 5-7 ton single axel trucks 8 months/year by 1984.</p> <p>13. Approximately 40 gravity flow drinking water systems, 26 other rural works and 140 km. of trails upgrading completed by 1986.</p> <p>14. a. 5 District Annual Plans reflect local-national programs by 1983.</p> <p>b. 5 District monitoring and evaluation systems functioning by 1982.</p> <p>c. 5 District Technical Offices fully staffed by trained personnel by 1984.</p> <p>d. 2 District Health Centers fully operational by 1984.</p> <p>e. 5 District multi-purpose training centers functioning by 1984; 18,260 person days of training of district and local officials and citizens by 1986.</p>		<p>6. Various national training institutions accept trainees from Rapti Zone.</p> <p>7. HMG/USAID "Integrated Rural Health/Family Planning Services" project commences and supports local activities in Rapti Zone.</p> <p>8. HMG/USAID "Radio Education Teacher Training" project achieves goal of training all teachers in Rapti Zone by 1984.</p> <p>9. HMG/N policies continue to support decentralization of planning to District and Local levels.</p>

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS									MEANS OF VERIFICATION	ASSUMPTIONS FOR PROVIDING INPUTS
	PROJECT TOTALS			GROSS EXPENDITURES BY INPUT BY YEAR							
INPUTS	80-85 TOTAL	80-85 HMG/N	80-85 AID	FY 80	FY 81	FY 82	FY 83	FY 84	FY 85		
A. LAND	75	75	-	-	38	15	8	9	5	1) District Annual Plans. 2) AID and HMG Project accounts and audits.	AID and HMG/N are able to provide competent staff for all positions. Nepal and India trade and transit agreements remain the same or become more favorable to Nepal. HMG/N's ability to disburse and account for development funds continues to improve.
B. CONSTRUCTION											
1) Buildings	4468	291	4177	21	1440	841	742	777	647		
2) Rural Works	7785	2752	5033	-	1217	1653	2767	1440	1204		
3) Other	2111	-	2111	-	213	377	529	498	494		
C. MATERIALS & EQPT.	2357	5	2352	-	1289	374	228	224	242		
D. OTHER PROGRAM INV.	680	-	680	-	121	213	174	120	52		
E. CREDIT	1090	-	1090	-	840	211	12	13	14		
F. PERSONNEL	5961	2938	3023	4	621	939	1199	1464	1734		
G. TRAINING											
1) Local	1494	-	1494	-	140	254	334	351	415		
2) Participant	628	66	562	-	41	55	91	187	254		
H. OPERATING & MAINT.	4198	847	3351	3	296	677	881	1128	1213		
I. TECHNICAL ASST.											
1) Expatriate L-T	1994	-	1994	-	671	735	406	182	-		
2) Expatriate S-T	747	-	747	-	86	162	268	138	93		
3) Nepalese S-T	86	-	86	-	14	15	17	19	21		
GRAND TOTAL	33674	6974	26700	28	7027	6525	7156	6550	6388		

ANNEX D: CHECKLIST OF STATUTORY CRITERIA

CROSS REFERENCES:

IS COUNTRY CHECKLIST UP TO DATE? Yes. See Project Paper for Resource Conservation and Utilization, 367-0132, February, 1980.

HAS STANDARD ITEM CHECKLIST BEEN REVIEWED FOR THIS PROJECT? Yes. Applicable items have been addressed in the Project Paper and/or the Grant Agreement.

PROJECT CHECKLIST

A. GENERAL CRITERIA FOR PROJECT

1. FY 79 App. Act Unnumbered; FAA Sec. 653(B); Sec. 634A.
(a) Describe how Committees on Appropriations of Senate and House have been or will be notified concerning the project;
(b) is assistance within (Operational Year Budget) country or international organization allocation reported to Congress (or not more than \$1 million over that figure)?

1.

a. Notification of the proposed project has been sent to the Congress as part of the annual AID Congressional presentation.

b. Congress will be notified of any increase in project funding.

2. FAA Sec. 611(a)(1). Prior to obligation in excess of \$100,000, will there be (a) engineering, financial, and other plans necessary to carry out the assistance and (b) a reasonably firm estimate of the cost to the U.S. of the assistance?

2. Yes. See Financial Analysis and Plan in Project Paper.

3. FAA Sec. 611(a)(2). If further legislative action is required within recipient country, what is basis for reasonable expectation that such action will be completed in time to permit orderly accomplishment or purpose of the assistance?

3. No further legislative action is required.

4. FAA Sec. 611(b); FY 79 App. Act. Sec. 101. If for water or water-related land resource construction, has project met the standards and criteria as per the Principles and Standards for Planning Water and Related Land Resources dated October 25, 1973?

4. Yes, preliminary planning has been carried out and appropriate economic and financial analyses conducted. See Financial and Economic Analyses in Project Paper.

5. FAA Sec. 611(e). If project is capital assistance (e.g., construction), and all U. S. assistance for it will exceed \$1 million, has Mission Director certified and Regional Assistant Administrator taken into consideration the country's capability effectively to maintain and utilize the project?

5. Yes. See Annex E.

6. FAA Sec. 209. Is project susceptible of execution as part of regional or multilateral project? If so, why is project not so executed? Information and conclusion whether assistance will encourage regional development programs.

6. The project as designed is not at this time susceptible of execution as part of a regional or multilateral project. However, other international donors are also assisting in this sector in other zones of the country.

7. FAA Sec. 601(a). Information and conclusions whether project will encourage efforts of the country to: (a) increase the flow of international trade; (b) foster private initiative and competition; (c) encourage development and use of cooperatives, credit unions, and

7. Yes to (b), (c), (d) and (e).

savings and loan associations;
(d) discourage monopolistic practices; (e) improve technical efficiency of industry, agriculture and commerce; and
(f) strengthen free labor unions.

8. FAA Sec. 601(b). Information and conclusion on how project will encourage U.S. private trade and investment abroad and encourage private U.S. participation in foreign assistance program (including use of private trade channels and the services of U.S. private enterprise).

9. FAA Sec. 612(b); Sec. 636(h). Describe steps taken to assure that, to the maximum extent possible, the country is contributing local currencies to meet the cost of contractual and other services, and foreign currencies owned by the U.S. are utilized to meet the cost of contractual and other services.

10. FAA Sec. 612(d). Does the U.S. own excess foreign currency of the country and, if so, what arrangements have been made for its release?

11. FAA Sec. 601(e). Will the project utilize competitive selection procedures for the awarding of contracts, except where applicable procurement rules allow otherwise?

12. FY 79 App. Act. Sec. 608. If assistance is for the production of any commodity for export, is the commodity likely to be in surplus on world markets at the time the resulting productive capacity becomes

8. U.S. private enterprise firms and/or private individuals will be involved in implementing the project.

9. The project Grant Agreement contains provisions which assure that the HMG/N will utilize local currencies for support of local costs expenses of the project. See Financial Plan in Project Paper for HMG/N local currency contribution.

10. No.

11. Yes.

12. Not applicable.

operative, and is such assistance likely to cause substantial injury to U.S. producers of the same, similar, or competing commodity?

B. FUNDING CRITERIA FOR PROJECT

**1. Development Assistance Project 1.
Criteria**

a. FAA Sec. 102(b); 111; 113; 281a. Extent to which activity will (a) effectively involve the poor in development, by extending access to economy at local level, increasing labor-intensive production and the use of appropriate technology, spreading investment out from cities to small towns and rural areas, and insuring wide participation of the poor in the benefits of development on a sustained basis, using the appropriate U.S. institutions; (b) help develop cooperatives, especially by technical assistance, to assist rural and urban poor to help themselves toward better life, and otherwise encourage democratic private and local governmental institutions; (c) support the self-help efforts of developing countries; (d) promote the participation of women in the national economies of developing countries and the improvement of women's status; and (e) utilize and encourage regional cooperation by developing countries?

- a. The project deals directly with this subject.
- b. The project directly involves this subject within the current rural organizational system of the country.
- c. The project entirely supports the self-help efforts of this RLDC.
- d. Yes, through favorable project impact on rural areas and specific sub-components oriented to participation of women in development.
- e. This subject does not apply to the project.

b. FAA Sec. 103, 103A, 104, 105, 106, 107. Is assistance being made available: (including only applicable paragraph which corresponds to source of funds used. If more than one fund source is used for project, include relevant paragraph for each fund source).

(1) [103] for agriculture, rural development or nutrition; if so, extent to which activity is specifically designed to increase productivity and income of rural poor; [103A] if for agricultural research, is full account taken of needs of small farmers;

The project is designed specifically to increase productivity and income of the rural poor, in an integrated manner, throughout the extremely poor rural area that is its target.

c. [107] Is appropriate effort placed on use of appropriate technology?

Yes. See Project Analysis in Project Paper.

d. FAA Sec. 110(a). Will the recipient country provide at least 25% of the costs of the program, project, or activity with respect to which the assistance is to be furnished (or has the latter cost-sharing requirement been waived for a "relatively least-developed" country)?

The HMG/N will provide at least 23% of the cost of the project; a waiver for a "relatively least developed country" is requested. See Financial Plan.

e. FAA Sec. 110(b). Will grant capital assistance be disbursed for project over more than 3 years? If so, has justification satisfactory to the Congress been made, and efforts for other financing, or is the recipient country "relatively least developed"?

Not applicable.

f. FAA Sec. 281(b). Describe extent to which program recognizes the particular needs, desires, and capacities of the people of the country, utilizes the country's intellectual resources to encourage institutional development; and supports civil education and training in skills required for effective participation in governmental and political processes essential to self-government.

The HMG/N has stated in its five-year plans and reiterated more strongly in the Revised Fundamental Principles of the Sixth Plan (1980-85), its intention to increase rural productivity and income through programs evolved and managed through popular participation at the local level and responsive to local needs, desires, and capacities. This project is designed to build on and encourage this process, employing a broad range of host-country professional and vocational talent. It has specific, rural-based, educational and training sub-components.

g. FAA Sec. 122(b). Does the activity give reasonable promise of contributing to the development of economic resources, or to the increase or productive capacities and self-sustaining economic growth?

Yes, see response to f. above.

11/12
ANNEX E

Section 611 (e) Certification

RURAL AREA DEVELOPMENT - RAPATI ZONE PROJECT (367-0129)

This project will finance a significant proportion of the costs of increasing production (primarily agricultural), productivity and the quality of life in the Rapati Zone through a variety of programs in farming systems, renewable resource management, rural works, employment and skills development, and institutional development. The project contains elements of construction, extension, training, technical assistance, commodities provision and organizational improvement.

It will be administered by the Ministry of Home Panchayat of HMG/Nepal through a Project Coordinating Committee and draw upon, as well as upgrade in the project area, capacities of inter alia, the Departments of Forestry, Irrigation, Soil & Water Conservation, Cottage and Village Industries, Roads, Livestock Development & Animal Health, Local Development, Agriculture, the Ministries of Health and Education, the Agricultural Development Bank of Nepal and the Agriculture Inputs Corporation, all of which are proven institutions.

I, Samuel H. Butterfield, Principal Officer of the Agency for International Development in Nepal, having taken into account the recognized limits of the Government of Nepal to provide trained personnel for rural development projects and to maximize the benefits from such projects, but also the successful maintenance and utilization of projects in Nepal previously financed or assisted by the United States, and having reviewed the performance of agencies of HMG/Nepal, including those mentioned above, which will have primary responsibility for implementing this project, do hereby certify that in my judgement His Majesty's Government of Nepal has both the financial capacity and the human resources to carry out, maintain and utilize this project effectively.


Samuel H. Butterfield
Director, USAID/Nepal

Date: March 15, 1966

ANNEX F

INITIAL ENVIRONMENTAL EXAMINATION

PROJECT LOCATION : NEPAL

PROJECT TITLE : RURAL AREA DEVELOPMENT - RAPATI ZONE
(367-0129)

LIFE OF PROJECT : 5 YEARS : FY 80 COMMENCEMENT

FUNDING : LOP : \$26.7 MILLION

I.E.E. PREPARED BY : S. J. FREUNDLICH, USAID/N/PDIS
JAMES OSBORN, ASIA/PD
MARCH 1980

ENVIRONMENTAL ACTION
REQUIRED : NEGATIVE DETERMINATION

MISSION CONCURRENCE

: 
SAMUEL H. BUTTERFIELD
DIRECTOR, USAID/NEPAL

DATE: 2-29-80

ASSISTANT ADMINISTRATOR'S
DECISION

: APPROVED _____

DISAPPROVED _____

DATE: _____

ANNEX F

IMPACT IDENTIFICATION AND EVALUATION FORM (IEE)

PROJECT: RURAL AREA DEVELOPMENT - RAPATI ZONE
PROJECT NUMBER: 367-0129

Impact
Identification
and
Evaluation

Impact Areas and Sub-areas

A.	LAND USE	
1.	Changing the character of the land through:	
a.	Increasing the population	L
b.	Extracting natural resources	H+
c.	Land clearing	L
d.	Changing soil character	M+
2.	Altering natural defenses	N
3.	Foreclosing important uses	L
4.	Jeopardizing man or his works	L
B.	WATER QUALITY	
1.	Physical state of water	M
2.	Chemical and biological states	M
3.	Ecological balance	L
C.	ATMOSPHERIC	
1.	Air additives	L
2.	Air pollution	L
3.	Noise pollution	L
D.	NATURAL RESOURCES	
1.	Diversion, altered use of water	M
2.	Irreversible, inefficient commitments	N
E.	CULTURAL	
1.	Altering physical symbols	N
2.	Dilution of cultural traditions	L
F.	SOCIO-ECONOMIC	
1.	Changes in economic/employment patterns ...	M
2.	Changes in population	M
3.	Changes in cultural patterns	M
G.	HEALTH	
1.	Changing a natural environment	M
2.	Eliminating an ecosystem element	U
H.	GENERAL	
1.	International impacts	L
2.	Controversial impacts	L
3.	Larger program impacts	H

For Discussion of Impacts see Section III., D. of the Paper.

ANNEX G

TELEGRAM

UNCLASSIFIED

R 160043Z JUL 77
FM SECSTATE WASHDC
TO AMEMBASSY KATHMANDU

UNCLAS STATE 166120

AIDAC

E. O. 11652: N/A

TAGS:

SUBJECT: RURAL AREA DEVELOPMENT - RAPTI ZONE - PID

1. ASIA PROJECT ADVISORY COMMITTEE ON JUNE 24 REVIEWED THE SECOND SUBMISSION OF THE RURAL AREA DEVELOPMENT, RAPTI ZONE PID AND PROVISIONALLY APPROVED PROCEEDING WITH CONTINUED DEVELOPMENT OF THE GRANT PROJECT. APAC RECOGNIZES THAT THE GENERATION OF RURAL AREA ECONOMIC CENTERS WARRANTS AID SUPPORT IN NEPAL; HOWEVER, THE PROPOSED PROJECT DID NOT SUFFICIENTLY CORRELATE THE OUTPUTS DESCRIBED IN THE PID TO CLEARLY DEFINED DEVELOPMENT OBJECTIVES IN THE RAPTI ZONE. APAC ALSO CONSIDERS IT IMPERATIVE TO CONFIRM THE QUOTE DEPTH UNQUOTE OF GON'S POLICY SUPPORT OF REGIONAL DONOR DEVELOPMENT AT AN EARLY DATE TO ENSURE WE DO NOT GET OUT AHEAD OF GON. CONSEQUENTLY, THE NEXT STAGE OF PROJECT DEVELOPMENT IS DEPENDENT UPON (A) AN EXAMINATION AND ASSESSMENT OF THE RAPTI ZONE AS AN AREA SUFFICIENTLY CAPABLE OF BOTH ABSORBING AND EFFECTIVELY UTILIZING THE PROPOSED CONCENTRATION OF DEVELOPMENT RESOURCES, AND (B) IDENTIFICATION OF ZONAL DEVELOPMENT PRIORITIES AND A CORRESPONDING PRELIMINARY DESCRIPTION OF PROJECT ACTIVITIES. THE PROJECT PROPOSAL WILL BE REEVALUATED BY AID/W FOLLOWING RECEIPT AND REVIEW OF THE ADDITIONAL ANALYSIS. THE SCOPE OF WORK AND COMPOSITION OF THE REQUIRED PROJECT DESIGN TEAM WILL BE DEVELOPED BY AID/W IN CONJUNCTION WITH THE MISSION.

