

Foreword

This volume contains contributions of authors who worked in different cultural geographical sub-projects of the interdisciplinary German-Pakistani Culture Area Karakorum (C.A.K.) project.

The cultural geographical projects had been supervised by Prof. Israr-ud-Din, Department of Geography of the University of Peshawar (Pakistan), and by Prof. Dr. Eckart Ehlers, Department of Geography of the University of Bonn (Germany), while the interdisciplinary coordination was carried out by Prof. Dr. Irmtraud Stellrecht, Department of Ethnology at the University of Tübingen (Germany).

Over a period of more than ten years researchers from Pakistan and Germany worked in different regions of the Northern Areas of Pakistan. The project regions taken under investigation reached from Gojal in the north to the central place Gilgit and to Punial and Yasin in the west (see map of project areas). While recent results from the Shigar valley in Baltistan were ready for publication luckily also some first notes and project proposals from the western project extension towards Chitral could be included in this volume.

Results represented deal with traditional landuse and modern rural development (Ehlers, Holdschlag, Stöber) and the impact of non-governmental organizations (Clemens), with aspects of workload, nutrition and indigenous knowledge systems (Ehlers, Herbers), urban development (Dittmann, Fazlur-Rahman) as well as with ethno-linguistic and socio-economic transformations of traditional structures (Fischer, Kreutzmann, Schmidt).

The majority of the contributors to this volume had been working in one of the cultural geographical sub-projects of the "Culture Area Karakorum" project. But, however, there also are contributions of co-authors from other fields of scientific work. We are happy that one of the Pakistani counterparts, Fazlur-Rahman is – together with others – presenting some recently gained results concerning the urban development of Chitral town.

In general the volume does not only contain summaries of cultural geographical sub-projects and their central topics but also results gained from peripheral research fields.

We would like to express our deep gratitude to the Deutsche Forschungsgemeinschaft (DFG, German Research Council) and the Gesellschaft für Technische Zusammenarbeit (GTZ) which not only founded our field research in the Northern Areas of Pakistan and the Chitral District of the Northwest Frontier Province but also generously financed this publication.

Andreas Dittmann

Rural Development in Northern Pakistan. Impacts of the Aga Khan Rural Support Programme

Jürgen Clemens

Preface

The following article presents major results of the author's Master's thesis.¹ After the completion of the original thesis, several studies and publications dealt with the development activities of the Aga Khan Rural Support Programme in northern Pakistan, and the latest development of this program is briefly summarized in this preface on the basis of these studies.²

The Aga Khan Rural Support Programme (AKRSP) is looked upon as one of the rare examples of successful rural development projects and the adoption of its model of development is often suggested. Social organization of local communities with direct and equal participation of the entire village population is the program's major success. Its flexible management structure has ensured the rapid program expansion within the program area. Although it was founded with the background of the network of Ismailian welfare programs, its approach and program activities have been widely accepted also in areas of northern Pakistan with predominantly Shia- and Sunni-populations. With the direct participation of the target population, AKRSP has also gained a high degree of legitimacy there. Simultaneously, AKRSP has engaged most of its staff locally and is open to also integrate local knowledge into its program packages.³ One precondition of AKRSP's suc-

¹ Clemens 1992. The thesis was submitted to the Department of Geography, University of Bonn under the supervision of Prof. Dr. E. Ehlers in January 1992. It is written in German, and includes chapters on the origin and development of AKRSP as a part of the Aga Khan Foundation (AKF) and its network of welfare programs. This aspect, together with the socio-economic structure at the program's beginning are briefly summarized in this paper. This study mainly analyses original data of the program's inputs (AKRSP 1990) and of official census reports (GoP 1983, 1984a/b). The author carried out additional data collection and expert interviews were in 1991.

² Cf. Schönherr 1992, Khan & Khan 1992, Hoffmann 1993, Kreutzmann 1994, Streefland et al. 1995, World Bank 1995, Clemens et al. 1996, Fischer 1997.

³ Cf. World Bank 1987, 1990, 1995, Schönherr 1992, Clemens 1993, Kreutzmann 1994, Clemens et al. 1996 & 1999 for further information. During further research in Astor, the author experienced the acceptance of AKRSP among the Sunni population, although parts of the population had reservations for a long time because of the presumed religious background of this development program.

cess is its long-term funding by international donors. Thus, a high degree of program continuation is ensured and the management is independent of the governmental budget.

The success of AKRSP has led to several expansions within northern Pakistan. Additionally, several development projects in Pakistan have at least partially adopted AKRSP's approach and the "National Rural Support Programme" was founded on the same basis by the Government of Pakistan.

However, despite the program's generally accepted success, there is also some criticism. Some authors doubt whether this process will be economically sustainable (cf. Hoffmann 1993). From such a point of view the monetarization and market orientation of the *programme area's* economy lead to an increased dependency of external supplies on the national or even the global markets (cf. Pilardeaux 1995) and finally to a higher degree of vulnerability.

Several points of criticism and suggestions by evaluation teams (World Bank 1990) have been integrated into AKRSP's strategy. Since 1992, activities in the fields of skill training and human resource development together with the support of off-farm enterprises have been intensified. AKRSP's credit and savings program will be institutionalized and other sectoral strategies, including regional planning, are being prepared. In such fields, the program aims at acting as a consultant agency to support *village organizations*⁴ on demand. On the other hand, the day to day routine of program activities was decentralized on the subdivisive level after the implementation of *field management units* (AKRSP 1995). The latest development of AKRSP is characterized by the integration of advanced participatory methods at the community level (cf. Clemens et al. 1996, 1999) and the focus on integral program activities, i.e., natural resource management, gender issues or enterprise development, instead of mainly sectoral inputs (AKRSP 1998).

The *village organizations* initiated by AKRSP proved to be vital elements of self-help and local management of development demands. An increasing number of these organizations cooperate not only with AKRSP but also with external governmental and non-governmental organizations like "The World

⁴ Words in italics refer to AKRSP's terminology.

Conservation Union" (IUCN) or the governmental "Social Action Programme".

1. Introduction

1.1 Objective of this Study

The objective of this study is to analyze the impact of the Aga Khan Rural Support Programme with regard to the process of development in the remote and high altitude regions of Hindukush and Karakoram in northern Pakistan. Its major objective is the analysis of regional patterns of AKRSP's program activities on a disaggregated basis.⁵ By comparing the program's progress in the *subdivisions* of AKRSP, this study aims at contributing to the discussion of the role of non-governmental organizations in regional development and policy.

One of the main questions is, to which extent AKRSP's activities have been adopted to specific socio-economic conditions at the local level and whether these include means to overcome inter-regional disparities. This question leads to the analysis of interrelations between endogenous and exogenous influences on this development program and therefore also leads to problems concerning the applicability of AKRSP's model of development.

1.2 Characteristics of the Aga Khan Rural Support Programme

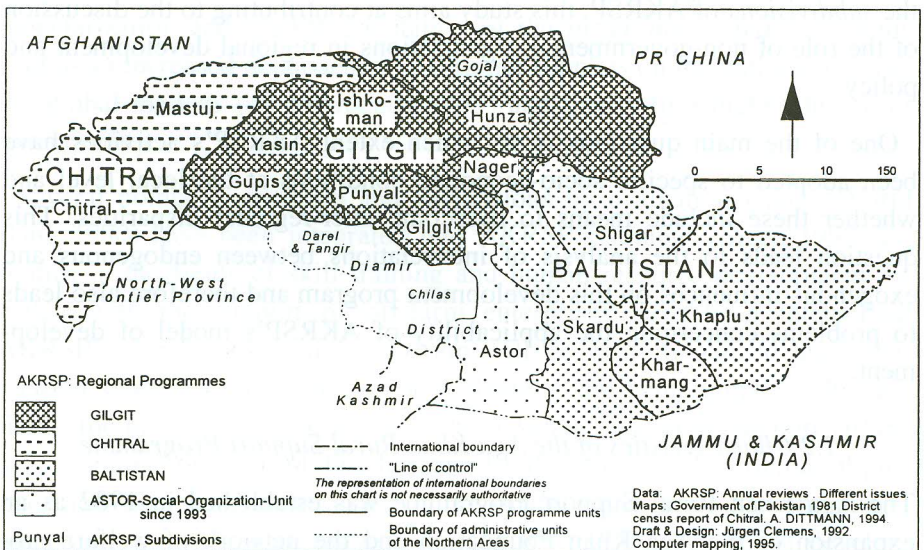
The Aga Khan Rural Support Programme was established in 1982 as an expansion of the Aga Khan Foundation and the network of welfare programs of the Ismailian community. This particular program concentrates its activities on rural development in the mountainous areas of northern Pakistan. As a non-governmental and non-communal institution, however, AKRSP serves the entire population, and is not confined to the Ismailian

⁵ AKRSP's *programme area* is divided into three *regional programmes* and eleven *subdivisions* (see map 1). The latter are again divided into *social organization units* (SOU; see table 4 for the Gilgit *regional programme*), since their demarcation is not certain, SOUs were excluded from this map. AKRSP's original regional division was based on the official division into districts and subdivisions. In 1995, AKRSP's *subdivisions* were upgraded to *field management units* with additional responsibilities and management facilities, and the SOUs lost their function.

community. This was a major precondition for the financial support by several international donor agencies.

AKRSP's activities started in the former Gilgit District in 1983 and were officially expanded to the districts of Chitral and Baltistan in 1986, where pilot phases had already been started in 1985. In AKRSP's terminology, these areas are called *regional programmes*. In 1993 the program also began its work in the Astor Additional District (see map 1) after the repeated demand by the local population and their political representatives.

Map 1: The Aga Khan Rural Support Programme in Northern Pakistan



DIPLE-1.FH5 71 %
 J. Clemens, 24.07.1995/10.12.1998

1.3 Objectives of the Aga Khan Rural Support Programme

The program's main objective is "to support the commercialization of previously subsistence villages" (World Bank 1987: xii) by increased agricultural productivity and surplus marketing. Social assistance, in a broader sense, is no direct objective, but there are several linkages to other welfare programs, e.g. of the Aga Khan Foundation, regarding health services, education and rural housing. With increasing maturity of the program, additional linkages have also been developed with several governmental and other non-governmental organizations. Rural development in the context of AKRSP's approach includes three major principles:

- Social organization of rural population
- Economic and productive incentives, and
- Skill training

The central focus of this approach is the direct integration of the village population into the process of decision making, planning and implementation of program packages. Therefore, local self-help organizations, *village organizations* (VOs), have to be established by the villagers themselves. With this process of *institution building* AKRSP aims at filling an institutional vacuum at the local level, left behind after the abolition of feudal rulers in the early 1970s.

Concerning AKRSP's model of development, these *village organizations* are both: objective and instrument! The program aims at the creation of self-sustaining institutions at the village level to locally deal with the people's felt needs. To implement the program inputs, the *village organizations* are offered the participation in special program packages like agricultural innovations, credits or skill training.

1.4 Characteristics of the Programme Area

The socioeconomic conditions of northern Pakistan in the 1980s were characterized by a low per capita income of less than 50 percent of the mean of Pakistan, a high rate of child mortality, low literacy ratios and high rates of outmigration together with a rapid population growth. In contrast to down country Pakistan the agrosocial structure, however, is more or less homogeneous. Most farmers own approximately one hectare of irrigated land, landlessness and shareholding are rare in this region (World Bank 1990, Kreutzmann 1994).

1.5 Village Organizations and Rural Infrastructure

The collaboration between AKRSP and *village organizations* is fixed by *terms of partnership*. With this means, the *village organizations* accept a set of conditions, e.g. equality of all VO-members, regular meetings and collective savings by its members. A regular supervision of the *village organizations* together with technical and management assistance is provided by AKRSP's extension workers (*social organizers*).

**Table 1: Village Organizations:
Development by Regional Programmes and Time.**

Regional Pro-grammes	cumulative Development by Time								Cs. vil.	Pot. VO's	
	1983	1984	1985	1986	1987	1988	1989	1990	[No]	[No]	
Gilgit	A	123	289	316	349	376	414	457	476	306	500
	B	11,317	23,120	24,590	26,412	26,500	26,500	26,500	26,500		
	C	92.0	80.0	77.8	75.7	70.5	64.0	58.0	55.7		
Chitral	A		90	139	168	224	323	370	440	502	600
	B		7,920	9,681	10,667	12,383	15,377	16,665	18,682		
	C		88.0	69.6	63.5	55.3	47.6	45.0	42.5		
Bal-Tistan	A			22	54	162	256	358	468	234	665
	B			1,402	2,915	6,309	9,417	12,663	18,585		
	C			63.7	54.0	38.9	36.8	35.4	39.7		
AKRSP -Total	A	123	379	477	571	762	993	1,185	1,384	1,042	1,765
	B	11,317	31,040	35,792	39,994	45,192	51,294	55,818	63,767		
	C	92.0	81.9	75.0	70.0	59.3	51.7	47.1	46.1		

Sources: AKRSP. Annual Reviews, 1983-1990. Author's own Calculation.

A: no. of *village organizations*

B: total no. of members in *village organizations*

C: average no. of members per *village organization*

Cs.vil: census villages

Pot. VO's.: potential no. *village organizations*

As an incentive or catalyst for the creation of collective economic activities, AKRSP provides a grant for the improvement of the rural infrastructure. With these *productive physical infrastructure* projects (PPI), local bottlenecks for increased production and further economic development shall be removed. This program includes projects like new or widened irrigation channels, link roads connecting the villages with the superior road network, protective works for flood control along the mountain streams as well as micro-hydroelectricity plants.

The members of the *village organizations* themselves choose the particular infrastructure project that will benefit all VO-members best. AKRSP provides technical assistance and the financial funds that are necessary for its realization, and the villagers have the duty to construct and maintain the PPI. The grant also includes salaries for the VO-members, working on the PPI-scheme. The VO-members are obliged to pay a share of their salaries (25 %) into the VO's joint bank account. By this means of collective savings

AKRSP introduces credit facilities to small farmers, and the savings provide potential collaterals for further credits to the communities.

2. Analysis

2.1 Institution Building Process

Since *institution building* is a major focus of AKRSP's activities, the analysis starts with the development of *village organizations* in AKRSP's *programme area*. A gross pattern of this development by *regional programmes* and by time is shown in table 1 and figure 1. The acceptance of AKRSP's development model among the population is analyzed by two indicators on the basis of the *subdivisions*:

- Percentage of villages covered by *village organizations*,
- Percentage of households covered by *village organizations*.

In both cases, the compilation of these indicators is only possible after combining data of official census reports and AKRSP's internal data and reports. This procedure is necessary to get a common basis for the regional break down of AKRSP's activities (see the indicators in table 2).⁶ Since AKRSP's activities did not start simultaneously in all *subdivisions*, it is necessary to compare their progress on the basis of the particular "sixth regional programme year" (see table 2).

The particular development by *regional programmes* is presented in figures 2.a and b for both indicators separately. These figures show the indicators' different characteristics, see for example the Baltistan *regional programme* with a rapid increase of "covered" villages contrary to the lowest increase of "covered" households. The rank-correlation analysis proves that there is no significant correlation between the "coverage" of villages or

⁶ The activities of AKRSP can only be compared with data of the official 1981 population census (GoP 1983 & 1984a/b). No "base-line-survey" has been carried out by AKRSP at the program's beginning, although the necessity has been pointed out repeatedly (World Bank 1990). Such surveys, based on stratified village samples and randomly selected households, were conducted in the late 1980s (M.H. Khan 1989a/b), and after the completion of this study, in 1992, 1993, 1995 and again in 1998 (cf. Streefland et al. 1995, World Bank 1995, personal communication with AKRSP's staff).

households by AKRSP's *village organizations* within the *programme area* ($r_s = 0.236$, see also table 3).

The percentage of villages "covered" by VOs is high where the average village size is big and the average household size is small. This can be explained by the different ways to define a village or a *village organization*. In several cases, census villages comprise several hamlets where separate *village organizations* were founded. The maximum figure of 253 VOs per 100 villages in the Kharmang *subdivision* gives an impressive example of this phenomenon (see map 2). In comparison, the percentage of households "covered" by VOs shows no significant correlation with other indicators available. The basic assumption by AKRSP that each household is represented only by one member cannot be proved. In several cases, this indicator is higher than 100 percent, and separate case studies also prove this result.⁷

To compare the acceptance of AKRSP's approach among the population of the *subdivisions*, the second indicator (percentage of households "covered" by VOs) is the more appropriate one. The results of a regional analysis and comparison is shown in maps 2 and 3. Map 3 clearly indicates the regions with high proportions of Ismailian population, see the comparison of Nager and Hunza or the one of Chitral and Mastuj. This indicates that the acceptance of AKRSP is higher among Ismailis than it is in the entire *programme area*.⁸

⁷ About 58 % of the sample households in the Gilgit *regional programme* are represented in VOs by more than one member (M.H. Khan 1989a). Bigger households are overrepresented in VOs in Hunza (Kreutzmann 1989b).