2. THE COMMITTEE ALSO FURTHER AGREED THAT THE FOLLOWING CONCERNS SHOULD BE DEALT WITH DURING DESIGN.

(A) IN ORDER TO AVOID POTENTIALLY DISRUPTIVE COMPETITION AMONG DONORS, THE APPROPRIATE ORGANIZATIONAL APPARATUS FOR MAXIMIZING COORDINATION WITH OTHER DONOR ACTIVITIES SHOULD BE EVALUATED WITHIN THE CONTEXT OF OVERALL PROJECT DESIGN. CREATION OF DISTINCT, UNIQUE BUREAUCRATIC ENTITIES TO CARRY OUT THE PROJECT (SUCH AS A QUOTE DEVELOPMENT CORPORATION UNQUOTE OR QUOTE AREA DEVELOPMENT BOARD UNQUOTE)

SHOULD BE AVOIDED WHEREVER POSSIBLE. IN ORDER TO PREVENT POSSIBLE DONOR QUOTE BALKANIZATION UNQUOTE APAC EXPECTS THAT OTHER DONORS WILL BE ACTIVELY BROUGHT INTO THIS PROJECT IF AT ALL FEASIBLE. IDA WOULD APPEAR TO BE IDEAL CANDIDATE. PLEASE INDICATE IF YOU WISH AID/W TO PURSUE THIS POSSIBILITY FURTHER FROM HERE.

In the past three years HMG/N has established the appropriate organizational apparatus for coordinating donor activities in rural development; the RAD Rapati Project follows existing policies and experience to date. (See PP Section III., F., Annex L, and Appendix F.)

The issue of donor "balkanization" remains actively discussed in the Panchayat Development Central Coordinating Committee; the policy of this committee generally encourages individual donors to support all development activities in one areal unit. Donor(s) pursue informal collaboration, coordination does take place, and rural development projects draw on national level (donor or HMG/N funded) projects where practical. As discussed in Section II. B., the current Project will draw on efforts of several other donors over the initial five-year period.

(B) THE POTENTIAL PROJECT SHOULD BE STRUCTURED TO MINIMIZE POSSIBLE DISTORTION OF NATIONAL PROGRAMS THROUGH DIVERSION OR OVEREXTENSION OF SCARCE GON MANPOWER AND BUDGETARY RESOURCES INTO ONE AREA SUCH AS THE RAPTI ZONE (I.E., SENSITIVITY TO THE GON'S QUOTE ABSORPTIVE CAPACITY UNQUOTE), THEREFORE, KEEPING THE SCALE OF THE PROJECT WITHIN REASONABLE BOUNDS IS IMPORTANT.

The Project design represents a careful balance of local aspirations and needs against concerns of absorptive capacity, and is considered of a scale appropriate to the current stage of development in Rapati Zone. As implied in Section II. A., the design "... combines stress on line department and agency responsibility ... with ... enhancement of local level capability and responsibility for planning, coordinating and implementing development activities ..."

The Project envisions the creation, and training where necessary, of approximately 900 incremental positions for line departments and agencies in Rapati Zone during the course of the Project. Of this figure, approximately half are for local people and are of a level (Non-gazetted Administrative III and IV, Agricultural Assistants) that present few problems to the Civil Service (in terms of position creation) and that should not obviate hiring from the Zone. The remaining positions, averaging 90 per year spread among 13 departments or agencies of HMG/N, are not considered to be an unreasonable level of expectation either by USAID/N or by concerned HMG/N officials.

and the upgrading of existing roads should serve to stimulate more intra-district marketing as increases in production allow. The off-farm employment component will complement the agricultural production strategy, not so much by increasing purchasing power to stimulate production in lowland areas, but rather by increasing household and community secondary incomes and enabling farmers to assume more risk -- hence, innovation -- in their agricultural production.

(E) GON MANPOWER SHORTAGES ARE GENERALLY CRITICAL IN RURAL AREAS. IN ADDITION TO THE TRAINING COMPONENT PROPOSED, PROJECT DESIGN SHOULD DEAL WITH PROPOSED MECHANISMS OR INCENTIVES DESIGNED TO INSURE THAT SUFFICIENT GON STAFF WILL REMAIN AVAILABLE TO IMPLEMENT AGRICULTURAL PRODUCTION PROGRAMS (I.E., ADAPTIVE RESEARCH, EXTENSION SERVICES, ACCESS TO CRITICAL INPUTS OF CREDIT, FERTILIZER, SEED, ETC.) AND, SIMULTANEOUSLY, OFF-FARM EMPLOYMENT PROGRAMS.

In-service training for HMG/N staff is amply provided through the Project, with Zonal and Regional (within Nepal) training emphasized initially and participant training phased in later as a "reward" for performance. (See Section III. E., Human Resources and Training Analysis.)

HMG/N has instituted a point system wherein an employee gets more points towards promotion by serving in rural areas than in Kathmandu, as well as a graduated series of "remote area allowances" above base pay, to serve as incentives for personnel to serve in areas such as Rapati Zone. In addition, it has become fairly standard donor practice to provide some sort of "project allowance" as an incentive on donor funded projects. USAID/N does not necessarily agree with this practice, and would rather see HMG/N raise all salary levels and institute an improved training and promotion structure into the civil service. However, the practice is common enough that were the Project not to include some sort of additional allowance, it would be extremely difficult to attract good people to Rapati in spite of the training incentives.

The AID funding thus includes roughly \$1.6 million over five years for "Incentive Allowances" for HMG/N departmental and agency personnel serving in the Zone who are actively engaged in Project work. These allowances have been based on an average additional 25 percent of base pay for gazetted and 35 percent of base pay for non-gazetted personnel. As noted in a recent cable exchange between AID/W and USAID/N on the subject, "... the government is working up an across the board policy on the issue to guide both donors and GON ministries ..." (KATHMANDU 2525, 4/28/80) and at this time there is no uniform procedure for these allowances. The figures used in RAD reflect our best estimates of what the final policy will

Budgetary resources, including recurrent costs, are discussed in the USAID/N response to the following cable (STATE 071482), paragraph 4.

(C) ECONOMIC INTERACTION MAY CROSS THE POLITICAL OR ADMINISTRATIVE BOUNDARIES OF CONTIGUOUS ZONES. THE DESIGN TEAM SHOULD, THEREFORE, INVESTIGATE STRUCTURING THE PROPOSED PROJECT AS A TRANS-ZONAL APPROACH TO QUOTE MARKET AREA UNQUOTE OR QUOTE ECONOMIC SPACE UNQUOTE DEVELOPMENT WITHOUT BEING CONSTRAINED BY THE PARAMETER OF THE RAPTI ZONE PER SE. CONVERSELY, INITIAL INTEGRATED DEVELOPMENT ACTIVITIES MAY BE MORE APPROPRIATE WITHIN INDIVIDUAL RAPTI ZONE DISTRICTS AS OPPOSED TO THE ZONE AS A WHOLE OR SOME OTHER LARGER QUOTE ECONOMIC SPACE UNQUOTE.

(D) ONE OF THE FUNDAMENTAL PREMISES OF THE PROPOSED PROJECT IS THAT GENERATION OF OFF-FARM EMPLOYMENT IN THE HILLS WILL INCREASE PURCHASING POWER AND THEREFORE STIMULATE DEMAND FOR INCREASED AGRICULTURAL PRODUCTION FROM LOWLAND AREAS. THE PROJECT DESIGN SHOULD DETERMINE THE VULNERABILITY OF THIS PROJECT QUOTE LINKAGE UNQUOTE CONCEPT GIVEN THE HIGH COST OF TRANSPORTATION BETWEEN THE HILLS AND THE LOWLANDS AND THE POSSIBILITY OF INDIAN MARKET DOMINANCE.

The current design has taken into account both the formal and informal market structure of individual districts, the Zone, the surrounding area, and where appropriate, linkages with northern India. With the exception of Dang District, which markets a substantial surplus of rice and mustard oil in good years, most areas have been found to have extremely undeveloped markets because the majority of the population exists at or below a subsistence level. (See Annex J, Social Soundness Analysis, on income levels and current landholdings, and Appendix G, Farming Systems, for farm production estimates.) The Project strategy thus focuses on increasing food production in the hill districts rather than on creating market areas in the Zone. As noted in Appendix G, Farming Systems, the substantial increases in agricultural production that will be achieved during the Project will still not provide a marketable surplus of food crops in any of the Hill districts, but will approach household subsistence needs more closely than does current production.

This revised assessment of the potential for agricultural production in the Hills, coupled with findings during design that market linkages between lowland areas and the Hills are tenuous and generally dependent on markets outside the project area, has led both HMG/N and USAID/N away from an immediate inter-regional exchange approach to the Project strategy. Primary emphasis is on fulfilling subsistence needs in a self-sustaining manner rather than on creation or expansion of comparative advantages in a market economy. The establishment of additional service centers in the districts

include, and are generally consistent with the figures used by other donors. (See STATE 119187, 5/6/80, for AID/W statement on this issue.)

(F) THE SCHOOLS FOR RURAL TRANSFORMATION CONCEPT IS ALREADY INCORPORATED INTO A FUNCTIONING PROGRAM UNDER THE NATIONAL EDUCATION COMMITTEE. THE NEC, HOWEVER, HAS DECIDED TO PROCEED CAUTIOUSLY WITH A MINIMUM OF EXTERNAL ASSISTANCE. THE DESIGN TEAM SHOULD EXAMINE THE POSSIBILITY THAT THE SIX PROPOSED PILOT PROJECTS WILL EXCEED THE CAPACITY OF THE NEC AND POSSIBLY DISRUPT A CURRENTLY SUCCESSFUL APPROACH TO COMMUNITY DEVELOPMENT, VANCE

Since the initial PID, no additional "Schools for Rural Transformation" have been established in Nepal. Although USAID/N agrees with the concept, the current design does not include funding due to lack of experience to date. Should this situation change, the low level of funding required could probably be shifted within the Education Component to allow for a pilot activity in Rapati Zone.

Excerpted by USAID/N
19 March, 1980

TELEGRAM

UNCLASSIFIED

R 1808247 MAR 80
FM SECSTATE WASHDC
TO AMEMBASSY KATHMANDU 2266

UNCLAS STATE 071482

SUBJECT: FY 82 CDSS REVIEW

1. NEPAL CDSS REVIEW WAS HELD FEBRUARY 14, 1980. AA/ASIA JOHN SULLIVAN CHAIRED THE REVIEW. ...
2. ... WASHINGTON REALIZES THAT STRIKING RESULTS WILL BE SLOW IN COMING. WASHINGTON WILL LOOK FOR REASONABLE AND UNINFLATED PHYSICAL TARGETS FOR THE MEDIUM AND FOR THE LONGER TERM. ...

The Project design is weighted heavily towards "reasonable and uninflated physical targets," a fact which occasionally conflicts with local aspirations and/or HMG/N policies regarding rural development. The current document reflects targets based on a careful analysis of experience to date in Rapati Zone and elsewhere in Nepal, with specific interventions (i.e., training, technical assistance) added where known bottlenecks exist. Funding is provided within the Project for a joint HMG/N/AID evaluation in Year Three; should progress in certain components exceed targets as designed, consideration will be given to shifting or adding funds to permit more accelerated work in those components.

3. IN REGARD SECOND ISSUE, CONCERN CENTERED AROUND FEASIBILITY OF CURRENT STRATEGY GIVEN LOW OVERALL AGRICULTURE PRODUCTION POTENTIAL AND SMALL SIZE OF LAND HOLDINGS IN NEPAL'S MIDDLE HILLS. ISSUES PAPER FOR REVIEW COMMENTED THAT WORLD BANK ESTIMATES 0.6 HECTARE IS MINIMUM LAND HOLDING AVERAGE FAMILY REQUIRES FOR AGRICULTURE SUBSISTENCE. THIS STATEMENT GENERATED MUCH DISCUSSION AS TO WHETHER OR NOT MEANINGFUL PRODUCTION INCREASES (I.E., UP TO AT LEAST SUBSISTENCE LEVEL) COULD BE ACHIEVED ON THE 0.4 HECTARES WHICH IS AVERAGE LAND HOLDING IN HILLS OF NEPAL. ... AA/ASIA CONCLUDED THAT MISSION SHOULD BE ASKED TO PROVIDE WASHINGTON WITH MORE SYSTEMATIC ANALYSIS OF CONDITIONS AND GON OBJECTIVES IN MIDDLE HILLS AND MORE CLEARLY DEFINED STRATEGY FOR THIS AREA ASAP. RAD PROJECT PAPER, EXPECTED IN MAY, AND HAPS PROJECT PAPER, ANTICIPATED FIRST QUARTER FY 81 (?), WERE SUGGESTED AS TWO MEANS OF PROVIDING THIS INFORMATION. ...

Both the Farming Systems analysis at Appendix G and the Financial and Economic Analysis at Annex B (Summary) and Appendix A demonstrate that meaningful production increases can be achieved on holdings less than 0.6 hectares, depending on such variables as type(s) of land held, access to and control of water supply, and reliable access to improved inputs, including extension. Additionally, the World Bank estimate referred to above is based primarily on farm production of field crops; analysis shows that few families rely solely on cropping for subsistence, but rather undertake mixed strategies including animal husbandry, migration, cottage industry and petty trading to augment incomes. The Project is designed to improve returns from these varying strategies as well, particularly for households with land types which do not suggest much possibility of improved productivity on marginal sized holdings.

4. OVERALL QUESTION ON THIRD ISSUE WAS WHETHER DONORS, BY PROVIDING LOCAL AND RECURRENT COST FINANCING PLUS NONPROJECT COMMODITY ASSISTANCE, WERE PUSHING TOO MANY RESOURCES INTO NEPAL, BURDENING NOT ONLY ITS FINANCING ABILITY TO SUPPORT THE LEVEL OF ASSISTANCE BUT ALSO INSTITUTIONAL AND ADMINISTRATIVE CAPACITY. A) IN TERMS OF RECURRENT COSTS SPECIFICALLY, QUESTION WAS IF MISSION WAS SPEAKING OF LIFE-OF-PROJECT FUNDING ONLY AND IF THERE WAS ASSURANCE GON COULD PICK UP SUCH COSTS AFTER PROJECT TERMINATED. ANOTHER CONCERN WAS EXTENT TO WHICH GON WAS ATTEMPTING TO INCREASE ITS DOMESTIC RESOURCES. DURING DISCUSSION OF ISSUE, NO OBJECTION WAS RAISED TO MISSION PROVIDING LOCAL AND RECURRENT COST SUPPORT IN CONNECTION WITH SPECIFIC PROJECTS. AA/ASIA INDICATED THAT BUREAU SUPPORTS DECLINING LOCAL CURRENCY SUPPORT BY A.I.D. AND INCREASING LOCAL CURRENCY SUPPORT HOST COUNTRY. CONCERN WAS VOICED, HOWEVER, OVER LONG-RUN IMPLICATIONS OF RECURRENT-COST FINANCING. PPC REP NOTED PPC IS PREPARING POLICY PAPER ON THIS TOPIC. IT IS EXPECTED TO STATE RECURRENT COST FINANCING SHOULD BE PROJECT RELATED AND THAT THERE SHOULD BE EVIDENCE THAT THESE COSTS WILL BE PICKED UP BY ENTITY, SPECIFICALLY IDENTIFIED, AFTER PROJECT TERMINATES. IN REGARD QUESTION ABOUT GON'S POTENTIAL TO INCREASE REVENUE COLLECTION, CONSENSUS OF MEETING WAS PROSPECTS FOR MUCH IMPROVEMENT IN THIS AREA WERE NOT VERY BRIGHT. GIVEN ABOVE CONCERNS, AA/ASIA INSTRUCTED MISSION TO REVIEW BOTH RECURRENT COST IMPLICATIONS OF ITS PROJECT PROPOSALS AND HOST GOVERNMENT EFFORTS TOWARD RESOURCE MOBILIZATION AS PART OF ITS FUTURE PROJECT PAPERS. ...

Many of the calculations supporting the overall HMG/N 21 percent contribution to the Project assume costs of existing, on-board staff who will be working full-time on Project-related

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activities. Of the total estimated figure of \$1.5 million (in FY 80 dollars) for recurrent costs, only about \$.7 million represent costs over what is currently being spent in the Zone. If one assumes the standard HMG/N without-inflation increase of 10 percent per year in departmental budgets, then the actual uninflated \$1.5 million only represents a \$.3 million contribution above a "without Project" situation. It is the opinion of the Mission that HMG/N will be able to assume this increment. The issue of increased revenue collection is difficult to analyze at the present time. It is assumed that the local tax structure will be strengthened in the future, but it is unclear what form this will take or how decentralized tax collection authority will be. In sum, although USAID/N agrees with the CDSS reviewers that "prospects for improvement in this area (are) not very bright," there is little that can be done in one areal unit such as Rapati independently of national revenue collection policies. In terms of local (i.e. Zonal) resource mobilization, however, the Project analyses reflect high impact in non-tax areas.