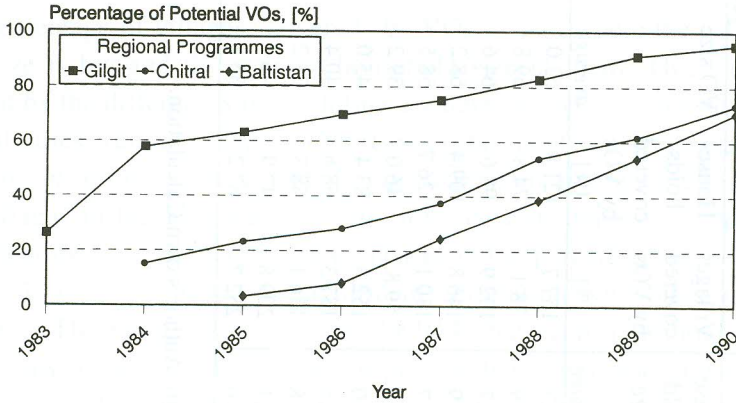
⁸ "... the high proportion of Ismaili villages in Gilgit District, favorably disposed to an Aga Khan supported program, gave an initial impetus which was invaluable, though a quarter of the population of the program area is Ismaili." (World Bank 1987: xv); cf. also Kreutzmann 1989b, Schönherr 1992.

Table 2: Indicators of Village Organizations.

Subdivisions	Census-Indicators for the year 1981				VO-Indicators, AKRSP "6th regional programme year"			
	Villages	Rural population	Rural house-holds	Village size	Villages covered by VOs	House-holds covered by VOs	VO size	"6th reg. prog. year"
	[No]	[No]	[No]	average	[%]	[%]	average	
Hunza	52	28,436	4,244	547	157.7	121.8	63.0	1988
Nager	73	47,376	5,323	649	78.1	74.8	69.8	1988
Gilgit	51	49,586	6,417	972	192.9	98.6	64.6	1988
Punyal & Ishkoman	47	33,975	4,301	723	146.8	109.4	68.2	1988
Gupis & Yasin	83	38,402	4,987	463	130.1	126.7	58.5	1988
Chitral	351	121,641	17,888	347	59.8	46.0	39.2	1990
Mastuj	151	86,919	12,417	576	152.3	83.4	45.0	1990
Skardu	71	68,735	9,165	968	187.3	58.6	40.4	1990
Shigar	57	32,364	4,759	568	156.1	58.3	31.2	1990
Khaplu	55	58,200	9,541	1,058	209.8	47.9	46.1	1990
Kharmang	51	52,750	7,992	1,034	252.7	67.2	35.8	1990

Sources: AKRSP. Annual Reviews, 1983-1990. GoP 1983; 1984a/b. Author's own Calculation.

Figure 1: Village Organizations in AKRSP's Regional Programmes: Percentage of potential VOs.



Sources: AKRSP. Annual Reviews, 1983-1990. Draft and Calculation: J. Clemens.

Table 3: Spearman's Rank-Correlation-Coefficient (r_s) of analysed Indicators.

X-Variables	Y-Variables				
	A	B	C	D	E
A: Village size	--	-0.242	0.782	-0.191	0.082
B: Household size		--	-0.729	0.475	0.626
C: Villages covered by VOs			--	0.236	-0.255
D: Households covered by VOs				--	0.618
E: VO size					--
<i>Significance levels</i> (n=11):	5.0%: 0.527	2.5%: 0.609	1.0%: 0.700	0.5%: 0.754	0.1%: 0.846

Sources: see table 2. Author's own Calculation.

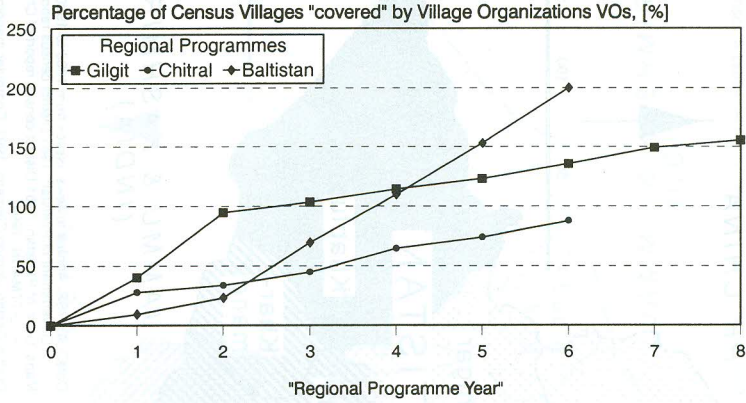
2.2 Productive Physical Infrastructure-Programme

2.2.1 General Patterns

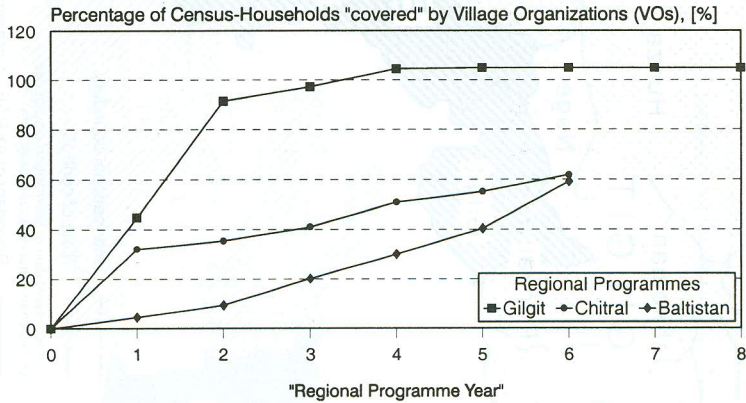
The improvement of the local productive infrastructure in collaboration with the village population is the most significant program activity for the period under review. Its analysis is divided into two parts: at first the general development pattern will be shown, followed by a detailed analysis for different subregions.

Figure 2: Development of Village Organizations by “Regional Programme Years”.

2.a:



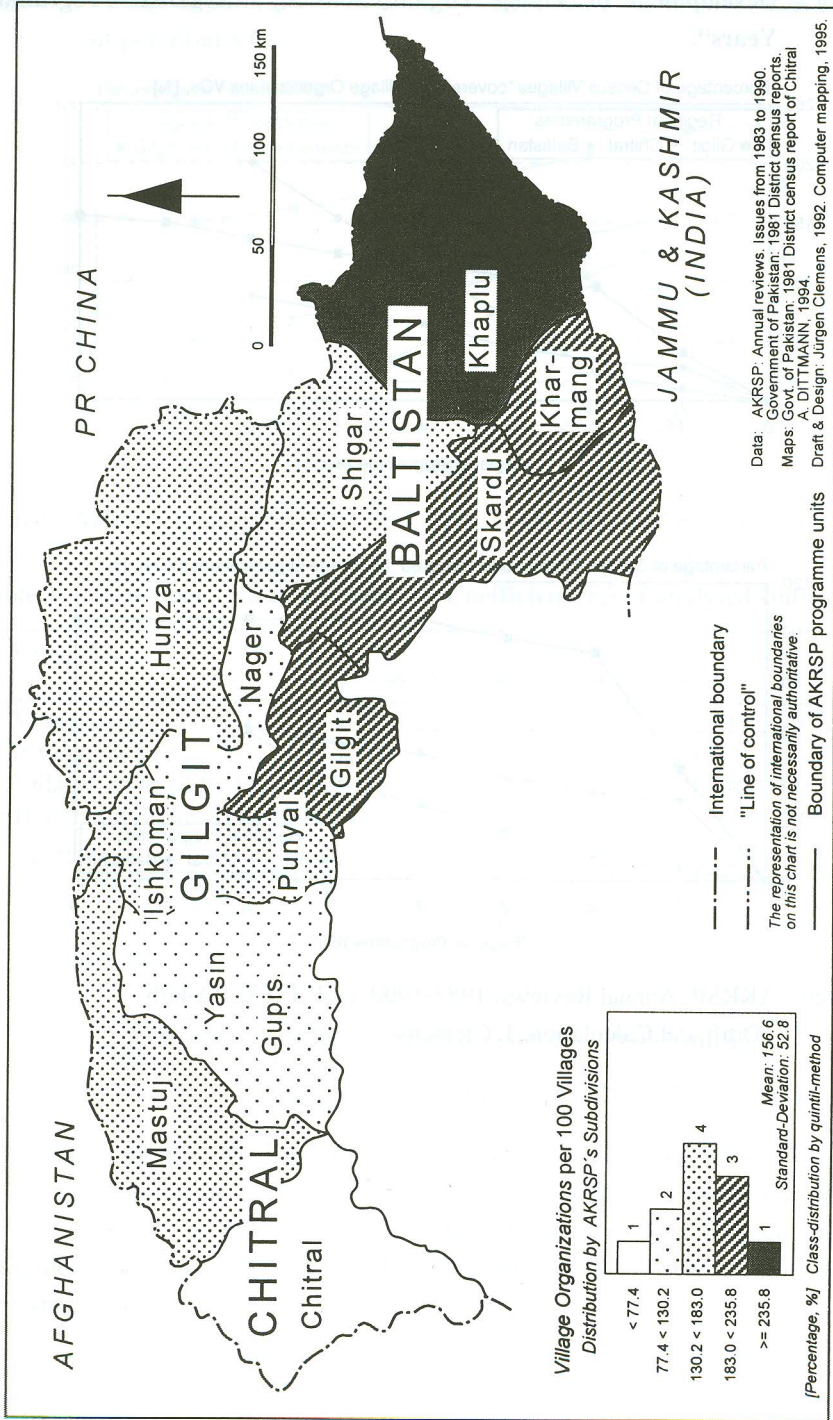
2.b:



Sources: AKRSP. Annual Reviews, 1983-1990. GoP 1983; 1984a/b.

Draft and Calculation: J. Clemens

Map 2: AKRSP: Percentage of Villages "Covered" by Village Organizations. "Sixth Regional Programme Year".



Map 3: AKRSP: Percentage of Households "Covered" by Village Organizations. "Sixth Regional Programme Year".

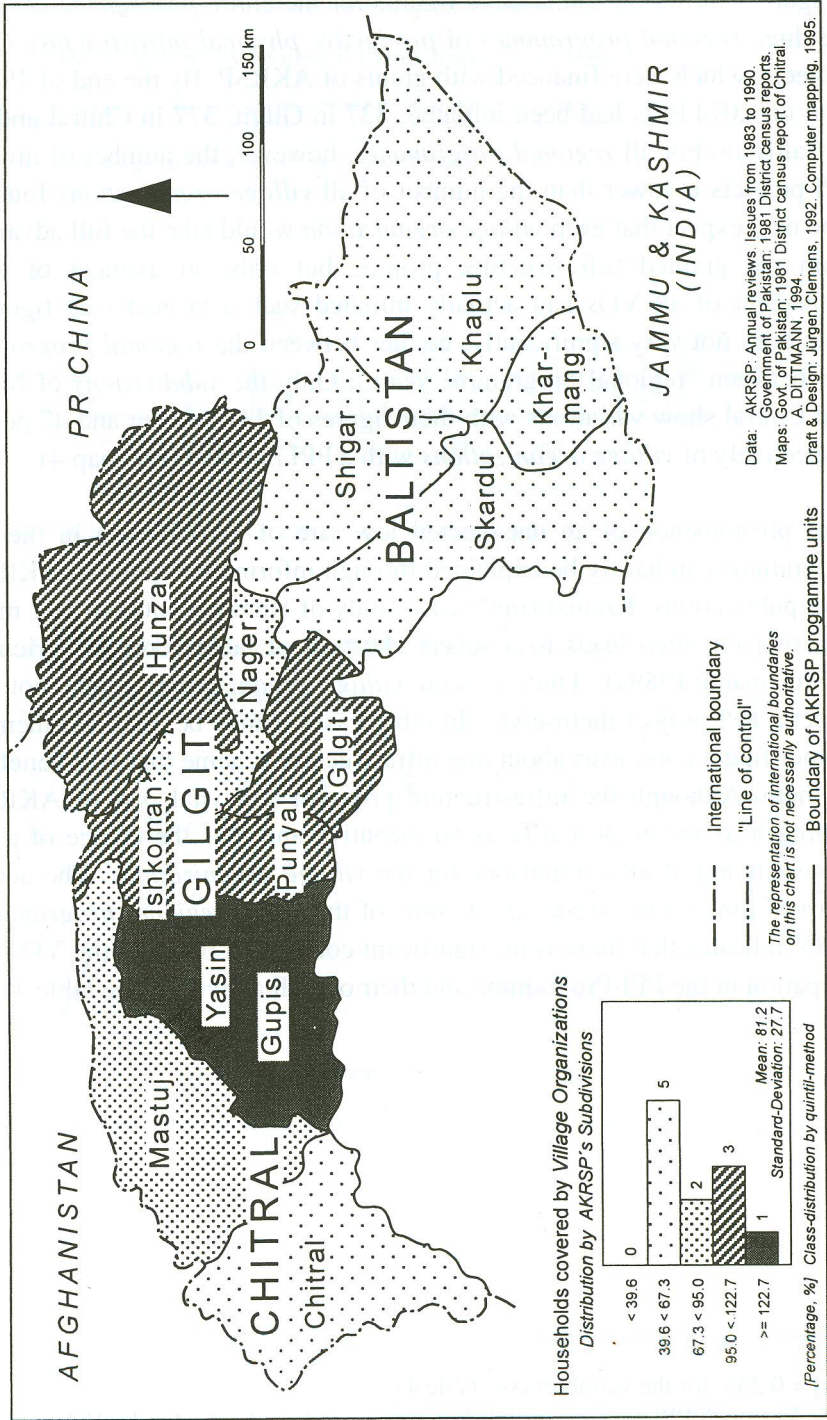


Figure 3 shows the cumulative figures for the entire *programme area* and the three *regional programmes* of *productive physical infrastructure* (PPI)-projects, which were financed with grants of AKRSP. By the end of 1990, a total of 1,074 PPIs had been initiated, 337 in Gilgit, 377 in Chitral and 360 in Baltistan. For all *regional programmes*, however, the number of initiated PPI-projects is lower than the number of all *village organizations* founded. One may expect that each *village organization* would take the full advantage from the granted infrastructure project, but only an average of about 75 percent of all VOs had actually initiated such a project (see figure 4). This does not vary significantly, neither between the *regional programmes* nor between "regional programme years". Only the *subdivisions* of Mastuj and Chitral show variations with their figures of 112 percent and 47 percent respectively of *village organizations* with a PPI initiated (see map 4).

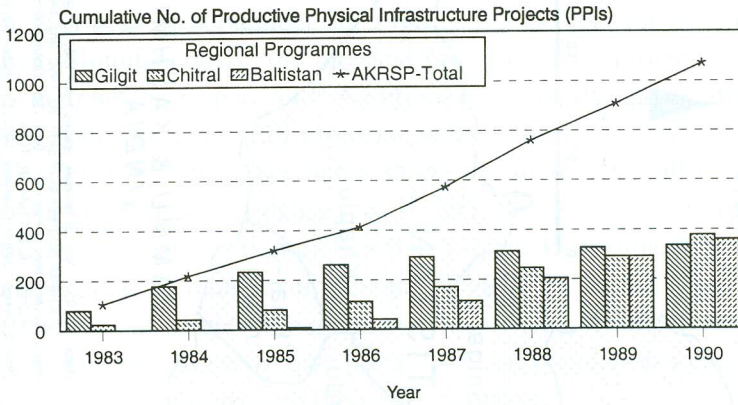
This phenomenon of an unexpected low rate of participation in the PPI-Programme can hardly be explained through information given in AKRSP's own publications. Kreutzmann's case study of Hunza points out that migration of men often leads to a severe shortfall of labor force in agriculture (Kreutzmann 1989a). Thus, several *village organizations* might not construct a PPI-project themselves. In other cases it may be, that VO-members cannot find a consensus about one infrastructure scheme that will benefit all of them. Although the infrastructure program is a vital part of AKRSP's approach, it serves primarily as an incentive and thus the choice of a PPI-project is not at all compulsory for the *village organizations*. The activity chart of nine *social organization units* of the Gilgit *regional programme* in 1985 indicates that there is no significant correlation between the VOs' participation in the PPI-Programme and their overall activities (see table 4).⁹

⁹ $r_s = 0.233$, for the variables (see table 4):

x: VOs with PPI-projects initiated, y: mean number of activities by VOs.