6. ... AA/ASIA, THEREFORE INSTRUCTED MISSION TO DESCRIBE IN FUTURE PROJECT PAPERS HOW IT INTENDS TO ENSURE SUCCESS OF MANPOWER TRAINING ELEMENTS OF ITS PROJECT WITHOUT PROFESSIONAL ATTENTION OF EHR STAFF. ...

The abolition of USAID/N/EHR reduced the "manpower" concerned specifically with training by two persons, a USDH EHR Officer and one FSN DH position. The whole USAID/N/Training Branch was shifted to the Program Office and continues to provide the Mission a wide range of services, including, most importantly, placement and processing of third country and U.S. participants. One FSN DH was shifted to the ARC Office to help the office chief monitor the Agricultural College project. The USAID/N/RAD Office, which will assist in the implementation of and monitor the RAD -- Rapati Zone Project, hired a USPSC Training Advisor in November, 1979, who will continue coordinating local and participant training with the various agencies of HMG/N and, where appropriate, USAID/N/Training, until the establishment of the PCO Training and Technical Assistance Unit during FY 81. The current Advisor has been nominated to fill the third USDH position in the RAD Office, and although his responsibilities will broaden considerably, he will continue to monitor training under the Project from his new position.

E. ... FINALLY, IT IS NOTED THAT CDSS DOES NOT ADDRESS MISSION PLANS TO IMPROVE PARTICIPATION OF WOMEN IN AID-ASSISTED ACTIVITIES EVEN THOUGH IT DOES STATE THAT QUOTE WOMEN BEAR A DISPROPORTIONATE SHARE OF AGRICULTURAL WORK UNQUOTE AND ALSO THAT QUOTE WOMEN SUFFER FROM UNEQUAL...ACCESS TO ALMOST ALL DEVELOPMENT SERVICES UNQUOTE. GIVEN EMPHASIS ON INCREASED

AGRICULTURAL PRODUCTIVITY THROUGH FARMING SYSTEMS APPROACH IN CDSS'S RURAL DEVELOPMENT SECTOR STRATEGY, WHAT SPECIFIC ACTIVITIES WILL BE INCLUDED IN OUR PROJECTS TO ENSURE THAT WOMEN ARE CONSIDERED NOT ONLY AS RECIPIENTS OF DEVELOPMENT SERVICES BUT DEVELOPMENT RESOURCES AS WELL? RAD AND HAPS PROJECT PAPERS MAY BE APPROPRIATE VEHICLES TO PROVIDE THIS INFORMATION.

Draft results from the "Status of Women in Nepal" Study, financed by AID (PD&S funding) and HMG/N (Center for Economic Development and Administration, Tribhuvan University) have provided a basis on which to build fuller participation of women into the RAD Project. Of particular utility is the fact that two of the "Status of Women" Case Studies were conducted in villages of Rapati Zone.

The Project components described in Section II. B. of the Project Paper refer to activities or training opportunities specifically targeted for and/or likely to elicit the participation of women. Outside of planned activities with the District Women's Organizations and women's Small Farmer Development Groups, there are no "women-specific" activities foreseen. Rather, following the findings of the "Status of Women" Study and of most of the relevant international literature, the design builds on existing spheres of women's authority (e.g. seed selection and storage, fodder management, some cottage industries, domestic water collection and utilization, child care, nutrition) and targets training within overall components for women. Employment opportunities in agriculture, resource management and cottage industries are targeted for women. Half of the teacher training in the education component is for untrained and unqualified women teachers. These emphases should all serve to increase the number of options for young women and girls in the Zone through providing role models and opportunities not previously available to them.

One issue regarding women's participation in the Project continues to be the problem of enforcing HMG/N's laws on equal-pay-for-equal-work. Construction wage labor in the Zone is commonly paid on differential rates for men, women and children. A current effort to force contractors to pay women equally has resulted in no women being employed on a particular project. HMG and USAID will continue to monitor this unfortunate occurrence, and will consider such activities as legal aid should a resolution not be found.

125-1126

ANNEX H

TELEGRAM

UNCLASSIFIED

P 301040Z MAY 80
FM AMEMBASSY KATHMANDU
TO SECSTATE WASHDC PRIORITY 0839

UNCLAS KATHMANDU 3208

AIDAC

E.O. 12065: N/A
SUBJECT: GON LETTER OF REQUEST FOR RURAL AREA
DEVELOPMENT- RAPATI ZONE PROJECT

REFERENCE: KATHMANDU 3192

1. TEXT OF GON OFFICIAL LETTER OF REQUEST DATED
THIRTY MAY 1980 FROM MINISTRY OF FINANCE FOLLOWS.

2. QUOTE: DEAR MR. BUTTERFIELD: KINDLY REFER TO
YOUR LETTER OF MARCH 3, 1980 REGARDING PROJECT PAPER
ON RURAL AREA DEVELOPMENT, RAPATI ZONE.

I AM PLEASED TO INFORM YOU THAT HIS MAJESTY'S
GOVERNMENT OF NEPAL (HMG/N) HAVE AGREED THE OVERALL
OBJECTIVES AND COMPONENTS OF THE PROJECT PAPER.
HOWEVER, SOME OF THE SPECIFIC COMPONENTS OF THE
PROGRAMME RELATING TO EDUCATION, IRRIGATION, ETC.,
CAN BE WORKED OUT IN DETAIL LATER WITH THE CONCERNED
DEPARTMENTS AT THE TIME OF PREPARING ANNUAL WORK
PLAN.

WITH THESE OBSERVATIONS, HMG/N WOULD LIKE TO REQUEST
U.S. GOVERNMENT TO PROVIDE GRANT ASSISTANCE FOR THE
IMPLEMENTATION OF THE RURAL AREA DEVELOPMENT PROGRAMME
IN RAPATI ZONE AS PROPOSED IN THE PROJECT PAPER.
WE HOPE THAT THIS REQUEST OF HMG/N SHALL RECEIVE
FAVOURABLE CONSIDERATION FROM U.S. GOVERNMENT.

WITH BEST REGARDS,
SINCERELY YOURS,

H.S. SHRESTHA
JOINT SECRETARY UNQUOTE.

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ANNEX H

TELEGRAM

UNCLASSIFIED

R 030703Z JUN 80
FM AMEMBASSY KATHMANDU
TO SECSTATE WASHDC 0869

UNCLAS KATHMANDU 3256

AIDAC

E.O. 12065 NA

SUBJECT: NEW MINISTRY OF LOCAL DEVELOPMENT

1. ON SUNDAY, JUNE ONE, PRIME MINISTER S.B. THAPA ANNOUNCED TO PRESS THAT MORE EMPHASIS WILL BE LAID ON ECONOMIC IMPROVEMENT BY GIVING "TOP PRIORITY TO RURAL DEVELOPMENT". PART OF THIS INCREASED EMPHASIS IS THE CREATION OF NEW MINISTRY OF LOCAL DEVELOPMENT, UNDER LEADERSHIP OF MINISTER BALARAM GHARTIMAGAR. ANNOUNCEMENTS WERE MADE FOLLOWING CABINET RESHUFFLE AND FIRST MEETING WITH NEW COUNCIL OF MINISTERS.
2. ALTHOUGH ACTUAL STRUCTURE OF NEW MINISTRY REMAINS TO BE FULLY ELABORATED, IT IS CLEAR IT WILL INCLUDE TWO OF THE CURRENT LEADING ENTITIES CONCERNED WITH RURAL DEVELOPMENT, I.E., THE COORDINATION STRUCTURE FOR INTEGRATED PANCHAYAT DEVELOPMENT AND THE LOCAL DEVELOPMENT DEPARTMENT. BOTH WILL BE SHIFTED INTACT FROM MINISTRY OF HOME PANCHAYAT. IT IS PROBABLE THAT PANCHAYAT DEVELOPMENT OFFICERS WILL ALSO MOVE UNDER ITS AUSPICES. MEMBERSHIP ON THE FUNCTIONS OF COORDINATION COMMITTEES FOR RURAL DEVELOPMENT ARE TO REMAIN VIRTUALLY THE SAME, WITH PROBABLE SHIFTING OF COMMITTEE CHAIRS AS APPROPRIATE. INDICATIONS ARE THAT ALL KEY PEOPLE IN EXISTING STRUCTURES WILL RETAIN THEIR RESPONSIBILITIES AND ROLES, ALTHOUGH POSITIONS/DIVISIONS MAY BE RENAMED.
3. ADMINISTRATIVE STRUCTURE FOR RURAL AREA DEVELOPMENT RAPATI ZONE (RAD) PROJECT THUS REMAINS EXACTLY AS DEPICTED IN PROJECT PAPER, WITH MINISTRY OF LOCAL DEVELOPMENT REPLACING MINISTRY OF HOME PANCHAYAT AS "LEAD MINISTRY" BUT WITH COORDINATING AND IMPLEMENTING ENTITIES UNCHANGED. CREATION OF MINISTRY SHOULD NOT LEAD TO ANY MAJOR STRUCTURAL CHANGES IN IMPLEMENTATION OF RURAL DEVELOPMENT PROJECTS BUT WILL MOST CERTAINLY FOCUS EVEN MORE ATTENTION AND RESOURCES ON ACTIVITIES PLANNED AND UNDERWAY.

PAGE TWO

KATHMANDU 3256

4. INCLUSION IN CABINET OF PORTFOLIO FOR LOCAL DEVELOPMENT APPEARS TO REFLECT INCREASED GON COMMITMENT TO MAKING DECENTRALIZED RURAL DEVELOPMENT POLICIES WORK MORE SMOOTHLY. THIS HEIGHTENED STATUS BODES WELL FOR THE EARLY YEARS OF THE RAD PROJECT.

27/1/20

ANNEX I

PROJECT AUTHORIZATION AND DETERMINATION
THAT AID WILL DIRECTLY PROCURE
SELECTED GOODS AND SERVICES

1. Action Memorandum
2. Authorization
3. Project Data Sheet
4. Determination That AID Will Directly Procure Selected Goods and Services

JUL 10 1980

ACTION MEMORANDUM FOR THE ACTING ADMINISTRATOR

THRU: ES *pc*

THRU: A/AA/PPC, Charles Paolillo *CP*

FROM: AA/ASIA, John H. Sullivan *JHS*

SUBJECT: NEPAL - Rural Area Development - Rapati Zone Project (367-0129)
\$26,700,000 Grant

Problem: Your approval is required for a grant of \$26,700,000 to Nepal for the Rural Area Development - Rapati Zone (RAD) Project (367-0129). The grant is from the Agricultural, Rural Development and Nutrition (FAA Section 103) appropriation and includes an initial authorization of \$2.5 million in FY 1980 with subsequent increments through FY 1984 of \$24.2 million subject to availability of funds.

Discussion: The Government of Nepal (GON) has adopted a rural development strategy based on integrated development programs in sets of contiguous administrative districts. These programs focus particularly on the middle hills where 60 percent of the nation's people live. They seek to improve subsistence food production and consumption, employment and delivery of basic services. This project reflects that strategy and will support development at the village, district and zonal levels in the five districts of the Rapati Zone in the Far Western Region of Nepal. The project will improve crucial aspects of the quality of life for the rural poor in the Zone, including income, productivity, nutrition, employment, control of family size and access to basic education.

Coordination and management of the programs to be supported under the project will be the responsibility of the newly created Ministry of Local Development (MLD) which incorporates the GON units previously responsible for rural development projects. This Ministry will provide coordination of sectoral programs at the central level. A Project Coordination Office under the Ministry will provide coordination at the project and local levels.

Active participation and responsibility of the rural poor in the planning, design and implementation of discrete improvements supported by the project are key to the achievement of the project's objectives. Project design and development efforts by the GON and USAID have identified a number of simple management procedures, including improved annual budgeting and operational planning at local levels, that fully involve implementing agencies and local authorities in project-supported activities.

These activities address almost the whole range of development needs for the area and include improvement or initiation of farming systems, renewable resource management, (e.g., soil and water conservation, community forestry), employment and skills development, rural industries, education, appropriate technology, alternative renewable energy sources and rural works. The large number of interventions is essential if the integrated rural development concept is to be translated into a tangible improvement in living standards by addressing a range of interrelated local needs and requirements in the project area.

The availability of GON and local human resources was carefully considered in the analysis and design of the proposed activities. To address these concerns, the project provides for broad local and in-country training and institution-building support. As with other targeted aspects of the project, the training programs will emphasize the inclusion of women and other socially and economically disadvantaged groups in the area.

The total project costs are \$33.6 million equivalent of which the AID grant will contribute \$26.7 million. The AID funds will provide for long-term expatriate technical assistance in planning and information, rural construction engineering, technology transfer, procurement and logistics, and financial management. This will be supplemented as required by short-term advisors in specific substantive fields as well as by extensive Nepalese technical advisory staff. The AID funds will also provide financing for materials and equipment, construction, Nepal personnel support costs, operations and maintenance, credit resources, costs of specific project interventions and extensive training. The GON contribution of \$6.9 million equivalent will concentrate on costs of construction, personnel, training, and operations and maintenance.

CDSS: The FY 1982 USAID/N CDSS focuses on the urgency of addressing the related problems of environmental degradation, rural poverty in the hills and the lack of implementation capability at both the national and local levels. This project is fully in accord with the objectives of the CDSS and addresses each of these constraints as a main project component.

Design Changes: In view of both the technical and management complexity of the project, the Asia Bureau Project Advisory Committee concluded that the FY 1984 obligation should be conditioned on a satisfactory joint evaluation of the project conducted in the third year of implementation. The evaluation will provide AID and the GON with a clear decision point at which project performance can be assessed and necessary adjustments made. Obligation in FY 1984 will be contingent on AA/ASIA's review of the results of this evaluation.

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Conditions Precedent: In addition to AID's standard requirements, the following conditions precedent to disbursement for project and subproject activities are included in the Project Authorization:

- that the GON appoint a qualified project coordinator acceptable to AID; and
- that the planned FY 1984 obligation for the project be subject to prior AID and GON agreement on the findings of the FY 1983 joint evaluation and on the measures to implement such findings.

Covenants: Covenants specifying the terms of GON support for and participation in the project are also included in the Project Authorization. These include covenants to budget and provide funds for the project on a timely basis, to establish the necessary staff positions to implement the project, and to ensure that semi-autonomous implementing agencies meet their obligations under the project.

Congressional Notification/Audits: The project was included at page 100 of the FY 1980 Congressional Presentation. There are no outstanding GAO or AID audit issues.

Waiver Requests: The following requests for waivers are included in the Project Authorization:

- a waiver of the FAA Section 110 (a) requirement of a 25 percent host country contribution to the cost of the project. The waiver is on the basis that Nepal is a relatively least developed country and its \$6,974,000 equivalent contribution (at 21 percent of project cost) is already significant. The waiver is permitted under Section 124 (d) of the FAA.
- a waiver of Section 636 (i) of the FAA (which requires that motor vehicles be of United States manufacture) to permit AID financing of three personnel vans (estimated value \$30,000) from India. A waiver of that Section and also of the requirement for competitive procurement is required to permit the financing of 37 Honda trail bikes (estimated value \$40,000) from Japan.
- a waiver to permit financing of \$80,000 worth of explosives which are normally not eligible for AID financing.

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The vans will provide essential transport of project personnel. The trail bikes are necessary for off-road use by extension agents in remote project areas. Diesel vans and light trail bikes of the kind required are not manufactured in the United States. Moreover, Honda is the only Japanese manufacturer of trail bikes meeting the specifications of this project. Other donor financing is not available for either the vans or the trail bikes.

Accordingly, your approval of the project will: (a) permit non-U.S. procurement of the motor vehicles required from Code 941 and 935 countries as noted above, and (b) allow proprietary procurement in the case of the trail bikes.

We should note that the project will also require 25 four-wheel-drive diesel passenger vehicles and two four-wheel-drive diesel pick-up trucks, all of which will be of United States manufacture. The vehicles covered by the waiver request, however, reflect project requirements which simply cannot be met by United States-manufactured vehicles.

By granting the waiver for the Japanese trail bikes, you will be determining in that case that exclusion of procurement from Free World countries other than the cooperating country and countries included in code 941 would seriously impede attainment of U.S. foreign policy objectives and objectives of the foreign assistance program.

Finally, the explosives are essential to the construction component of the project, and existing GON procedures for transporting, storing, and handling of explosives ensure against misuse.

Recommendation: That you sign the attached Project Authorization.