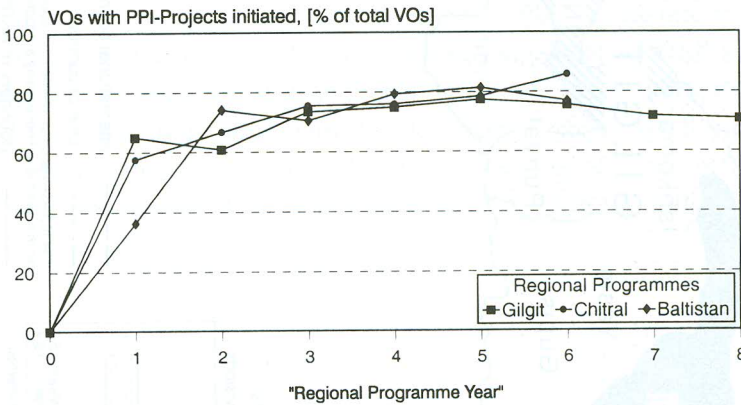
Figure 3: Productive Physical Infrastructure-Programme:

Development by Regional Programmes and Time.



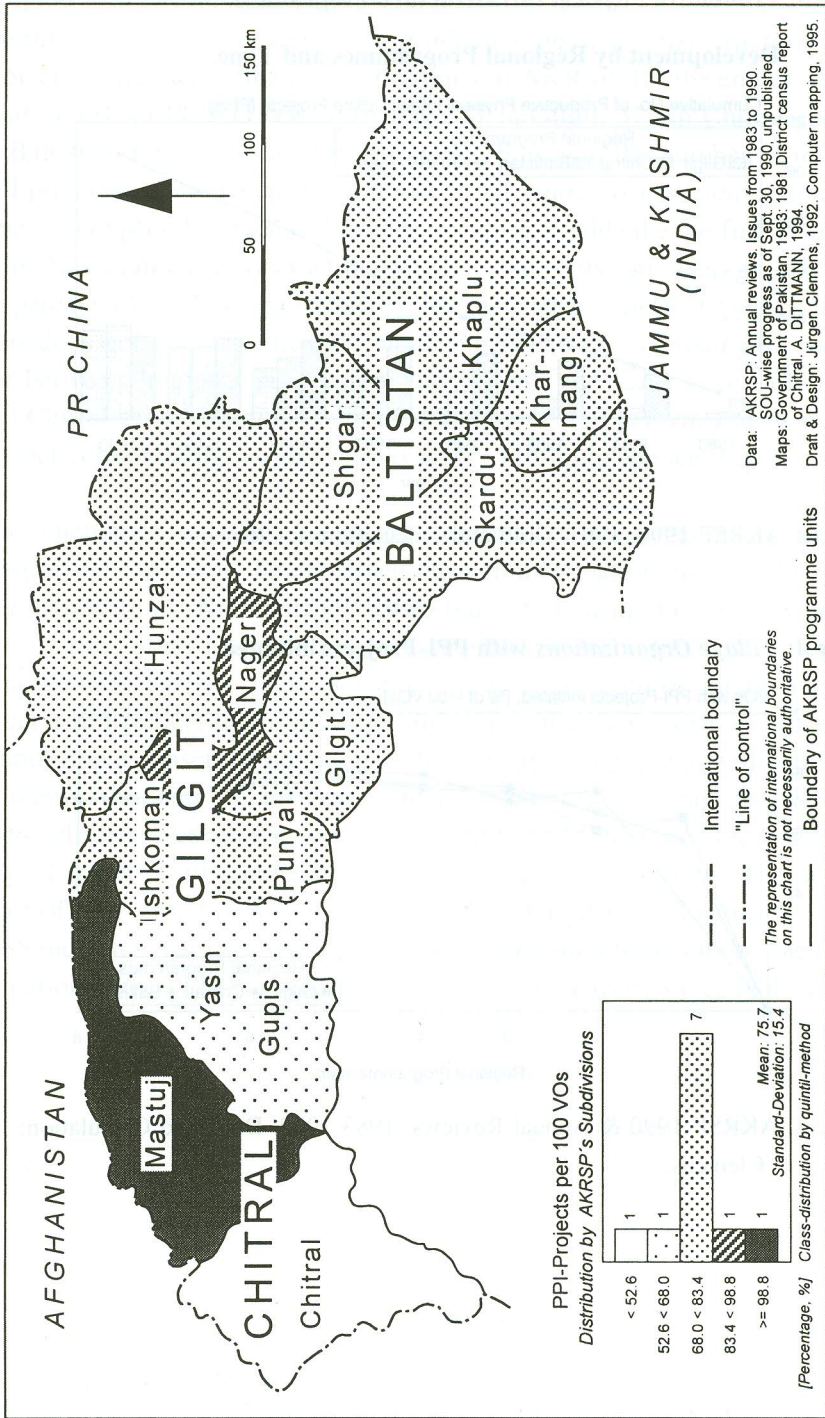
Sources: AKRSP 1990; 1991. Draft and Calculation: J. Clemens.

Figure 4: Village Organizations with PPI-Projects initiated.



Sources: AKRSP 1990 & Annual Reviews, 1983-1990. Draft and Calculation: J. Clemens.

Map 4: AKRSP: Percentage of Village Organizations with PPI-Projects Initiated. "Sixth Regional Programme" Year.



In the framework of this study, the impact of AKRSP's infrastructure program can be evaluated only by two means. On the one hand, the physical progress of these infrastructure schemes is quite high, the percentage of completed PPIs as of September 30, 1990 is 67.6 percent for the entire program area. Simultaneously, the physical progress of all projects, including the ongoing ones, is 82 percent.¹⁰ Additionally, AKRSP's publications indicate only four cancelled PPI-projects in the Gilgit *regional programme* (AKRSP 1991). On the other hand, there are about 100 follow-up infrastructure projects, that are financed by the VOs themselves or with grants by third parties, i.e., external donors like IUCN or the Government of Pakistan. An average of more than seven percent of all VOs started a second PPI-project, in five out of eleven *subdivisions* this figure is 13 percent or even higher (see table 5). These figures prove the rural population's capability of improving local conditions with their own initiative.

2.2.2 Detailed Analysis of the Infrastructure Program

A VO-wise listing of all PPI-projects provided the basis for the detailed analysis of preferences concerning infrastructure projects and of the program's diffusion by space and time (AKRSP 1990). As mentioned above, one of the main objectives of this study is the analysis of AKRSP's regional impact at the lowest level of disaggregation of data. This attempt has been realized for three subregions with detailed maps,¹¹ showing all *village organizations* and their particular PPI-project, including the date of its initiation. The major results of this analysis are discussed in the following chapter.

¹⁰ AKRSP 1990; authors' own calculations. From Sept. 30, 1990 to Dec. 31, 1990, the percentage of completed PPI-projects increased to 71,2 percent (AKRSP 1991).

¹¹ Clemens 1992: maps IV.5 to IV.7 (scale 1 : 400,000) for Gupis & Yasin, Hunza & Nager, and Skardu & Shigar.

Table 4: Programme Activities of Village Organizations in the Gilgit Regional Programme.

Social Organization Units	VOs	[No]	Activities						
			PPI-projects	Village specialists	Credit progr.	Women's progr.	Marketing	Land development	Member VO
Gojal	total	28	28	25	14	17	2	7	3.3
	[%]		100.0	89.3	50.0	60.7	7.1	25.0	
Hunza	total	35	28	12	4	16	5	3	1.9
	[%]		80.0	34.3	11.4	45.7	14.3	8.6	
Nager	total	19	13	14	5	0	3	1	1.9
	[%]		68.4	73.7	26.3	0.0	15.8	5.3	
Sikanderabad	total	24	19	21	5	2	4	1	2.2
	[%]		79.2	87.5	20.8	8.3	16.7	4.2	
Gilgit	total	75	61	41	13	12	8	8	1.9
	[%]		81.3	54.7	17.3	16.0	10.7	10.7	
Punyal	total	33	25	21	6	11	4	7	2.2
	[%]		75.8	63.6	18.2	33.3	12.1	21.2	
Ishkoman	total	23	16	12	4	4	3	3	1.8
	[%]		69.6	52.2	17.4	17.4	13.0	13.0	
Gupis	total	36	21	23	0	2	3	0	1.4
	[%]		58.3	63.9	0.0	5.6	8.3	0.0	
Yasin	total	46	34	29	5	8	6	1	1.8
	[%]		73.9	63.0	10.9	17.4	13.0	2.2	
GILGIT	total	319	245	198	56	72	38	31	2.0
	[%]		76.8	62.1	17.6	22.6	11.9	9.7	
Standarddeviation:			10.8	16.3	12.9	18.9	3.0	8.0	0.5
Variation-Coefficient:			14.0	26.2	73.5	83.5	25.4	82.6	24.8

Sources: AKRSP 1986. Author's own Calculation.

Table 5: Village Organizations: Self financed Productive Physical Infrastructure Projects, 1986-1990.

Subdivisions	1986	1987	1988	1989	1990	Total	Percentage of total VO's
	[No]	[No]	[No]	[No]	[No]	[No]	[%]
Hunza	2	0	4	2	4	12	13.5
Nager	4	0	1	3	2	10	14.9
Gilgit	2	3	3	6	5	19	16.0

Subdivisions	1986	1987	1988	1989	1990	Total	Percentage of total VOs
	[No]	[No]	[No]	[No]	[No]	[No]	[%]
Punyal & Ishkoman	6	0	4	0	0	10	13.2
Gupis & Yasin	0	4	0	1	3	8	6.4
Chitral	0	0	0	0	9	9	4.3
Mastuj	0	0	0	0	0	0	0.0
Skardu	0	0	0	1	1	2	1.5
Shigar	0	0	8	7	2	17	19.1
Kharmang	0	0	3	0	0	3	2.8
Khaplu	0	0	4	0	6	10	7.2
AKRSP-total	14	7	27	20	32	100	7.2

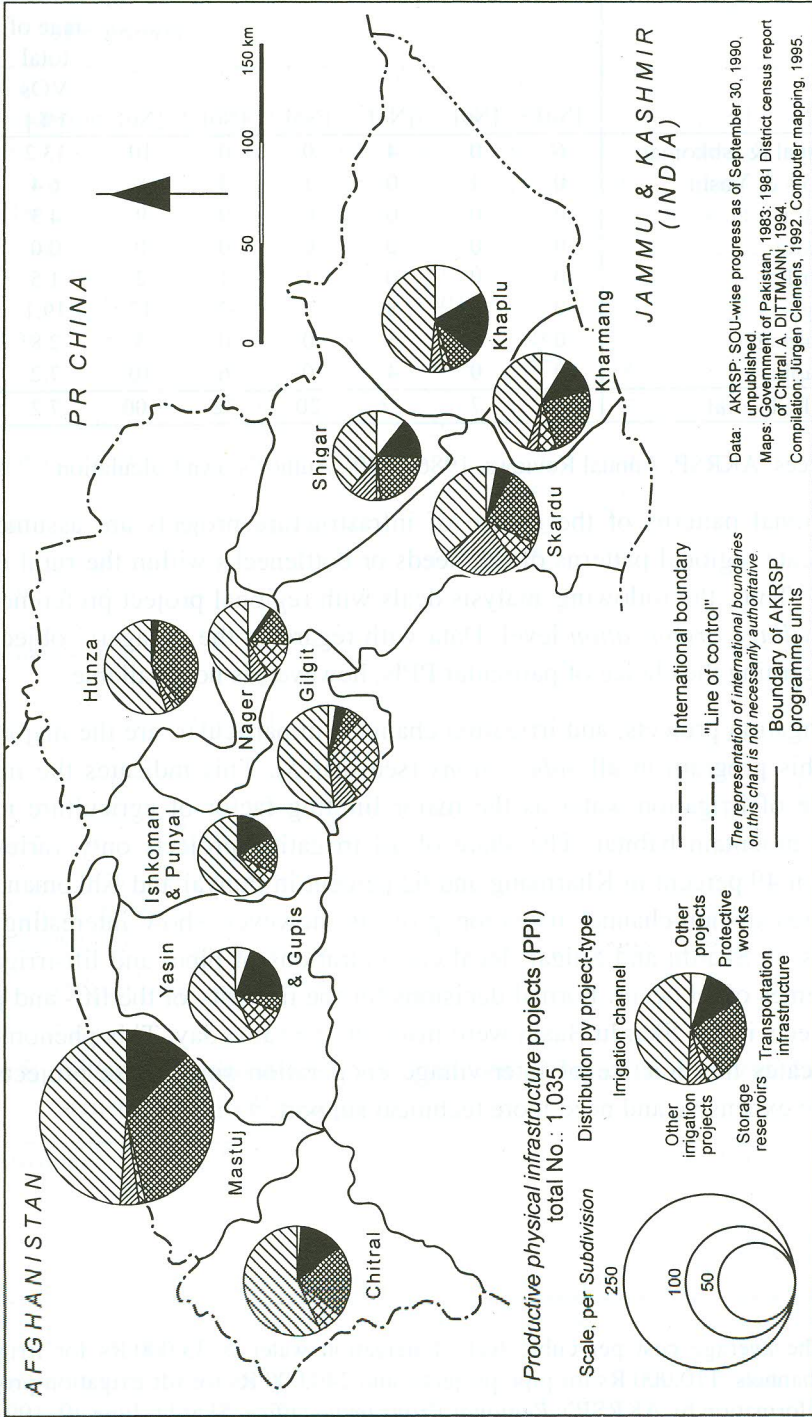
Sources: AKRSP. Annual Reviews, 1986-1990 . Author's own Calculation.

Regional patterns of the choice of infrastructure projects are assumed to indicate regional patterns of felt needs or bottlenecks within the rural economy. Thus, the following analysis deals with regional project preferences at the *village organization* level. Data with regard to the villagers' objectives concerning the choice of particular PPIs, however, is not available.

Irrigation projects, and irrigation channels in particular, are the major part of this program in all *subdivisions* (see map 5). This indicates the importance of irrigation water as the major limiting factor of agriculture in the arid mountain habitat. The share of all irrigation projects only varies between 49 percent in Kharmang and 62 percent in Punyal and Ishkoman. The figures of non-channel irrigation projects, however, show interesting patterns, in Skardu and Shigar, local concentrations of pipe- and lift-irrigation schemes often occur. Formal decisions for the majority of the lift- and pipe-projects in the Skardu Basin were made on the same day. This phenomenon indicates the practice of inter-village cooperation since these projects are more expensive and need more technical support.¹²

¹² The average cost per cubic feet of irrigation water is 33,000 Rs for irrigation channels, 110,000 Rs for pipe-projects, and 240,000 Rs for lift-irrigation-projects, information by AKRSP's *Regional Programme Office*, Skardu, June 30, 1991.

Map 5: AKRSP: Productive Physical Infrastructure-Projects. Distribution by Project-Type and Subdivisions, as of September 30, 1990.



Transportation projects, i.e., pony tracks, jeep roads and bridges, also vary significantly among the *subdivisions*. This variation, however, cannot be explained by a general formula. High proportions of such projects in Hunza (36 %), Gilgit (29 %) or Skardu (24 %) are based on the proximity to the "Karakoram Highway" or the "Gilgit-Skardu-Road", linking these areas directly with down country Pakistan. *Village organizations* building a link road to this major road network will benefit from the improved access not only with regard to their agricultural sector. The case of Nager (15 %), indicates that preferences along the "Karakoram Highway" differ for reasons which cannot be analyzed here. In Mastuj (34 %) the VOs improve the local road infrastructure by their own means since the government's program of road construction is not sufficient (AKRSP 1991). This differs, however, among the remote valleys, as the example of Gupis and Yasin shows.