Attachments:

1. Project Authorization
2. Project Paper

Clearance: JH date 7/11/80
GC:NHolmes

JH
USAID/Nepal:WDouglass;ASIA/TR:BLai;ASIA/PD:Jusborn/jk/fv:7/8/80

PROJECT AUTHORIZATION

NEPAL

Rural Area Development--Rapati Zone
Project No. 367-0129

Pursuant to Section 103 of the Foreign Assistance Act of 1961, as amended (the "Act"), and the Delegations of Authority thereunder, I hereby authorize the Rural Area Development--Rapati Zone Project (the "Project") for Nepal (the "Cooperating Country"), involving planned obligations of not to exceed Twenty-Six Million Seven Hundred Thousand United States Dollars (\$26,700,000) in grant funds over a five year period from date of authorization, subject to the availability of funds in accordance with the Agency for International Development (A.I.D.) OYB/allotment process, to help in financing foreign exchange and local costs for the Project.

The Project will support an integrated development program for five districts of the Rapati Zone of the Cooperating Country. Improvement of subsistence food production, resource management, employment and delivery of basic services are principal aspects of this effort. Specific activities to be undertaken through the Project for the Rapati Zone will include, for example, improvement or initiation of farming systems, renewable resource management, employment and skills development, rural industries, education, appropriate technology, rural works, and such other related interventions as contribute to meeting the development needs of the Zone.

Grant funds will finance long-term technical assistance, short-term advisors, materials and equipment, design and construction, Cooperating Country personnel support costs, operations and maintenance, credit resources, training and other related project requirements.

The Project Agreement, which may be negotiated and executed by the officer to whom such authority is delegated in accordance with A.I.D. regulations and Delegations of Authority, shall be subject to the following essential terms and covenants and major conditions, together with such other terms and conditions as A.I.D. may deem appropriate.

a. Source and Origin of Goods and Services

Except for ocean shipping and as A.I.D. may agree otherwise in writing, goods and services financed by A.I.D. under the Project shall have their source and origin in the Cooperating Country or in countries included in A.I.D. Geographic Code 941. Ocean shipping financed by A.I.D. under the Project shall, except as A.I.D. may agree otherwise in writing, be financed only on flag vessels of the Cooperating Country or of countries included in A.I.D. Geographic Code 941.

b. Conditions Precedent to Initial Disbursement

Prior to any disbursement under the Grant, or the issuance by A.I.D. of any commitment documents under the Project Agreement, and except as A.I.D. may agree otherwise in writing, the Cooperating Country shall furnish, in form and substance satisfactory to A.I.D., evidence that it has appointed a qualified Project Coordinator, agreeable to A.I.D., for the Project.

c. Conditions Precedent to Subsequent Obligations

Prior to any obligation of grant funds for this project for FY 1984, and except as A.I.D. may agree otherwise in writing, such obligation shall be subject to agreement by A.I.D. and the Cooperating Country based on the findings of a joint evaluation of the Project undertaken during FY 1983 and on the measures to be taken in the Project to implement such findings.

d. Conditions Precedent to Additional Disbursements for Construction

Prior to any disbursement for any construction activity in the Project, and except as A.I.D. may agree otherwise in writing, the Cooperating Country shall furnish, in form and substance satisfactory to A.I.D., final plans, special studies, cost estimates, specifications, provisions for engineering supervision, and contracts or other arrangements for construction work as specified in Implementation Letters.

e. Covenants

Except as A.I.D. may agree otherwise in writing, the Cooperating Country shall agree to:

- (1) budget for and provide funds and other contributions to the Project on a timely basis according to annual Project budgets;
- (2) provide qualified personnel and positions to implement the Project;
- (3) support the monitoring and evaluation program of the Project;
- (4) ensure that the Project Coordinator's position will be filled continuously during the life of the Project, governed by a mutually agreed-upon set of terms of reference, and that the Project Coordinator will be resident in Rapati Zone; and
- (5) ensure that semi-autonomous agencies carry out their responsibilities as planned.

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f. The Following Waivers are Hereby Approved

(1) The requirement that the Cooperating Country provide a contribution equal to 25 percent of the cost of the Project pursuant to the provisions of Section 110 (a) of the Act, is hereby waived pursuant to Section 124 (d) of the Act. It is waived on the basis that the Cooperating Country has been determined to be a relatively least developed country, as listed by the United Nations Conference on Trade and Development, and on the basis that financial constraints prohibit the Cooperating Country from meeting this requirement.

(2) The requirement of Section 636 (i) of the Act that motor vehicles be of U.S. manufacture is hereby waived, and authority to procure three personnel vans (estimated value \$30,000) from India (Code 941) and 37 light trail bikes (estimated value \$40,000) from Japan (Code 935) is hereby granted. Proprietary procurement of the trail bikes from Honda is also authorized.

(3) Project funds may be used to procure up to \$80,000 worth of explosives to be used in the road improvement and stabilization sub-project.

Clearances:

John H. Sullivan AA/ASIA
Norman L. Holmes, GC
Charles Paolillo, A/AA/PPC

Date

17/6/80
~~2/11/80~~
11/1/80

Initial

JHS
GC

Signature

D. J. Bennet

Douglas J. Bennet, Jr.
Administrator

July 20/1980
Date

ASIA/PD:DJBrennan/JOsborn:ASIA/TR:BLaf:jk/fv:7/8/80:X58450

ANNEX I - Part 3

AGENCY FOR INTERNATIONAL DEVELOPMENT PROJECT DATA SHEET	1. TRANSACTION CODE <input type="checkbox"/> A = Add <input type="checkbox"/> C = Change <input type="checkbox"/> D = Delete Amendment Number _____	DOCUMENT CODE 3
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2. COUNTRY/ENTITY NEPAL	3. PROJECT NUMBER 367-0129
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4. BUREAU/OFFICE ASIA/PD	5. PROJECT TITLE (maximum 40 characters) Rural Area Development - Rapti Zone
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6. PROJECT ASSISTANCE COMPLETION DATE (PACD) MM DD YY 06 30 85	7. ESTIMATED DATE OF OBLIGATION (Under 'B' below, enter 1, 2, 3, or 4) A. Initial FY 80 B. Quarter 3 C. Final FY 84
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8. COSTS (\$000 OR EQUIVALENT \$1 =)						
A. FUNDING SOURCE	FIRST FY 80			LIFE OF PROJECT		
	B. FX	C. L/C	D. Total	E. FX	F. L/C	G. Total
AID Appropriated Total	800	1700	2500	7996	18,704	26,700
(Grant)	(800)	(1700)	(2500)	(7996)	(18,704)	(26,700)
(Loan)	()	()	()	()	()	()
Other U.S. 1.						
Other U.S. 2.						
Host Country	-	300	300	-	6,974	6,974
Other Donor(s)						
TOTALS	800	2000	2800	7996	25,678	33,674

9. SCHEDULE OF AID FUNDING (\$000)									
A. APPROPRIATION	B. PRIMARY PURPOSE CODE	C. PRIMARY TECH. CODE		D. OBLIGATIONS TO DATE		E. AMOUNT APPROVED THIS ACTION		F. LIFE OF PROJECT	
		1. Grant	2. Loan	1. Grant	2. Loan	1. Grant	2. Loan	1. Grant	2. Loan
(1) FN	200	210	-	-	-	26,700	-	26,700	-
(2)									
(3)									
(4)									
TOTALS						26,700		26,700	

10. SECONDARY TECHNICAL CODES (maximum 6 codes of 3 positions each)	240	230	030	060	070	310	11. SECONDARY PURPOSE CODE 240
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12. SPECIAL CONCERNS CODES (maximum 7 codes of 4 positions each)							
A. Code	BR		BS				
B. Amount	20,000		12,000				

13. PROJECT PURPOSE (maximum 480 characters)

1. To increase measurable aspects of the quality of life, including income and production levels, of families in the Rapti Zone.
2. To improve local demand for, and control of, national level delivery systems for improved agriculture, health, education, resource management, and family planning.

14. SCHEDULED EVALUATIONS Interim MM YY 02 83 Final MM YY 07 84	15. SOURCE/ORIGIN OF GOODS AND SERVICES <input type="checkbox"/> 000 <input checked="" type="checkbox"/> 941 <input checked="" type="checkbox"/> Local <input checked="" type="checkbox"/> Other (Specify) 899
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16. AMENDMENTS/NATURE OF CHANGE PROPOSED (This is page 1 of a _____ page PP Amendment)

17. APPROVED BY	Signature Title Dennis Brennan Director, ASIA/PD	Date Signed MM DD YY 05 27 80	18. DATE DOCUMENT RECEIVED IN AID/W, OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION MM DD YY 05 27 80
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NEPAL

RURAL AREA DEVELOPMENT -- RAPATI ZONE PROJECT (367-0129)
DETERMINATION THAT THE AID WILL DIRECTLY PROCURE SELECTED GOODS AND
SERVICES

Discussion

In accordance with the provisions of Section III of Policy Determination 68 dated August 27, 1979, and on the basis of the exceptional circumstances described below, it is recommended that goods and services described below to be provided to the Rural Area Development -- Rapati Zone Project (RAD) be procured by USAID/Kathmandu directly. The exceptional circumstances are:

1. Overall administration of RAD rests with the Project Coordination Office (PCO) of the Coordination Division, Ministry of Home Panchayat. Neither the PCO nor the Coordination Division has ever been involved in contracting using foreign exchange (except Indian Rupees) and consequently do not have the experience nor the capability to administer the contracts described under Services below. In addition, the nature of the responsibilities of the PCO are such that contracting capabilities for expatriate services of this type are not an anticipated long-term need of the PCO.
2. Neither the PCO nor the Coordination Division have procured goods using U.S. dollars, and anticipate difficulty within their administrative structure in undertaking the sort of procurement described under Goods below. As suggested in PD 68, the Project provides for both long- and short-term technical assistance in this sort of procurement. This determination is thus requested with the understanding that Goods requiring payment in U.S. dollars will progressively be purchased by the PCO, as its experience and capabilities expand.

Services and goods to be included in this determination follow:

1. Services

- a. Long and short term technical assistance for the Project Coordination Office and associated line agency units in Planning, Monitoring and Evaluation (48 pm), Rural Construction (36 pm), Procurement and Logistics (18 pm) and Financial Management and Accounting (18 pm) and 31 months of short term technical assistance in these fields plus 6 months in technical training will be let as one contract.
- b. Long term technical assistance in Technology Development and Transfer (24 pm) and 12 pm of short term technical assistance in the same field will be let as a separate contract, suitable for small or minority owned business set aside.
- c. 12 pm of assistance of a Geological Engineer, to be spread over the initial three years of the project will be sought under a PASA arrangement with USDA.

2. Goods

a. 27 four-wheel drive vehicles with their source in the United States; 3 personnel vans from India, and 37 light trail bikes from Japan. All vehicles to be purchased with stocks of spare parts. (See page 2, Annex I for 636(i) Waiver request.)

b. Small quantities of non-Nepal source commodities for trials and adaptive testing, including improved seeds, cuttings, etc.

c. Specialized technical equipment with its source in the U.S., including tools, survey, drafting, other mechanical equipment, and specialized geologic and hydrological measuring equipment.

d. Certain construction commodities, including cement, reinforcing rod, galvanized wire, etc. if it is determined and recommended by the Project Officer that delays in this procurement would seriously undermine attainment of Project objectives in a timely manner. Criteria for this determination would include the procurement procedures of HMG/N and the local and international market availability of such commodities at the time of the procurement.

Recommendation

On the basis of the foregoing, I hereby determine that AID will directly procure the types of services described under paragraph 1, and USAID/Kathmandu will procure the goods listed under paragraph 2, for the subject Project, and that the associated Project Agreement and amendments thereto, and related Implementation Letters, which will obligate and guide disbursement of AID grant funds for this Project will reflect such a determination.

Approved: _____

Disapproved: _____

Date: _____

5/16/70

11/3
ANNEX J: SOCIAL SOUNDNESS ANALYSIS

1. Socio-economic Profile of the Rapati Zone

In the Rapati Zone 99.5 percent of the 850,000 people live in rural hamlets and scattered homesteads. This population can be disaggregated currently along three dimensions: landholdings (agricultural land owned and operated), per capita income, and ethnicity (including caste). Data for this analysis are from the initial outputs of the Project's Baseline Study conducted by the Agricultural Projects Service Center (APROSC) during 1979.¹

As revealed in Table J-1, 23 percent of the Zone's households have landholdings classified as sub-marginal or are landless, 37 percent have only marginal holdings, 24 percent have small holdings, 11 percent have medium holdings, and five percent have "large" holdings.² The fact that 60 percent of the population have marginal to no landholdings illustrates the precarious agricultural base of the majority of the population, although approximately 60 percent of their income is from agriculture. Significantly, as is shown in Table J-2, this 60 percent marginal/landless category has an average per capita income which is 63 percent of the five percent large farm households, and virtually the same as that of the 24 percent small farm households. As has been found elsewhere in Nepal, the skewed distribution of landholdings is (except in the case of the one to two percent truly large landholdings in the Terai) partially balanced by the greater wage earning capacity of the marginal/landless households and the large family size of the large farm households.

1/ Detailed analyses and reports are currently being prepared for the Study. It is not currently known how absolute figures for various categories of study data correlate with data from other sources. The figures presented here have been primarily used for internal, relative comparisons, not for comparison with national data.

2/ The cutoff points for these landholding categories, based on other national studies, are (in hectares): for the hills, .01, .204, .509, 1.08, and for Dang, .1, 1.02, 1.38, 5.1. Evidence for other hill districts comparing such respondent survey data with cadastral surveys strongly suggests that the landholding figures reported for the four hill districts, all without cadastral surveys, are under reported by at least 100 percent. Even if actual holdings are double or triple those reported, percentage distributions by category should still be meaningful.

While it can be safely assumed that the adjusted per capita income figures reported here -- an average of \$50 for the Zone -- are under-reported by anywhere from 25 to 100 percent¹, it is nonetheless clear that even by the standards of Nepal, almost the total population of the Rapati Zone is poor, and 85 percent are very poor indeed. In fact, approximately 57 percent of the Zone has a reported yearly per capita income of less than \$42.

The disaggregation of these 85 percent very poor along the dimension of ethnicity reveals more striking disparities: 45 percent of the Zone's population consists of high-caste Hindus (Brahmans, Chetris) 18 percent are Magar (including a very small number of other Tibeto-Burman groups; Thakuris, Giris, etc.); 16 percent are Tharus (almost exclusively in Dang); and 19 percent are members of "untouchable" occupational castes (including Kamis, Sarkis, Damais, Kumahle, and Badi). Table J-3 shows that the Tharus report less than a third the average income of the higher-caste Hindus, while the occupational castes report less than a half and the Magars almost three-fourths. Although it is likely that the disadvantaged ethnic groups -- particularly the Tharus -- have under-reported income to an even greater extent than the higher caste Hindus due to greater distrust of the interviewers as well as linguistic problems, these figures are indicative of the mutually reinforcing social and economic hierarchies found within the Zone. Finally, as Table J-4 indicates, there are disparities within ethnic groups as well, such that distribution of landholdings cross-cuts ethnicity despite differences in aggregate averages. With the higher caste Hindus having a slightly higher percentage of marginal/landless farmers than the Magars, and all groups having at least one percent large landholding families, it is clear that there is no single uniform structure of power and relative wealth in the Zone.

The social context in which these various segments of society (whether defined according to landholdings, income, or ethnicity) live together is characterized by a number of common institutions and behavioral patterns. Variations on the same Hindu worldview, complex webs of similar kinship systems, common forms of patron-client relationships, a common lingua franca, a common dependence on in-kind economic exchanges, common economic strategies, and a common Village Panchayat structure knit together households and groups throughout the Zone. At the same time, competition over scarce common land resources, tension arising from traditional patterns of exploitation in some areas, differential power and status hierarchies,

1/ The adjusted per capita income figure has been computed for total income, with the value of grain grown and consumed by the household added to all other cash and in-kind income. See the Use and Misuse of Social Science Research in Nepal, by Campbell, Shrestha, and Stone, Center for Nepal and Asian Studies, Tribhuvan University, Kathmandu, 1979.

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differences in cultures and languages, as well as long standing village disputes and political rivalry are forces which rend households and groups.

As the landholdings and per capita figures indicate, the Tharus are the most vulnerable of the disadvantaged groups. Having partial resistance to malaria, the Tharus were the traditional inhabitants of the Dang and Deokhuri Valleys (as well as other areas of the Nepal and Indian forested Terai). While possessing intricate and sophisticated cooperative management systems for irrigation and strong internal social cohesion under traditional leaders (mahaton), the Tharus have demonstrated a propensity to migrate to new settlements in the Western Terai rather than confront changing conditions and challenges to their old tenancy systems which were based on very low landlord taxes and extensive holdings.

With the eradication of malaria and the passage of land reform laws, many Tharus have lost land to in-migrating farmers from the hills and find themselves operating smaller landholdings under less advantageous crop-sharing arrangements. Those who have not migrated have recently been the objects of intense governmental efforts to issue tenancy certificates and enforce land reform laws. However, continuing opposition from certain landlords (some of whom are Tharu), continuing in-migration from the hills, traditional reluctance to confront opposition and foreign bureaucracy plus the lack of skills and means for intensifying their agricultural production in the face of reduced landholdings and crop-shares, have resulted in only partial success for this program so far.

The Magars living in the Rapati Zone can be conveniently -- oversimplistically -- divided into two groups. The Nepali language speaking Magars living in the central and western parts of the Zone live in hamlets which are interspersed among those of both higher and lower Hindu castes. Occupying a central position within this system, their economic strategies, aside from service in the Indian Army, are similar to their neighbors'. The Kham speaking Magar in the northern and eastern parts of the Zone, however, have almost no higher-caste members within their region and pursue economic strategies based on dry upland farming supplemented with sheep raising and cottage industry. Their demographic and social dominance within their own region has left them relatively autonomous. However, they are increasingly participating in national systems of government and education even though many of the women and some of the men still do not speak fluent Nepali.

The occupational castes spread throughout the Zone are made up of a number of ranked and traditionally untouchable groups. While each caste is known for a traditional occupational specialization (e.g., cobbling, blacksmithy, tailoring, entertainment) and many households within each caste still provide these services to their higher-caste and Magar clients, the majority support themselves through a mixture of farming and agricultural labor. Recent legislation has forbidden discrimination on the basis of caste; however, many traditional restrictions continue in force in the rural areas. In contrast to the situation

with regard to the Tharus, no specific government programs have yet been targeted to this large minority group.

Women in all ethnic/caste groups occupy an inferior status vis-a-vis men by virtue of the prevalent patrilineal virilocal marriage systems whereby women are rarely allowed more than temporary usufruct right over landed property. However, among the Tharus and Magars¹ women have greater freedom of marriage and Magar women have more control over movable property and income earned from cottage industries than do women of other castes in the Zone. Among all groups, except a few large farm households, women conduct over 50 percent of the agricultural field work, almost 100 percent of the food processing and preparation, many of the cottage industries, and the bulk of the water, fuelwood and fodder collection. They are the backbone of the on-farm management decisions. With literacy at only six percent (in contrast to the male literacy rate of 38 percent), and representation in government or political positions probably closer to one percent, women have so far been largely excluded from participation in modern development.

2. Local Receptivity to Changes Brought by the Project

For the purpose of analysis, the local behavioral changes required for success in this project can be divided into two broad categories; the acceleration of on-going household decision-making processes, and the establishment of new forms of organized behavior.

The former category encompasses the adoption of new technologies by individual households -- including new agricultural inputs and practices, new livestock breeds and animal health practices, and new technologies and skills for cottage industry, food processing and storage, and energy use. Behavioral changes to accommodate some new technologies in all of these spheres have been a continuing -- if slowly paced -- feature of households in the Rapati Zone throughout its history. Whether it was the adoption of maize several hundred years ago, the adoption of potatoes around fifty years ago, or the recent introduction of improved wheat seeds and plastic containers in some parts of the Zone, the process of accepting innovation has occurred even without strong government support. In this generic sense, the project will not run the risk of introducing a type of behavioral change foreign to the population as a whole, but should accelerate an already existing process.

However, the acceptability of any particular technology is highly variable -- differing by specific technology, by agro-climatic area, by ethnicity and economic conditions, for example. Aside from some historical and cultural regulation in the area (such as the high castes' avoidance of pigs and the Kham Magars' unfamiliarity with irrigated paddy/wheat agriculture), the factors which appear most influential in determining the receptivity to new technologies are similar to those found elsewhere. The adaptability and potential short-term productivity gains of any new technology are cautiously gauged and

1/ See the forthcoming monographs by Drone Rajaure on the Tharus and Augusta Molnar on the Kham Magars in Volume II of Status of Women in Nepal, CEDA Tribhuvan University.

weighed by farmers against both direct and indirect costs entailed. This occurs in a context which places a high premium on risk avoidance and household autonomy. Thus, for example, if fertilizer supplies are uncertain, if the growing period of new varieties is too long to survive a year of late monsoon, if stalk is not long enough to provide fodder for draft animals, if water availability is uncertain, if fertilizer use potentially reduces the fertility of the soil, farmers hesitate to risk their survival by adoption of technological innovations. However, once the new varieties or cultural practices are proven acceptable within the local farming system, such as occurred throughout most of Nepal with new wheat and potato varieties, they are adopted.

Since some of the proposed new technologies have been well established, either within the Zone or elsewhere in Nepal, while others are relatively untested in actual rural conditions, the degree of their acceptability will likely vary. There are, however, no a priori social constraints to adoption of new or improved technologies at an accelerating rate.

Project activities which require the establishment of new forms of organized behavior include the construction and maintenance of public works, community land-use management of renewable natural resources, small farmer credit group formation, and project planning and evaluation at the local level. Traditional or newly instigated local precedents for organized group behavior in each of these spheres can be found within the Zone. However, they vary greatly in effectiveness, sophistication, and in the degree of their institutionalization within the present panchayat system. In addition, many of them do not readily meet the new management and skill demands of the new technologies, involving, inter alia, legal structure, administrative requirements, and egalitarian objectives.

The social factors primarily involved in the formation of viable new organizations for cooperatively managing common resources include the degree of community cohesion (whether through strong leadership or traditions of cooperative action) and the degree to which households perceive that their individual interests are being equitably served through tangible benefits. In the case of small public works, it is evident from precedents within the Zone that where the members of the management organization involved are the direct beneficiaries the probability of successfully evolving new forms of organized behavior is high. Likewise, the informal precedents of local communities protecting their forests or jointly purchasing new breeding stock demonstrate that the adoption of new public land-use management systems as well as small farmer credit groups are possible -- though not as easily accomplished as small public works. Increased cooperative ability of communities to plan and assess projects in the terms required by government is necessarily a slow process strongly influenced by political events. But evidence that this is also possible at least in certain spheres through sensitive training, dialogue, and supervision is also growing.

3. Feasibility of the Project's Strategies for Inducing Changes

With the behavioral changes sought by the project being, to varying degrees and with differing potentialities, socially feasible, the principal question for analysis becomes: to what extent do the project strategies foster and accelerate these changes equitably?

While the people of the Rapati Zone increasingly perceive the agencies of government as developmental bodies which should be sources of needed inputs and support, so far the credibility of most of them is low with the poor majority. The severe shortage of goods, services and personnel available up to now, coupled with the social distance between the government officials (who are necessarily drawn from the small pool or urban, educated and almost invariably male elite) and the poor inhabitants of Rapati Zone have made it difficult for the government to change its image from a regulatory resource collecting agency into a developmental one. For reasons of both scarcity and social hierarchy, therefore, government-sponsored inputs and services have tended to be channeled first to the rural elite who not only have greater social access to them, together with lower transaction costs, but also can better afford the risks that technological innovation usually entails. Those inputs which are amenable to further dissemination through traditional farmer-to-farmer channels (such as new wheat or potato seeds) do spread relatively rapidly (even among groups with differing income levels and ethnic composition) through reliance on the high credibility and low transaction costs of this system. However, where changing behavior must rely on direct interaction between farm households and government agencies (such as to obtain credit, health services, and fertilizer) the numbers of people who adopt the changes have been considerably lower.

The project attempts to overcome these constraints through the simultaneous application of several strategies:

a. By substantially increasing the amount and quality of inputs available and the numbers of personnel capable and responsible for delivering the inputs to the people of the Zone, the project plans to reduce drastically the degree to which these goods and services are scarce. Even if it is assumed that the rural elite will continue to have easiest access to many of these inputs, the substantial increase in availability will insure that most members of the poor majority (the numbers differ according to each activity) will also have improved access without risking opposition from the rural elite.

b. By targeting a number of inputs directly to disadvantaged groups (small farmers and women through the Small Farmer Development Program, occupational castes, women, and ethnic minorities through cottage industry, human resource development, and appropriate technology programs), those with least access to most goods and services should be among the first to receive them.

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c. The Project is planning to recruit fairly large numbers of local people of both sexes and different socioeconomic backgrounds to serve as local extension agents and paraprofessionals in order to reduce the social distance normally operative and thereby increase credibility and communication. This strategy will be reinforced and complemented by the project's heavy emphasis on training at all levels within each of its components. In addition, the considerable investment in infrastructure and supporting services -- including the provision of permanent quarters, allowances, support facilities, and training opportunities -- of the project will serve to increase both the numbers and productivity of the government officials actually serving in the Zone.

d. The Project plans to increase local participation in the process of planning and implementing its components. Through supporting current efforts to decentralize planning to the District and Village level and strengthening the formation and viability of various kinds of groups at the village level the Project plans to increase the local population's control over decision-making concerning input delivery systems. This is a specific goal stated in the revised fundamental principles for HMG's Sixth Plan.

e. The Project will make efforts to direct certain new technologies into the traditional private channels where dissemination rates have been higher.

Each of these strategies is basically sound. None of them will work exactly as planned or probably as well as is hoped. However, by attacking the problems simultaneously from each of these directions, the probability of achieving widespread success increases considerably and exceeds the sum of the individual strategies' probabilities of success. Experience in rural Nepal suggests that thresholds of credibility, local participation, reduced opposition from the elite, and self-reliance are more likely to be crossed through the sensitive application of combined strategies such as these than if reliance were placed on only one or two alone. However, since it is impossible to predict which mix of strategy emphases will be most effective, the Project's soundness will depend greatly on the ability of project managers to identify and incorporate necessary readjustments as informed through adept monitoring.

4. Social Impact Assessment

The increased use of more productive agricultural and livestock technologies, the more intensive local management of renewable natural resources, the increased availability of government services and credit, the improved marketing and transport facilities, the greater degree of local participation in government-sponsored development activities, as well as other effects of the Project will have a number of important impacts on life in the Rapati Zone beyond those identified as the principal Project objectives.

One of the most far-reaching of these impacts is what may be termed the increasing "bureaucratic literacy" of the Zone's population. As government expands its staff and services within the Zone and as local communities and districts enhance their role in development, agencies will need to grow if these households wish to benefit from the new opportunities. The beneficial impact of this development can be enormous. Through increased bureaucratic literacy, households and communities will not only be able to increase their access to these services and commodities substantially, but should also be able to exert increasing control over them. In addition, by learning the language of modern government and commerce, the people of the Zone will increase their access to information and procedures which facilitate the exploitation of new economic initiatives and private entrepreneurship.

However, the increased requirements for dealing with bureaucracy also entails dangers. There is the prospect that self-sufficient subsistence systems will become more dependent upon the delivery of government-controlled inputs and outside technologies (such as fertilizer) while these continue to be subject to the vagaries of international markets and recurring bureaucratic snafus. There is also the danger that disadvantaged segments of society, including minority groups and women, will lag too far behind in developing their own bureaucratic literacy and thus face continued exclusion from the development process. The former danger is in part an unavoidable social cost of development, but can nonetheless be minimized through both careful assessment of the appropriateness of new technologies introduced and adroit use of private supply and dissemination channels. The latter danger can be offset through the targeted programs and strategies outlined above -- in particular the human resources programs. But this will depend upon constant monitoring and the flexibility to set up additional programs (such as legal aid services) if necessary.

While ultimate success thus necessarily depends on the quality of Project implementation, analysis of Project strategies in terms of social factors involved indicates that the Project is soundly designed to meet its stated objectives. Food production and consumption should be qualitatively and quantitatively improved in nearly every household in the Zone. Improved and increased income-generating opportunities should become accessible to the majority of disadvantaged people, whether defined on the basis of landholdings, ethnicity and caste, or sex. And finally, every Panchayat and numerous other types of local organizations should have a strengthened capacity to plan, implement, and sustain local development efforts. The Project is unlikely to restructure present economic and status disparities significantly; however, it is likely to increase the quality of life of most people of the Zone by specifically incorporating disadvantaged groups and women within the development process and providing the means for these people to sustain their own continued development with the on-going assistance of the government.

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TABLE J-1: DISTRIBUTION OF HOUSEHOLDS BY TOTAL LAND OPERATED¹

(in percentage of District/Total Zone)

<u>Type of Household²</u>	<u>Dang</u>	<u>Rolpa</u>	<u>Sallyan</u>	<u>Pyuthan</u>	<u>Rukum</u>	<u>Zone</u>
Submarginal/landless	41%	11	16	32	10	23
Marginal	30	49	38	40	31	37
Small	14	27	28	21	43	24
Medium	7	7	11	6	12	11
Large	7	5	5	2	5	5%

TABLE J-2: DISTRIBUTION OF AVERAGE PER CAPITA INCOME BY TYPE OF HOUSEHOLD¹

(in U.S. \$)

<u>Type of Household</u>	<u>Dang</u>	<u>Rolpa</u>	<u>Sallyan</u>	<u>Pyuthan</u>	<u>Rukum</u>	<u>Zone</u>
Submarginal/landless	\$38	48	29	47	41	40
Marginal	48	62	29	50	113(?)	48
Small	34	71	42	59	35	48
Medium	51	93	46	93	60	63
Large	89	65	59	82	57	74
<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
Average	47	66	39	55	41	\$50

1/ Source of this data is the preliminary outputs of the APROSC Baseline Survey.

2/ See footnote 2 on page 1 of this annex for a definition of household categories by amount of land owned.

TABLE J-3: DISTRIBUTION OF ETHNIC GROUPS (in percentage) AND PER CAPITA INCOME BY GROUP¹ (in U.S.\$)

<u>Ethnic Group</u>	<u>Dang</u>	<u>Rolpa</u>	<u>Sallyan</u>	<u>Pyuthan</u>	<u>Rukum</u>	<u>Zone</u>	<u>PCI/Zone</u>
Higher Castes	30%	45	59	51	53	45	\$68
Magars (etc.)	8	33	11	27	14	18	49
Tharus (etc.)	49	--only 1.6% of hills ---				16	24
Occupational Castes	9	21	26	16	29	19	31
Others	3	--only 1.4% of hills ---				2%	-

TABLE J-4: DISTRIBUTION OF ETHNIC GROUPS BY TYPE OF HOUSEHOLD²
(in percentage of total Zone)

<u>Ethnic Group</u>	<u>Submarginal-Landless</u>	<u>Marginal</u>	<u>Small</u>	<u>Medium</u>	<u>Large</u>
Higher Castes	17%	40	25	10	7
Magars (etc.)	17	38	28	11	4
Tharus (etc.) ³	52	22	16	6	5
Occupational Castes	30	43	23	4	1
Others	46	29	16	6	3

1/ Source of these data is the preliminary outputs of the APROSC Baseline Survey.

2/ See footnote 2 on page 1 of this annex for a definition of household types.

3/ It should be recalled that 98.4 percent of this group live in Dang in which all agricultural landholdings under 0.1 ha. were classified as submarginal/landless as opposed to the hills where the corresponding figure was 0.01.

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ANNEX K. Summary Technical Analyses

1. General Summary: Virtually all technologies to be supported under the Project exist either in the Rapati Zone or in Nepal at the present time. The overall technical strategy of the Project is to increase the diffusion and adoption in the Zone of the most successful of these as demonstrated in previous trials and by experience. The strategy is innovative in that it focuses much more on local initiative, management and maintenance of new or improved technologies than most other projects; it is straightforward in the types of technologies it will support. A summary of the rationale for technical choices for each component is presented below:

2. Technical Summaries of Components:

a. Farming Systems. Due to the extreme complexity of ecosystems within the Rapati Zone, it is neither possible nor desirable to establish fixed "packages" of farm technology for general distribution in the Zone. Broad strategies for increasing farm production and income in each of the three major agro-climatic zones are discussed below. These strategies are based on more widespread experience but may vary considerably according to needs specific to particular locations.

The strategies and the technologies to implement them have been selected on the basis of several assumptions. If current trends in population growth and food productivity remain unchanged, they indicate Rapati will continue to be a food deficit area. Given the existing inadequacies of input distribution and transportation and the limited use of appropriate farm management skills, the majority of farms produce at levels below subsistence and are thus heavily dependent on off-farm income to meet basic needs. This suggests that working within the farming systems -- crops, livestock, horticulture, on-farm storage, processing, marketing -- overall is necessary if household production and income levels are to be raised. Field units of the Ministry of Food and Agriculture will be able to draw on the continuing work the RMG/USAID "Integrated Cereals Project" and the future work of "Hill Agricultural Production Systems (HAPS)" in carrying out these strategies.