The analysis of the village-wise distribution of infrastructure projects shows more regional variations (see map 5). Irrigation schemes are of high importance in Gupis and Yasin and especially in Mastuj. In Yasin, projects to control the streams and for floodprotection are important to develop new arable land or to secure the existing cultivated area, "other" PPIs include one nursery, one micro-hydroelectricity project, and two mud-removals.

In Hunza and Nager, irrigation projects also are dominant, and the proximity to the "Karakoram Highway" is the main incentive for the construction of link roads. In remote valleys, however, such transportation projects are rare, although their relative impact on the local economy would be significant. Neighboring VOs often show the combination of an irrigation channel and a link road. This may be due to topographic differences between "upper" and "lower" villages and proves the local variation of felt needs which can only be improved with the participation of the target population.

Apart from irrigation projects, the Skardu and Shigar *subdivisions* are characterized by higher shares of floodcontrol-PPIs and boundary walls with increasing distance from the urban center of Skardu. Walls like these protect the cultivated or newly developed land with tree plantations or orchards against the free grazing of animals and thus improves the agricultural productivity.

Regional preferences for infrastructure projects by the *village organizations* are generally characterized by projects with a direct impact on the

local agricultural economy. Preferences for transportation projects indicate the growing importance of access to regional or national markets, not only for agriculture itself, but also for the entire rural economy, including commodity supplies, labor migrants and tourism.

2.2.3 Diffusion of the Infrastructure Program by Space and Time

The VO-wise listing of PPI-projects includes the date of the *3rd dialogue*, when the conditions of cooperation, *terms of partnership*, are formally sanctioned between the *village organization* and AKRSP. On this occasion, the VO is officially founded and AKRSP pays the grant's first installment.

Central to the further analysis is the question, whether the actual process of AKRSP's diffusion in the *programme area* can be compared with models of diffusion, and to what degree topographical conditions are of importance, e.g. as barriers. Thus, four aspects on the diffusion process prevail:

- Does the program's diffusion follow the hierarchy of the governmental administration?¹³
- Is the program's diffusion primarily influenced by neighborhood effects, e.g. the direct contact from village to village?
- Is the program's diffusion a combination of hierarchy and neighborhood effects?
- Is the program's diffusion handicapped by remoteness and inaccessibility of valleys?

Prior to the analysis, some remarks concerning AKRSP's practice of introducing its model of development are necessary. The common way is to select the "most receptive villages" as examples to their neighboring villages. In Baltistan, however, AKRSP practiced a cooperation with the "Union Councils", elected local boards, which decided to pool their "Annual Development Programme"'s budget with the one of AKRSP.¹⁴ Therefore, com-

¹³ Hierarchy in the sense of this study does not indicate a hierarchy between AKRSP's *village organizations*. It refers to the technical term for the kind of diffusion, or to the official administrative division of the Northern Areas.

¹⁴ AKRSP 1986: 78: "Since direct elected representatives (in Baltistan, J.C.) have undertaken to continue pooling their share of ADP in every Union Council where AKRSP starts its activities, the program has had to be phased sequentially by Union Councils. In the districts of Gilgit and Chitral, the program was introduced

bined effects of hierarchy and neighborhood are expected as the main components of the program's diffusion.

In practice, the visits of AKRSP's extension workers, *social organizers*, lead to concentrations of *3rd dialogues* for neighboring villages around particular dates, e.g. all the VOs in the Chupursan Valley in Gojal (Hunza) were founded on January 29 and 30, 1984. Compared with the development over several years, this phenomenon is not significant. Seasonality, however, is of high importance, most *3rd dialogues* took place in winter: 73 percent from October to March, 17 percent from April to June, and 10 percent from July to September (AKRSP 1990, author's own calculation). This practice is adopted to the agrarian labor peaks in summer and autumn due to irrigation and harvesting or the villagers' migration to high pastures.

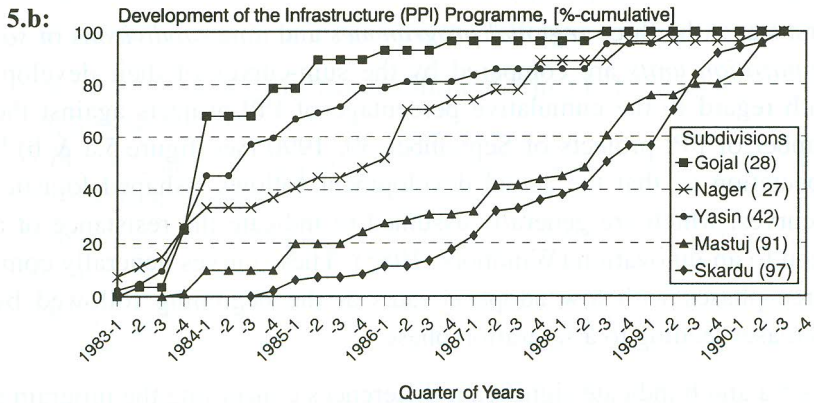
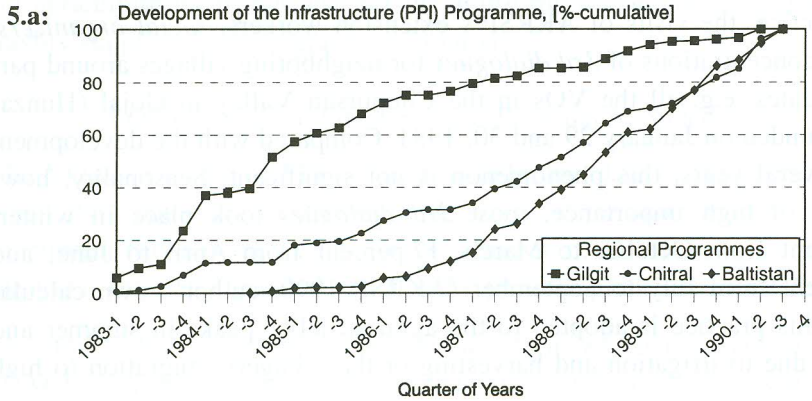
In a first stage, the three *regional programmes* and nine *subdivisions* or *social organization units* are compared by the sum-curves of their development with regard to the cumulative percentage of PPI-projects against the total number of PPI-projects of September 30, 1990 (see figure 5.a & b).¹⁵ The expectation is, that the actual development follows s-shaped logistic-growth-curves, which are generally assumed to indicate the resistance of a population to an innovation (Windhorst 1983). These curves generally comprise three phases with low adoption rates at the beginning followed by steep increases leading to a saturation phase.

Figures 5.a and b indicate significant differences concerning the program's diffusion on the regional scale. Only the figures of Chitral and Baltistan can be compared with logistic-growth-curves, they differ only in their degree of increase (see figure 5.a). However the characteristics of the Gilgit *regional programme*, and especially of the Gojal and Yasin *social organization units*, indicate that region-specific conditions are highly significant (see figure 5.b).

by selecting the most receptive village in scattered clusters and then the program methodology was transmitted to other villages through those VOs."

¹⁵ Clemens 1992: figures IV.6 to IV.8. In this paper, however, five *subdivisions* were selected (see figure 5.b). For analyzing the diffusion process, VOs and PPIs are used synonymously, since the dates of the *3rd dialogues* refer to the official foundation of VOs and the start of PPI-projects. Data concerning the previous contacts and dialogues are not available.

**Figure 5: Diffusion of *Productive Physical Infrastructure* Projects.
According to the Date of the 3rd Dialogues.**



Source: AKRSP 1990. Draft and Calculation: J. Clemens.

A more detailed analysis has been carried out by means of large scale maps.¹⁶ Their combination with the sum-curves of the particular *social organization units* provides interesting results. In Gupis and Yasin, the PPIs of the first years are concentrated in the central and lower parts of the valleys. The latest development shows different characteristics. Beside the expansion into the valleys' upper parts and into side valleys, there are processes of intensification in the vicinity to the oldest *village organizations*. In some cases, this is due to the division of existing VOs, which proved to be too big.

¹⁶ Clemens 1992: maps (1 : 400,000) IV.7 to IV.9; (cf. footnote: 11).

This pattern supports the assumption that the actual process of the program's diffusion can be described as a combination of hierarchy and neighborhood effects. The villages with an early adoption are located in the vicinity of central administrative villages or along already existing roads. A different pattern can be found in the Yarkhun Valley of Mastuj. Here, the program's diffusion expanded step by step from the lower to the upper parts, due to lacking road access (see figure 5.b).