The second major assumption has been that farmers want, and are willing to experiment with, a variety of "new" technologies, including better on-farm water management, improved livestock breeds and management, new seed varieties, and new mixes within existing cropping patterns. This well-supported assumption, combined with the success in or near Rapati of these proven "new" technologies, has suggested a strategy involving little original research but requiring improved communication generally and greater dissemination of existing results and products.

A third assumption has been that farmers are willing to spend their limited income on improved inputs or technologies that may cost a bit more but will produce more food (and better nutrition) as well as potential cash income. Thus certain products -- fruits, nuts, dairy -- which serve this dual purpose have been included in the planning. These products serve the secondary needs of further diversifying the household income base, and providing a hedge against disastrous drought or otherwise bad years.

This third assumption has also led to the strategy of optimizing the use of available credit: as now structured, the limited amount of credit available through the project will be used primarily for irrigated holdings, livestock production, and Small Farmer group activities. It has been assumed -- with support from field data -- that farmers will purchase improved seeds with cash on hand if the seeds are available. The Project will support a subsidy on potato seeds for the far north -- a severely impoverished area -- but will otherwise encourage free market rates where possible.

In Dang District (altitude under 1000 meters) emphasis will be on improving irrigation efficiency and increasing irrigated land by 1,450 hectares. Extension and input supply efforts will focus on the irrigated paddy-wheat rotation to move it to a more intensive early paddy-late paddy-wheat rotation on more farms. Farmers with unirrigated land will be encouraged to utilize improved seeds and fertilizer, where appropriate, to improve yields in upland paddy, maize and wheat. Improved stock in the cash crops of fruit trees (banana, mango, lichee), mustard, and cotton will be made more accessible through local contract-farmer production and improved delivery. Emphasis in livestock will focus on an expanded health delivery system, improved winter-season fodder production and stall feeding in this overgrazed area. Introduction of improved poultry and pigs to the disadvantaged Tharu population is also planned, as are small-scale breeding programs to upgrade local draught animal stock.

In the lower Hills and in the higher Hill valleys (elevation 1000-2000 meters) emphasis will be on increasing timely availability inputs, especially improved seeds and fertilizer for wheat, paddy, and maize crops. Fully irrigated land will be increased by approximately 600 hectares to support early paddy-late paddy-wheat rotation as in Dang. Emphasis in upland conditions will be on a maize-mustard-wheat rotation. Horticultural activities will focus on orange and lime production, with saplings intercropped in fields for the first five to eight years, and on ginger in suitable areas. Livestock activities will emphasize improved health and nutrition, with selected breeding activities (especially for the Murrah buffalo) introduced to SFDP (Small Farmer Development Program) groups and interested farmers. Contract seed production and group/cooperative processing and storage will also be encouraged.

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In the high Hills (altitude over 2000 meters), livestock activities will take precedence over cropping. There will be an intensive effort in health, nutrition (creation of winter fodder stores) and improved breeding and culling of sheep, goats, and buffalo. Cropping activities will focus on use of improved seeds (produced by contract farmers) for the maize-wheat and maize-barley rotations at lower altitudes, for high-altitude rice cultivars and for potatoes as a sole crop at higher altitudes. Horticulture will focus on walnuts and apples, again intercropped for the first five to eight years.

A kitchen garden program throughout the Zone will be supported through the existing seedfarm located in Rukum District and through contract vegetable seed production in later years of the project. Agricultural Assistants (AAs), "Leader Farmers" (LFs), SFDP groups, health workers and teachers will all receive short training sessions in nutrition to encourage and consumption of vegetables in the commonly vitamin-deficient diets.

b. Renewable Resource Management. Approximately 88 percent of the Zone's total land of 10,135 km is non-cultivated. Of this area, an estimated 50 percent is under varying qualities of forest cover (divided fairly equally between hard and soft woods) with the remainder made up of pasture, range, scrub, and waste lands. Taken together, these lands provide over 60 percent of the total forage/fodder requirements for livestock, over 98 percent of the total requirements for fuel, construction and cottage industry, as well as the bulk of composting matter and materials for home industry and small scale trade utilized by the people of the Zone.

Following nationalization in 1957, these lands are technically owned by the government with legal authority for their management vested in the Forestry Department. With the exception of some large tracts in Dang and a few in the high hills, however, very little of this land area has lent itself to the application of modern forest management techniques. The scattered nature of the woodlots, pasture, etc. as well as their crucial role in the rural energy and subsistence systems, has made management of most of the area by the government nearly impossible using standard methods -- even if the vast numbers of trained manpower required were available or affordable. Thus, these public lands have mostly continued under de facto local management despite the lack of specific legal authority at this level.

While most communities have continued to observe traditional rights of resource distribution (i.e., among villages), the development of management systems based on conservation and renewal of these resources in the face of alarming population growth has thus not been fostered. With notable local exceptions, the result has been accumulating destruction of these natural resources with consequent increasing soil erosion and decreasing labor productivity.

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Within this context, there is no technically or financially viable alternative to orienting renewable resource management activities towards assisting local communities in developing their own public land management systems. These systems will be based on methods of preserving, improving, and renewing the stock of natural resources required for sustaining increased agricultural and labor productivity. Under the legal authority of the newly passed Panchayat Forestry laws, and in line with the IBRD/FAO/UNDP Community Forestry Project and the HMG/USAID RCU Project (367-0132), most of the Project's activities are directed towards providing local Panchayats the means and materials required to establish their own multi-purpose land-use management on forests, pastures, and bare and eroded areas.

Activities on some of the larger and more isolated forest tracts that cannot be easily or most usefully managed by local communities will be carried out directly by the Forestry Department to complement the primary emphasis on local management. While initial emphasis will be placed on using the best indigenous tree and grass species in all of these programs, trials including exotic species and results obtained from other national programs may lead to increasing utilization of new silvi-cultural regimens.

The Department of Soil and Water Conservation's activities to be initiated in the Zone with project support will focus on the treatment of critically eroded areas. Additional efforts, as staff level permit, will be directed to land-use planning and targeted protection activities complementing other Project supported activities.

c. Employment and Skills Development. It is evident that many households in Rapati Zone cannot meet subsistence needs from mixed farming alone. Indeed, nine percent of the households devote an estimated total of 3.7 million person days annually in seasonal migration for unskilled labor alone. Although improvements in farming -- including preservation of the physical resource base -- remain the most critical elements in increasing production and income levels overall, two other elements of an employment strategy are particularly important to households and/or individuals who have little access to land. The first of these two, an increase in labor intensive rural construction works, is discussed under e., below. The second, development of secondary (industrial) and tertiary (service) activities, is the primary concern of this cluster.

With the exception of government service, which remains sought after but beyond the reach of most of the disadvantaged people in the Zone, both rural industry and service occupations are generally disorganized and primitive at the local level and without clear and cohesive policies at the national level. The Department of Cottage and Village Industries (DCVI) and its complementary organization the Cottage Industries and Handicrafts Emporium (P) Ltd. (CIHE), are currently reorganizing their

goals and functions for the Sixth Plan period. Some local services carried out by occupational castes -- blacksmithy, carpentry, masonry, -- are supported through ad hoc training courses by the DCVI, but others, notably agro-based processing, are undeveloped and not well supported. Infusion of improved technologies and the skills to utilize them are lacking in the Zone, with the exception of the occasional entrepreneur (often a return migrant) who brings in a new idea. Finally, the educational structure which might give many people the skills and/or "bureaucratic literacy" necessary to take advantage of opportunities in the Zone is of an overall poor quality at all levels in all Districts.

Attempts through this project at vitalizing the industrial and serviced sectors thus cannot either build on a strong base at the local level or expect immediately strong support from the national level. The strategy that evolves reflects these needs as follows:

(1) Primary emphasis will be on improving the dissemination of technologies known and proven in Nepal. Acting through the DCVI and CIHE in the case of rural industry, and through the District Education Offices in the case of skills, on-going programs in cotton and woolen textile manufacture, leatherworking, blacksmithy, carpentry, cane and bamboo manufacture, and adult literacy/functional education will be expanded considerably. The target group of beneficiaries of these programs will remain the relatively unendowed: marginal farmers, landless, occupational castes, and women.

(2) Secondary emphasis will be on improving the profitability of existing less widespread industries -- ginger production and processing, dairy production, oil seed processing, and water milling -- through introduction of simple improved technologies coupled with improved information on markets and marketability. Many of these adaptive technological activities will be geared to existing entrepreneurs in the Zone who, upon successful application of the technology, will be paid to train others in manufacture and operation.

(3) Tertiary emphasis will be on introducing new technologies, through pilot efforts, undertaken by groups or organizations who would be able to absorb risk more easily. Examples of technologies with potentially high income and/or production potential include mini-hydro for chiuri (Bassia Buttreca, a fruit bearing tree) processing, cheese manufacture, community bio-gas plants, and on-farm nitrogen fertilizer manufacture.

Much of the work in the latter two groups of industries will be managed by the Appropriate Technology/Alternate Energy Unit, of the PCO in Ghorahi. Drawing its designs from Nepal, India and elsewhere it will use a combination of grant funds for higher-risk pilot operation and loan funds for more proven technologies to promote adoption and adaptation in the Zone.

d. Institutional Development. In providing for the strengthening and establishment of a wide range of planning, implementation and technical support capabilities at the village, district and Project levels, this component is critical to most of the technical aspects of the Project. Since the Project does not call for or depend upon the introduction of many new technologies in the Project area, most of the technical support required is an expansion of existing capabilities. In the case of District Technical Offices, the Project proposes to expand both staffing and facilities to a level adequate for carrying out the tasks they have long been assigned. The only new technological element to be introduced at the district level under this component is a few solar power units for district wireless stations. This will be based on trials currently being made of such units by HMG in other, even more remote, district centers.

All building design and construction at the district level to be supported under this component will be reviewed and monitored both by the Project Coordination Office's Technical Unit and by USAID. Assistance for actual contracting and supervision of building construction will be provided through the PCO and where necessary or, as appropriate, by USAID. Sub-district and local support provided for in this component will focus on local training and operational support and should not raise any technical issues.

The Project Coordination Office and associated units to be established under this component will be responsible for overall monitoring, support and reporting on the primary implementation carried out by national and local units of line agencies. In addition, it will have a supportive implementation role in development fields which are outside the responsibilities of existing agencies. One such activity has already been discussed concerning the technology development unit to be associated with the PCO. In most other project components, the PCO will provide the technical review and monitoring of activities being carried out. Provision has been made for flexible technical assistance from Nepali or expatriate sources in other fields identified during the implementation of the Project.

e. Rural Works. The support provided for rural works under the Project is entirely for the expansion and improved support of types of activities which are already being undertaken at the district and village level. The one partial exception is the support provided for the improvement and stabilization of three locally constructed motorable roads. The problem in successfully carrying out rural works stems from weakness in existing planning processes, financial allocation processes, lack of technical assistance for estimating and supervising projects, and recurrent shortages of needed construction materials.

All of these problems will be at least partially relieved through institutional development. Planning assistance and guidance at both village and district levels will be provided by the Project Coordination

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Office's Technical Support Unit and augmented District Technical Office staff at the district level. The public works units (in DTOs) at the district level will be strengthened in staffing, facilities and operating capabilities through project support. A unit under the Project Coordinator's Office will carry out unified procurement and warehousing of basic construction materials which will be provided as assistance-in-kind for Project-supported rural works undertaken by local authorities, and will deliver similar support, on a reimbursable basis, for other construction activities should the need arise. Recurrent problems of inadequate maintenance on small rural works once constructed will be addressed through training during construction and small subsidies for such purposes after construction.

The large number of small rural works activities to be supported, and the need to encourage responsible annual planning (and selection) of such activities at the local level require that a simple, but reliable process of technically adequate planning and design, review and monitoring be instituted. At initial project stages this will require that some technical assistance be provided from private engineering firms and the PCO. As the DTOs achieve reasonable staffing levels, they will be able to assume most of the responsibility for such technical support. Necessary USAID review and monitoring of small projects for technical soundness will apply to all projects in initial Project years, but should be reduced to selective review and secondary monitoring in latter years as the PCO and DTOs are built up.

With the exception of the road improvement and stabilization support provided under the Project, other rural works support will be provided on the same matching basis as has been customary with existing HMG grant support for local projects provided through the Local Development Department. In requiring continued mobilization of local labor and resource contribution, this practice will minimize differences between the Project area and surrounding districts and maintain the extremely valuable tradition of local initiative and responsibility stemming from the investment of local resources in such projects.

Rural road improvement and stabilization provides support for three road sections which have been constructed over the last two decades through local efforts to minimally drivable standards. Two of these sections -- Ghorahi to Pyuthan and Chakchakai to Libang -- have been open to jeep and tractor-trailer traffic for several years. Although each of these roads has been the product of separate, sustained local initiatives and lobbying, central support for their construction by the Department of Roads has been combined under one project for several years. This has provided central technical and financial support to a multi-district project committee with considerable authority and autonomy. The support proposed under the RAD Project would utilize the same structure and process as has existed in the past, combining central government support and technical assistance with strong local involvement in road construction and maintenance.

The standards to which the roads would be improved will be adequate for small trucks. Improvement and stabilization measures to be carried out will extend the useful months of the road from the current six months a year to eight or nine, without providing the extremely expansive major stream crossing structures and maintenance.

Road improvement and stabilization works to be carried out will continue to use voluntary labor under the leadership of local Panchayat officials for selected type of work in the same manner as in the last several years. Most of the additional Project support will be used for paid labor.

Drinking Water Systems. Project support for the construction of small rural drinking water systems will supplement the efforts currently being made by HMG and UNICEF to meet the widespread need in the Zone for safer, piped water supplies. Current efforts by the Local Development Department (LDD) of the MOHP, supported by UNICEF and several foreign volunteer agencies, is primarily concentrated on three hill districts of the Zone. Support provided under the project will expand the construction of drinking water systems and complement the current efforts. The same procedures and standards used under the LDD, UNICEF-supported projects will be followed for systems constructed under this project. Construction supervision technicians are provided by the LDD to work with local project committees which are responsible for organizing local labor and other contributions. In addition to subsidies for technical assistance, improved materials and skilled labor, project support for systems includes transportation subsidies as required by a given system because delays in transporting needed materials have proven in past programs to be a major problem.

Minor Irrigation Construction and Improvement. With the exception of some high Hill valleys, most of the land in the Zone which can be relatively easily irrigated by small- and medium-scale diversion canal systems is already under irrigation for part of the year. Existing systems have generally been locally designed and constructed, and although they are not technically optimal, they generally have relatively well established, reliable management structures.

This component of rural works support will be used to provide financial and commodity inputs for improvements, repairs and upgrading of these existing irrigation systems. Technical assistance for the planning, design and supervision of the work will come from the PCO Technical Support Unit and DTOs. Assistance in training and dealing with more specialized problems will be drawn from the Department of Irrigation as available. The types of improvements and upgrading most likely to be required will be inexpensive: improvement or construction of diversion and headworks, selective reconstruction and lining of canals, design and construction of viaducts and other means of carrying canals over or through gullies, torrents and other stream crossings, and improvements in secondary and tertiary canals and tailworks.

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Other Rural Works. The great majority of currently requested, high priority local projects fall into the categories of irrigation, drinking water, bridges and trail improvement and construction. Other types of projects have been at least partially provided for under other components of this project. This third category of support for small rural works to be undertaken by districts and villages is intended to fund types of projects not otherwise provided for under the Project. It is expected to be primarily devoted to small bridges and trail improvements as well as some categories of building improvement and construction. Technical support and review and technical assistance for these projects will be the same as generally provided for in small rural works projects: through the PCO Technical Support Unit and the strengthened DTOs.

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ANNEX L: THE PROJECT COORDINATION OFFICE AND TECHNICAL ASSISTANCE

I. The Project Coordination Office (PCO)

His Majesty's Government of Nepal's policies on rural development place the main responsibility for implementation on local panchayats and line agencies and departments of the Government. While this avoids the problems of ad hoc authorities or institutions overlapping or competing with existing agencies or jurisdictions, it can easily result in the continuance of a "business as usual" attitude even in the presence of increased resource levels. In addition to sustaining the current pace of development, the achievement of the structural and procedural changes envisioned through decentralized, locally initiated development planning becomes difficult to achieve without fresh initiatives being made.

The Integrated Panchayat Development Design,* HMG's major policy document on rural development, recognizes the need for a strong coordinating and facilitating role in integrated projects. This is seen as promoting both accelerated development and the restructuring of responsibility for initiating and implementing development programs. The functions assigned to the PCO in this document are:

1. To facilitate the provision of the financial resources, manpower and commodities needed to carry out integrated projects;
2. To assist the districts under such projects in plan formulation, implementation, monitoring and evaluation;
3. To assist in the mobilization of resources for the projects;
4. To monitor and review the progress of the programs; and
5. To disseminate information about the project.

The present project proposes that in addition to the functions identified above the PCO promote the development, testing and dissemination of technologies in fields not currently being undertaken by HMG line agencies within the project area.

In the Rapati Project, the PCO will be performing the functions outlined above within an entire administrative Zone. Given line agency responsibilities for most of project implementation and their current organization in the Project area, this presents clear administrative advantages. It is clearly not intended, or desired, by HMG, however, that the PCO become or lead to a new administrative layer. Over the last decade HMG de-emphasized the concentration of technical and administrative functions at the Zonal level in favor of strengthening the newer Development Region level. As Development Region centers

* Ministry of Home Panchayat, HMG Nepal, November, 1978.

evolve with the strengthening of ministry and departmental capabilities at that regional level, it is envisioned that primary links would be between districts and regional centers. The Zonal level would lessen in functional importance and the current overwhelming dependence of field offices on Kathmandu would be mitigated. This process is still in its early stages.

Within the current field of developmental forces important to local communities and citizens, the PCO must serve as a powerful amplifier and rationalizer of resources, services, and information. This must occur from the local level up to the center, and from the center down. Stronger links, based on mutual interests, must also be forged among the field level staff of central agencies and local panchayat members and organizations. Assisting local organizations and line agencies in achieving greater, mutually beneficial, coordination will be one of the PCO's primary goals.

Within the structure of current multi-district rural development projects in Nepal, the Project Coordinator is as close to being a project manager as policies permit. He is a manager with clearly limited powers, however, in that he does not directly control the majority of project funding, implement project activities or exercise direct control over those who do. In spite of this severely constrained role, the effectiveness of the PCO will determine the overall success or failure of the project in achieving all of its basic objectives. One or more line agencies will be able, almost independently, to achieve the sectoral targets proposed within the project, but they will not be able to accompany this with a restructuring of decision-making on development priorities and responsibilities.

The following functional units (shown in Figure 3 between pages 26 and 27 in the text) will be established within the Coordination Office to achieve these objectives. Some of these will be units under the umbrella of the PCO, but jointly administered and staffed by agencies and departments of HMG with technical expertise and staff in the functional scope of the unit. In these instances it is proposed that written agreements between the PCO (or its parent Ministry, Home Panchayat) and the agencies concerned be prepared to govern the operation of such units.

1. Project Coordinator's Office. This office will be headed by the Project Coordinator, a senior officer of HMG meeting the qualifications set forth in the IPDD. As set out in Section VIII of this Paper, the continued presence in this position of an individual mutually acceptable to HMG and USAID is a Condition Precedent for the disbursement of funds for project activities. It is further recommended, in view of the responsibilities and broad scope of this position, that terms of reference for the Coordinator be agreed to prior to the satisfying of Conditions Precedent and set out in an exchange of letters between the Ministry of Home Panchayat and USAID/Nepal.

In addition to the Project Coordinator, this office will be staffed by a Gazetted Second Class Officer capable of acting in the place of the Coordinator in his absence, and additional administrative and clerical staff as may be mutually agreed upon.

Given the responsibilities of the PCO for facilitating the provision of the resources and manpower necessary to implement the proposed project, it is essential that the Coordinator be delegated, or provided prompt access to adequate authority for carrying out procurement and other legal agreements required to fulfill these responsibilities. Within the provisions of HMG rules and procedures, this authority should be discussed and specified at the time of negotiating and signing a Grant Agreement for this project.

A PCO liaison office will be established and staffed in Kathmandu to serve as a reliable link with the Coordination Division, Ministry of Home Panchayat; provide the PCO in the field with necessary support and services; assist the Coordinator in carrying out his responsibilities in Kathmandu; and serve as an operational base for radio communications with the PCO in Dang. This office should be headed by an extremely capable Gazetted Third Class Officer.

2. Planning, Monitoring and Evaluation Unit. This unit will be responsible for assisting the Coordinator in carrying out two inter-related tasks. The first of these is to guide and assist district and village authorities within Rapati Zone in preparing annual plans, budgets and operational revisions as required, as a basis for carrying out project supported and other development activities within their jurisdictions. This unit will be responsible for ensuring that such plans are prepared in adequate time each year to serve as a basis for budget submissions, through appropriate channels, for project supported activities. The subsuming of such project related plans and budgets within overall jurisdictional plans is in keeping with the intent of the District Administration Plan and the IPPD.

In addition to the planning responsibilities, this unit will be responsible for planning, organizing and carrying out monitoring and evaluation of project supported and related development activities in Rapati Zone. Regular monitoring efforts will be carried out, in most cases, jointly with and through implementing line agencies or local panchayats. Special studies or impact evaluations will also be carried out by this unit, either independently or jointly with other agencies and organizations.

In support of its planning responsibilities and consistent with its monitoring and evaluation role, this unit will serve as a repository for and disseminator of data and information relating to the project and development activities in the Zone.

3. Finance and Accounting Unit. This Unit will consist of two sections, an Internal Audit Section and a Fiscal Unit each headed by a Gazetted officer of HMG/N. The unit will establish and maintain effective

accounting and financial management systems for the PCO, assist other department or agencies receiving Project support in maintaining records on and reporting use of those funds in a timely manner, assist the PCO liaison office with overall Project financial records at the Kathmandu level, and train local accountants in improved financial management and accounting procedures.

4. Technical Assistance and Training Unit. This Unit will support activities of the various line ministries and agencies implementing the Project through provision of necessary short-term technical assistance both in resolving technical problems and in providing training to staff and local citizens in various functional skills. It will consist of two sections.

One, the Training and Communications Section, will be headed by a Gazetted officer with experience in rural communications and in training methodologies. This section will work with line departments and agencies, and local authorities in drawing up annual training plans, identifying courses and/or developing curricula to meet training needs, and communicating results of developmental activities through fora which will be understood and adopted or applied by local people. Where appropriate, this section will call on the services of full-time functional specialists from the second, Technical Assistance Section, or will contract for short-term Nepalese technical assistance to conduct courses or workshops in the Zone. In addition to providing functional training expertise, the technical assistance section will also provide expertise to deal with problem areas identified in District plans or by line agencies. The TA Section will be staffed by 5 full-time agriculturalists of varying specialities, one or two teacher trainers, and one or two resource management specialists. The exact mix will vary over the life of Project based on District needs and departmental or agency skills existing in the Zone.

5. Supplies & Services Unit. The Supplies and Services Unit will provide specified procurement, logistics and maintenance support to Project implementing agencies throughout the Zone and to the PCO. It will consist of a Procurement Section, headed by a senior Gazetted Officer with experience in domestic and South Asian procurement, and will undertake as mutually agreed upon, selected domestic and all international procurement for District, and local authorities and line departments and agencies, (particularly of construction commodities), and all procurement for support of the PCO. A second section, the Superintendent Section, will be responsible for warehousing and inventorying supplies (for the PCO and in transit to implementing agencies), maintaining the PCO complex (buildings, equipment) and all vehicles brought in under the Project, and operating the PCO radio unit in Ghorahi. This section will be headed by a Senior Superintendent, and will be staffed by a crew of experienced mechanics, storekeepers, drivers, and radio operators.

6. Appropriate Technology/Alternate Energy Unit. There are several qualified institutions and firms in Nepal undertaking research and production of appropriate technology, including alternate energy

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devices. The Agricultural Development Bank of Nepal, which does not maintain a staff of technical specialists, has been extremely successful in encouraging public institutions and private entrepreneurs in developing and testing prototypes which the ADB/N then purchases and tests through its Small Farmer Development Program and other projects. This Unit has been developed as an outgrowth of this approach and as a base for such efforts in Rapati Zone. It will be staffed by individuals paid by the PCO, with the senior officer on detail from the ADB/N. Operating funds will be channelled through the ADB/N in order to provide flexibility in contracting. The senior officer, with experience in working with rural entrepreneurs, will work closely with a senior engineer and a staff of local artisans in developing prototypes, undertaking adaptive testing, and disseminating results both through line agency staff and through local entrepreneurs. Two of the main areas of emphasis will be improved wood stoves and on-farm storage.

7. Technical Support and Monitoring Unit. This Unit will be associated with, but not fully funded through the PCO. Its basic responsibilities will be to provide necessary technical support and monitoring in the buildings and rural works construction elements of the Project. Two sections will be established through the Ministry of Works and Transport: 1) a Section of the Department of Housing and Physical Planning, headed by a senior engineer, will be responsible for supervising construction of most buildings under the Project. The construction of the PCO complex and the Agricultural Training Center in Nepalgunj will be supervised by USAID/N. This section will, in consultation with concerning departments, adapt standard building designs to specific sites as service centers are established and District infrastructure upgraded, and will contract for and supervise the work of local contractors in their construction; 2) a section to provide support to District Technical Offices, specifically in adaptation of standard designs to specific sites, development of bills of quantities and procurement plans, and adherence to environmentally sound design standards. This section will also assist in reviewing sub-project plans. The section will be headed by an engineer with several senior overseers in residence.

A third section will be established through the Ministry of Water, Power and Irrigation. This section will undertake the final designs for medium irrigation to be supported under the Project, and directly supervise construction of approved schemes. It will also provide support to District Technical Offices in adapting standard designs and carrying out structurally and environmentally appropriate improvements and construction of minor irrigation schemes. This section will be headed by an irrigation engineer.

All units will work under the administrative direction of the Project Coordinator.

II. Technical Assistance

The Technical Analysis Section and Annex K of this paper have already discussed the minimal dependence of the Project on technologies

which are not already present in Rapati Zone or well known to HMG technical and field staff. Emphasis has been placed on the wider and faster dissemination of known technologies, as well as their better use. This both minimizes the complexity of extension efforts and, indirectly, is consistent with HMG's desire to reduce the level of specialized expatriate technical assistance required to carry out donor assisted development projects. Stress is properly placed by HMG on the use or development of Nepali personnel to carry out required implementation.

The primary implementation responsibilities within the Project fall on line agencies and departments, and on local panchayats and other organizations. The implementation responsibilities remaining distinct from those above are primarily limited to institutional and human development. The Project Coordination Office is intended to carry out these responsibilities, in addition to effecting the coordination of overall Project activities. In general, the PCO provides a physical and operational base for the performance of various functions which have been identified as having high priority for effecting rural development in the project area during project design investigations.

Against this array of coordinating and institutional development roles to be performed by the PCO, a careful review has been carried out of how these can be most effectively and realistically translated into an organization structure, and what staff and specialists this requires. The result is a staffing and personnel resources pattern which combines regular and temporary HMG positions, corporation staff, roles for individual and group contractors from the private, quasi-public and educational sectors in Nepal, and selected long and short-term U.S. professionals.

Provision has also been made in several sectoral programs, as well as within units of the PCO, for retaining the services of Nepali experts and consultants to supplement regular staff. It is expected that these services will be obtained both through institutional and individual arrangements. Arrangements for obtaining such services efficiently will be sought so that the application of local expertise to the problems of the Zone can be maximized.

There are development volunteers from several nations, primarily Peace Corps, already working in the Zone in the fields of rural construction and education. It is expected that this involvement will continue and should grow to meet the accelerated demand for technicians and professionals in fields which can be effectively undertaken by volunteers. The Project will encourage HMG departments and agencies in requesting volunteer assistance, particularly in roles where this will support and promote the effectiveness and development of HMG staff and personnel. Several programs being supported by the project, for example community forestry, small hill irrigation, education and drinking water systems, are ones emphasized by the Peace Corps.

U.S. technical assistance is proposed for positions where local professionals either lack adequate experience in the combination of professional skills and rural development orientation required, or where it is felt to be extremely unlikely that highly qualified Nepali professionals can be attracted to long term positions in the Rapati Zone. All of the long-term positions proposed will have one or more local counterparts who should already have the professional qualifications and basic training to allow them to perform the tasks required after working with more experienced TA personnel for the periods identified. The existing lack of local professionals for the positions proposed is more likely to be remedied through the gaining of greater applied experience and short-term practical training than through long term academic training. The project includes provision for this personnel development.

In addition to the long term requirements identified here, provision has been made for up to 43 months of short-term expatriate technical assistance in specialities to be determined by the PCO in consultation with USAID. An additional 12 months of technical assistance in geological engineering, to be performed in several visits over three years, is proposed in connection with the road improvement and stabilization sub-activity.

All long-term technical assistance positions should be resident in the Zone in order to work effectively within the PCO, although at least two positions (Financial Management and Procurement) will require frequent contacts in Kathmandu to effectively carry out their responsibilities in collaboration with HMG officials.

The following long-term technical assistance needs have been identified for which scopes of work are attached:

	<u>Person months</u>
1. Planning and Information Systems	48
2. Rural Construction Engineering	36
3. Technology Development and Transfer	24
4. Procurement and Logistics	18
5. Financial Management and Accounting	<u>18</u>
	144
	(person months)

As discussed in the text of this paper, USAID/Nepal proposes that these long-term positions be filled through two contracts, one combining positions number 1, 2, 4 and 5 with associated levels of short-term assistance, and one contract for position number 3 with associated short term technical assistance. Geological Engineering services will be sought through a PASA arrangement. This contracting will be carried out by AID, with HMG consent on individual incumbents and proposed approaches to performing the technical assistance recommended.

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Scope of Work and Requirements for Planning, Monitoring and Evaluation Specialist

This position will be responsible for assisting the Project Coordinator of the Rapati Zone Project in establishing and training personnel to operate a Planning, Monitoring and Evaluation Unit within the Coordinator's Office in Ghorahi. Estimated work required is approximately 48 months with worksite in Ghorahi, Dang District, Nepal.

Details of Responsibilities

The Planning, Monitoring and Evaluation Unit within the PCO will perform three basic functions:

1. Assist district panchayats, district development committees, line agencies and village panchayats, in carrying out annual planning and budgeting for project supported development, and for overall district development activities as called for in the District Administration Plan.
2. Assist all units of the PCO, in cooperation with local panchayats and line agencies, in improving or establishing monitoring for project supported activities.
3. Carry out, and assist other PCO units, in designing and carrying out evaluations and special studies of Project activities and impact. These may be done by PMEU staff and/or local consulting firms or institutions.

In addition to recurring project monitoring outputs, special studies and data, the results of Unit efforts will also be compiled or summarized on a quarterly basis for submission in Project progress reports.

The incumbent of this position will be expected to work with and train two senior Nepali professionals, -- one Planning and program officer, one social scientist -- and junior staff in carrying out these responsibilities under the administrative direction of the Project Coordinator. Within the annual cycle of district planning, budgeting and implementation, the incumbent will provide technical guidance and direction to the development of PMEU staff and its working with district and village level officials and committees.

In addition, the incumbent will assist and provide technical direction for the identification, design, implementation and analysis/preparation of special studies and impact evaluations to be carried out by the unit. Where appropriate, the incumbent will assist the unit in developing terms of reference, contracting for and monitoring the carrying out of such studies by Nepali research firms or other qualified local institutions or individuals.

Recommended Qualifications and Experience

The incumbent must have an advanced degree, preferably Ph.D., in the social sciences, with a focus on development useful. Previous experience in applied research and the design and implementation of monitoring and informations systems required, preferably in the context of development project implementation and monitoring in less developed countries. The incumbent and any accompanying dependents must be prepared to live in a relatively isolated location, and the incumbent must be physically capable of sustained foot travel in isolated and rugged terrain. Functional capability in Nepali language must be achieved either prior to arriving in-country or within six months after arrival.

Scope of Work and Requirements for Rural Construction Engineer

This position will be located in the Technical Support and Monitoring Unit of the Project Coordination Office, Rapati Zone Project. Estimated work required 36 months, post Ghorahi, Dang District, Nepal.

Details of Responsibilities

The incumbent, under the administrative authority of the Project Coordinator, will provide technical and administrative guidance to the technicians staffing this unit from the Ministry of Works and Transport (Departments of Roads, Housing and Physical Planning and the District Technical Office Unit) and Department of Irrigation, Ministry of Water, Power and Irrigation. The TSM unit will carry out and provide support and training to local technicians in the design, planning and supervision of construction of a wide range of small rural construction activities funded under the RAD Project. These will include the construction of office buildings, quarters, warehouses; irrigation improvement and new construction schemes; small bridges; trail improvements and other related activities of the construction program for the project. Most of these latter activities will be carried out by local community efforts. Other activities will be carried out by petty contractors, larger contractors and HMG departments and agencies.

The incumbent will be particularly responsible for assisting in the provision of technical support to the District Technical Offices by the TSMU. The incumbent will also provide the Project Coordinator with advice and assistance in ensuring that proper technical support and monitoring is provided for project-supported rural construction activities.

Where applicable, responsibility for reviewing and certifying approval of rural construction designs and construction plans will be carried out by the incumbent.

Recommended Qualifications and Experience

The incumbent should have a minimum of a B.S. degree in Civil Engineering with at least five years experience in the design, planning and construction supervision of small rural construction works. Previous experience working in developing countries on projects involving petty contractors, community involvement in projects and the problems of dealing with small, geographically dispersed projects considered essential. The incumbent must be prepared to assist in organizing and training local engineers, construction supervisors and technicians to carry out the functions of the TSMU as quickly as possible. Previous experience with preparing and letting small contracts also required.

The incumbent must be physically fit to travel in the remote and rugged project area, frequently by foot. The incumbent must also be prepared to live at the relatively remote site of the PCO. Acquisition of Nepali language skills preferred, but not required.

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Scope of Work and Requirements for Technology Development and Transfer Specialist

This position will be located in the Appropriate Technology/Alternate Energy Unit (ATU) of the PCO, and its incumbent will be responsible for assisting the head of the unit in its establishment, staff training and organization, preparation of both long-term and annual workplans, and providing technical advice in its initial operations. The estimated period of work is 24 months, with possible short term follow-up consultancies. Worksite will be Ghorahi, Dang District, Nepal.

Details of Responsibilities

The ATU will be operated in conjunction with the Agricultural Development Bank of Nepal (ADB/N) in order to link its operations to both pilot and production oriented dissemination of its adaptive development and research work. In carrying out its own operations, it is expected to draw upon a number of firms, institutions and individuals working in specific fields of technology development and extension in Nepal and elsewhere.

Within this general objective, to be refined in an initial five year workplan and subsequent annual workplans, the incumbent of this position will be responsible for assisting the head and staff of this unit in carrying out the following tasks:

1. Preparing the above mentioned plans.
2. Finalizing plans for workshop construction, equipping and operation.
3. Initiating identification of existing technologies in the Zone for which improvements exist in Nepal or could be developed. (Illustrative areas: agricultural tools, milling and other food processing technologies, food storage.)
4. Plan and begin adaptive testing, development or dissemination efforts, as appropriate, using local artisans, Nepali consultants and experts, and international consultants, as necessary and feasible.
5. Plan and initiate an improved stove dissemination effort, utilizing existing prototypes and stoves already developed or adapted in Nepal.
6. Develop and initiate technical dialogues, demonstrations and training with local craftsmen and artisans in appropriate skills and technical areas.

The incumbent is expected to develop local staff capabilities to continue the operations of the Unit with a minimum of short term technical assistance. The incumbent is also expected to assist the unit in establishing procedures for identifying and securing the services of needed local artisans, experts and research and development institutions and firms.

Recommended Qualifications and Experience

The incumbent must have a mixture of training and experience in both technical and management skills related to indigenous technology development and adaptive introduction, testing and dissemination of currently alien, but useful and appropriate, technologies. Although basic research skills are necessary, a strong orientation to technology transfer and assisting rural artisans and entrepreneurs is necessary. The incumbent must be physically fit to travel in remote, rugged terrain, normally on foot and prepared to reside in the relatively inaccessible worksite. Prior language skills in Nepali not required, but acquisition of functional Nepali within the first six months of work in-country necessary.

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Scope of Work and Requirements for Procurement and Logistics Specialist

The incumbent will be responsible for assisting the Project Coordinator of the Rapati Zone Project in establishing and developing a Procurement Section within the Supplies and Services Unit of the PCO. This section will be responsible for all procurement required by the PCO, and for the procurement and warehousing of basic construction commodities required for project supported activities. Estimated work required is approximately 18 months with primary worksite in Ghorahi, Dang District, Nepal. It is expected that the incumbent of this position could effectively follow up the initial resident work period with short term consultancies at critical periods of annual procurement cycles.

Details of Responsibilities

In addition to basic problems of procurement due to Nepal's status as a landlocked, less developed country, recurring domestic shortages and international market fluctuations have magnified problems of obtaining essential construction commodities. This has led to repeated and widespread delays in almost all construction projects in Nepal in recent years.

In view of these recurrent shortages and the serious problems caused, the Project Coordination Office will establish a Procurement Section to carry out such procurement as may be necessary or deemed appropriate throughout the project to provide reliable supplies of basic construction commodities for project supported activities. Included in this procurement will be commodities for construction works carried out directly by PCO related units, construction undertaken by other departments and agencies of HMG and local community implemented rural works projects. In order to reasonably respond to possible demands, it will be necessary to establish a commodity needs estimation procedure tied to annual planning and budgeting carried out under the project. Based on these assessments, and an assessment of potential, eligible sources, advance procurement of commodities will be carried out by the PCO Procurement Section.

Utilizing private sector transportation, the Procurement Section will also provide for the storage and in some cases delivery of procured commodities

Recommended Qualifications and Experience

Professional qualifications preferred, but extensive experience in commodity procurement in developing countries, including international tendering required. Experience with Asian procurement of relatively small annual quantities of commodities preferable. Previous experience in establishing and training staff for warehousing and inventory systems also necessary. The incumbent must be physically fit for occasional travel in remote, rugged parts of the project area, and prepared to reside in the relatively remote, seasonally inaccessible, PCO site.

Scope of Work and Requirements for Financial Management and Accounting Specialist

The incumbent will be responsible for assisting the Project Coordinator of the Rapati Zone Project in establishing and maintaining effective financial management and accounting systems for all project supported activities, including the operations of the Project Coordination Office. Estimated work required is approximately 18 months, with primary work-site in Ghorahi, Dang District, Nepal.

Details of Responsibilities

In view of recurring problems with financial management and accounting on donor assisted projects in Nepal, involving both harmful disbursement delays and undue burdens on local accountants with insufficient training to properly maintain the accounts required, the RAD Project has provided for the establishment of an Finance and Accounting Unit within the PCO. The Unit will have two sections, Fiscal and Internal Audits. The Unit will carry out the following functions:

1. Establish and maintain effective and suitable (for both HMG and AID) accounting and financial management systems for the PCO.
2. Assist other departments and agencies receiving support under the project to maintain acceptable accounts in a manner which permits timely reporting and accounting for the use of project provided funds. Wherever possible, this should be done within the scope of a single accounting system, rather than requiring local accountants to maintain dual systems in order to account for donor funds.
3. In collaboration with the Technical Assistance and Training Unit of the PCO, design and give orientation and training courses for local accountants in procedures conforming to HMG requirements and suitable for donor accounting, auditing and end-use requirements.

The incumbent of this position will assist the head of the Finance and Accounting Unit, under the administrative authority of the Project Coordinator, in establishing a fully functional unit, training its staff and designing necessary systems within overall unit development and workplans to carry out the above functions.

In order to properly carry out these responsibilities the incumbent will confer regularly in Kathmandu and the project area with appropriate officials of the Ministry of Finance, the Coordination Division within the Ministry of Home Panchayat, and other HMG departmental and agency officials as necessary. The incumbent must initially become thoroughly familiar with HMG accounting and auditing procedures and regulations, as well as USAID requirements. The incumbent will, as part of the F&A Unit, work regularly with the staff of USAID/Nepal's Financial Management Office.

Recommended Qualifications and Experience

The incumbent must have professional qualifications in accounting with suitable experience in designing and maintaining accounting systems and strong knowledge of financial management procedures. Previous experience with development project accounting and financial management preferred. It is expected that individuals without previous experience working in developing countries will have an extremely difficult time in effectively applying their professional skills within the time required. It is essential that the incumbent be physically able to travel by foot in rugged and remote terrain, and be prepared to reside in the relatively remote PCO site in Dang. Acquisition of some facility in Nepali language preferred, but not required.

ANNEX M: IMPLEMENTATION SCHEDULE

Table M-1 : RAD Year I Implementation Schedule

<u>DATE</u>	<u>ACTION</u>	<u>RESPONSIBILITY</u>
(3 - 6/80)	- (Detailed annual work plans and operational budgets for Nepali FY 036/37 -- Project Year I -- prepared and approved)	LA's, PCO, USAID/RAD
June	- Project Paper approved by AID/W; Congressional Notification made; Funds authorized	AID/W
	- Grant Agreement negotiated and signed	USAID/N, HMG Min. of Finance
	- PIO/C's for vehicles and motorbikes prepared	USAID/RAD & PROC, AID/W/SER/COM TDY
	- IFB's for A&E services for PCO complex, Agr. Training Center, service centers and interim godown in Ghorahi prepared, issued (funding from 367-0133) (30 days)	USAID/RAD & PDIS
July	- PIO/T's for two contracts for U.S. technical assistance prepared	USAID/RAD
	- HMG/N Budget submitted to National Panchayat	
	- PCO resident in Zone, Finance & Accounting Unit (F&A) and Liaison Office established (367-0133 funding)	PCO
	- Vehicle tenders let (30 days)	SER/COM
	- Motorbike tenders let (30 days)	USAID/PROC
	- Requests for Proposals for technical assistance issued in CBD (45 days)	AID/W/SER/COM
	August - September	- Conditions Precedent to First Disbursement Satisfied
- Project Implementation Letters 1 (CP's satisfied) and 2 (procurement regulations) issued unilaterally		USAID/N
- District level workshops held to review and revise Year I plans and discuss overall Project		PCO, USAID/RAD

- A&E contracts negotiated, signed, begun USAID/PDIS, PCO
- Vehicles ordered AID/W/SER/COM
- Motorbikes ordered USAID/PROC
- Technical assistance proposals reviewed, responses short-listed and sent to USAID/N and HMG for review; decision made AID/W and USAID/RAD TDY
- FY 2037/38 Budget approved by National Panchayat USAID/N & HMG
- September -
 - Project Implementation Letters for Year I for other Ministries/agencies (total ten letters) prepared and jointly issued PCO
- October
 - Indian & Third Country participant training slots and schedule determined USAID/RAD & TRNG with PCO & LA's
 - HMG/N official requests made for training and for first release of funds HMG/N-Finance
- October
 - First releases made USAID/N/FM
 - PCO Planning, Monitoring & Evaluation Unit (PMEU), Technical Assistance and Training Unit (TATU), Technical Support & Monitoring Unit (TSMU) & Supplies and Services Unit (SSU) established (rented quarters) PCO/LA's
 - Component activities begun as per annual work plans DLA's, LA's, DP's
 - Technical assistance contracts negotiated, signed (Contractor start-up begins) AID/W and Contractors
- November
 - PIO/P's for participant training prepared and participants selected USAID/RAD & TRNG, LA's
 - A&E plans for PCO complex, Agriculture Training Center and service centers approved PCO and USAID/PDIS

- Tender for erection of temporary godowns let (30 days) PCO
- Final decisions on District rural works for Year I made District Panchayats & PCO
- International tenders for cement and reinforcing rod let (based on revised bills of quantities per A&E plans and rural works priorities) USAID/AM
- Construction sub-contracting for buildings undertaken; local procurement initiated for buildings and selected rural works A&E Firms, District & Village Panchayats with PCO/TSMU
- Grant Agreement amended and FY 81 obligation made USAID/N and HMG/N/Fin.
- December -
January -
 - Village and District level plans for Year II prepared Village & District Panchayats & DLO's with PCO and USAID/RAD
 - Bids received, contract let for temporary godown in Ghorahi PCO
 - Regional level trainees nominated and placed for one and two-year courses at Nepalgunj (Education) and Rampur (Agriculture) and Kathmandu (overseers for DTO's) LA's, PCO, TATU and USAID/RAD
- January
 - First Certified Statements of Expenditure sent forward DLO's, PCO (PCO/F&A and Liaison Office assist)
 - First Quarterly Report prepared, issued PCO
 - PCO/Appropriate Technology/Alternate Energy Unit (ATU) established PCO/ADB/N
 - Internationally procured construction commodities arrive, are distributed; all construction fully underway USAID/AM to PCO/SSU & TSMU
 - Academic participants begin departing USAID/RAD & TRNG
 - Technical assistance personnel arrive, undertake orientation PCO

- February
- District level plans for Year II finalised and reviewed at Zonal/Project level, by USAID/N, and transmitted to Kathmandu for submission to Ministry of Finance through departments, ministries CDO's, PCO and ZCC, LA's
 - Second quarterly releases made USAID/N/FM
 - Technical assistance in place (rented quarters) PCO
 - Motorbikes arrive and are distributed USAID/AM & RAD, PCO/SSU
 - Detailed designs for Year II construction begun PCO/TSMU and DTO's
- March
- Ministries and PDCCC review and approve annual work plans from districts for Year II; final budgeting begun to incorporate centrally managed component activities PCO, Coordination Division, PDCCC, LA's
 - Vehicles arrive and are distributed USAID/AM & RAD, PCO/SSU
- April
- Second set of Certified Statements of Expenditures sent forward DLA's, PCO (PCO/Fl... and Liaison Office to assist)
 - Quarterly Report prepared, issued PCO
 - Detailed designs for Year II construction complete; aggregate bills of quantities for international procurement adjusted PCO/TSMU & SSU
- May
- Operational plans and budgets for Year II finalized and submitted to Ministry of Finance LA's, PCO, USAID/RAD
 - Commodity procurement for Year II begun PCO/SSU and relevant LA's
- June
- Ministry of Finance approves plans, budgets HMG/N/Fin.
- July
- Nepal FY 037/38 Annual Budget (incorporating Project Year II budgets) submitted to National Panchayat HMG/N/Fin.

- Final Certified Statements of Expenditure for Year I sent forward DLA's, PCO (PCO/F&I and Liaison Office assist)
 - Quarterly report prepared, issued PCO
 - Year II Project Implementation Letters prepared and issued PCO and USAID/RAE
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 Table M-2 : RAD Year II and All Years Recurrent Implementation Schedule

<u>DATE</u>	<u>ACTION</u>	<u>RESPONSIBILITY</u>
July	- Nepal Annual Budget (incorporating new Project Year Budget) submitted to National Panchayat	HMG/N/Fin.
	- Final Certified Statements of Expenditure for previous Project Year sent forward	DLA's, PCO
	- Quarterly Report prepared, issued	PCO
	- New Project Implementation Letters prepared and issued	PCO & USAID/RAD
	- Component activities begin or continue as per annual plans (less capital investments)	DLA's, PCO, DP's, VP's
August	- Nepal Annual Budget approved	National Panchayat
	- First quarterly releases made	USAID/N/FM
	- Capital investments for component activities begun	LA's, DLA's, PCO
August - September	- Indian and Third Country participant training slots and schedule determined	USAID/RAD & TRNG with PCO & DLA's
	- HMG/N official requests made for participant training	HMG/N/Fin.
October	- First Quarter Certified Statements of Expenditure sent forward	DLA's, PCO
	- First Quarter Report prepared, issued	PCO
	- Construction commodities at site	PCO/SSU & TSMU
	- Construction activities (rural works, roads, buildings) begin	PCO/TSMU, DP's, VP's, LA's
November	- Second Quarter releases made	USAID/N/FM
	- PIO/P's for participant training prepared and participants selected	USAID/RAD & TRNG, LA's & HMG/N/Fin.
	- Grant Agreement amended and next FY obligation made	USAID/N & HMG/N/Fin.

- Village and District level plans for next year prepared VP's, /DP's, /PCO, DLA's, CDO's
- December -
January - District level Development plans finalized for next year DP's, DLA's, CDO's
- Detailed designs for next year's construction begun PCO/TSMU & DTO's
- Regional level trainees nominated and placed for one and two year courses in Nepal LA's, PCO/TATU and USAID/RAD
- Graduating trainees from previous courses return to Rapati Zone and resume work LA's
- January - Zonal/Project review of annual District plans ZCC, PCO, USAID/RAD
- Second Quarter Certified Statements of Expenditure sent forward DLA's, PCO
- Second Quarter Report prepared, issued PCO
- Academic participants begin departing USAID/RAD & TRNG
- Former participants return & resume work LA's
- February - ZCC and USAID/N approve annual plans, plans transmitted to Kathmandu CDO's, PCO and ZCC, USAID/N, LA's
- Second quarterly releases made USAID/N/FM
- March - Ministries & PDCCC review and approve annual plans; final budgeting begun to incorporate centrally managed component activities PCO, Coordination Division, LA's, PDCCC
- April - Third Quarter Certified Statements of Expenditure sent forward DLA's, PCO
- Third Quarter Report prepared, issued PCO
- Detailed designs and bills of quantities for next year's construction completed PCO/TSMU & DTO's

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- Detailed operational plans and budgets for next year finalized and submitted to Ministry of Finance LA's, PCO, USAID/RAD
 - May - Commodity procurement for next year begun PCO/SSU, LA's
 - June - Ministry of Finance approves plans, budgets HMG/N/Fin.