In Hunza, Gojal, and Nager, the villages of the first phase of program adoption are mainly concentrated along the "Karakoram Highway". But differing from Gupis and Yasin, villages at higher altitudes and in side valleys have already been reached during the early phases, e.g. in the Chupursan Valley (see above). As in Yasin, the majority of younger VOs in Hunza are close to the oldest ones, because of the division of already existing *village organizations* (see figure 5.b). The development by time can be clearly divided into periods of rapid expansion, periods of stagnation, and periods with minor expansions due to divisions of former VOs.

Compared to the examples mentioned above, the *subdivisions* of Skardu and Shigar show a completely different characteristic: the development by time shows a constant increase and no rapid expansion at the program's beginning (see figure 5.b). This supports the statement, that the program's expansion in Baltistan was done according to the local administration (see above). Additionally, the process of the program's spatial expansion and intensification is characterized by local clusters of VOs, which were founded at the same date (see above). Villages of the early adoption phases are mostly located along the Indus and Shigar Rivers, and also in the Skardu Basin with better road access.

The diffusion of AKRSP's infrastructure program in its early phases reached villages with better road access. The following phases comprise processes of expansion into remote valleys, and of organizational intensification near the early adopting VOs due to the division of older and bigger VOs. The latter especially occurs in the Gilgit *regional programme*, and the division of existing VOs and the construction of separate infrastructure projects is no real diffusion of the program approach.

The diffusion into remote parts and side valleys varies widely within the entire *programme area*. In the Gilgit *regional programme*, many remote villages already adopted the program during the first program years. In Bal-

tistan and Mastuj, however, the program diffusion is a steady process, which is partially planned and also to a higher degree handicapped by remoteness and problems of accessibility.

Cultural dimensions provide important aspects for the understanding of the analyzed process of program diffusion. The degree of acceptance of the Aga Khan Rural Support Programme is highest among the Ismailian population,¹⁷ which is mainly concentrated in Hunza and Gojal, in Punyal and Ishkoman, Gupis and Yasin, and in Mastuj. Because of their longer experience with other AKF-welfare programs, there were no religious reservations and often a spontaneous adoption of AKRSP's new activities occurred.

2.2.4 Success of AKRSP's Model of Development

Although this study does not aim at evaluating AKRSP's entire program, two aspects are selected which indicate the general progress of the program. It is AKRSP's objective to initialize a process of self-reliant development among the rural population. The process of institution building is a vital element of this approach which AKRSP divides into three stages:¹⁸

– VO initiation

VO formation, PPI completion, etc. (approximately 0.5 to 2 years).

– VO consolidation

formation of *women organizations*, linkages with other agencies, effective utilization of *village specialists'* skills, and the capability of VOs to handle complex and management intensive issues (approximately 2 to 5 years).

– Self-reliant growth

decreasing dependency on AKRSP, increasing interest in social sector activities, formation and proper utilization of *clusters*, a sustainable credit program for the VO members and an effective use of the *clusters* and *village specialists*.

¹⁷ World Bank 1987, Kreutzmann 1989b, Schönherr 1992.

¹⁸ AKRSP 1991, and personal communication with AKRSP's staff.

2.2.4.a Cluster Formation

The program's progress with regard to *institution building* and its regional differentiation can be analyzed at the level of *cluster organizations*, i.e., the cooperation between several neighboring *village* and *women organizations* (VOs/WOs). In the beginning, *cluster organizations* were informal ways of inter-village cooperation and they were not part of AKRSP's program activities. At the village level, the demand for cooperation increased due to similar problems and also the goal of reaching economies of scale concerning purchases of inputs and marketing of agricultural products. Eventually, *clusters* were formally implemented by AKRSP as a voluntary program device, and the *cluster formation* was incorporated into AKRSP's assessment of the progress of its *institution building* activities (see above).

In 1987 this process started in the Chitral *regional programme*. However, the share of VOs and WOs participating in *clusters* is the highest in Hunza, Gupis and Yasin (see table 6). Following the stages of *institution building*, these *subdivisions* have reached the highest degree of maturity. Differences between the *regional programmes* of Gilgit and Chitral might be explained by the particular program duration. However, this fact cannot explain the higher degree of variation between *subdivisions* within Gilgit, ranging from 19.5 to 97.1 percent.

Table 6: Cluster: Cooperation of Village and Women Organizations (VO/WOs).

Subdivisions & Regional Programmes	Cluster-Indicators				
	Cluster [No]	Participating VOs & WOs [No]	Cluster size [No. of VO/WOs]	Total of VOs & WOs [No]	VO/WOs covered by clusters [%]
Hunza	11	156	14.2	163	95.7
Nager	7	55	7.9	80	68.8
Gilgit	9	109	12.1	155	70.3
Punyal & Ishkoman	2	23	11.5	118	19.5
Gupis & Yasin	13	199	15.3	205	97.1
GILGIT	42	542	12.9	721	75.2
Chitral	8	100	12.5	293	34.1
Mastuj	7	75	10.7	283	26.5
CHITRAL	15	175	11.7	576	30.4
AKRSP-Total	57	717	12.6	1,297	55.3

Source: AKRSP 1991. Author's own Calculation.

2.2.4.b Village Organization's Savings Program

Another approach to analyze AKRSP's progress and its regional variation is based on data on collective savings of the *village organizations*, particularly the development of per capita savings in VOs by time (see table 7). Regular savings by the members of *village* and *women organizations* are important elements of AKRSP's strategy of empowering the rural population to participate in the commercial credit market (see above). AKRSP's assumption is that the collective VO-savings are a result of the program's income generating activities. Therefore, the per capita savings of VOs are interpreted as a direct indicator of the program's progress, which is generally confirmed through internal case studies (M.H. Khan 1989a/b). Khan, however, reports that VO-savings are only a small share of the total household savings, approximately five to twelve percent, and Kreutzmann shows that off-farm income from labor migration or tourism is of growing importance to the household economy (Kreutzmann 1989a/b).

Credits offered to the local organizations by AKRSP are directly related to the amount of collective VO-savings. Thus, in order to maximize the participation in AKRSP's credit program, significant shares of the total VO-savings have been transferred from other, traditional, savings (M.H. Khan 1989a/b). This process is, however, not a universal one, since the differences between the *subdivisions* are significant (see table 7). Comparing the development of per capita savings according to the program's duration, the figures in the *subdivisions* of the Gilgit regional programme vary between the overall minimum and maximum of the entire *programme area* (see map 6), and the differences are attributed to the different awareness of opportunities.

**Table 7: Per Capita Savings of Village Organizations.
Development by Subdivisions and Time.**

Subdivisions & Regional Pro- grammes as of Dec. 31	cumulative Per Capita Savings							
	[Rs]							
	1983	1984	1985	1986	1987	1988	1989	1990
Hunza	96	117	n.a.	505	726	1,184	1,950	2,571
Nager	33	40	n.a.	362	817	1,187	1,342	1,470
Gilgit	84	103	n.a.	398	905	1,191	1,394	1,536
Punyal & Ishkoman	40	77	n.a.	417	604	773	960	1,103
Gupis & Yasin	43	96	n.a.	331	791	1,075	1,195	1,367

Subdivisions & Regional Pro- grammes as of Dec. 31	cumulative Per Capita Savings							
	[Rs]							
	1983	1984	1985	1986	1987	1988	1989	1990
GILGIT	55	90	n.a.	401	776	1,087	1,370	1,611
Chitral			232	470	655	839	1,127	1,290
Mastuj			228	379	626	870	986	1,116
CHITRAL			230	417	638	855	1,050	1,194
Skardu			178	283	453	559	665	694
Shigar			136	326	441	460	526	605
Kharmang			210	312	381	447	570	588
Khaplu			-.	184	298	439	436	515
BALTISTAN			167	294	399	483	551	596
AKRSP-Total	55	90		398	686	907	1,089	1,191

Sources: AKRSP. Annual Reviews 1983-1990. Author's own Calculation.

n.a.: not available

-.: no programme activities

Some interesting findings result from the comparison of the dynamics of per capita savings. In Hunza, per capita savings increased by 117 percent between 1988 and 1990, whereas in the *regional programme* of Gilgit as a whole the total increase was just 48 percent. In those of Chitral and Baltistan it was 40 percent and 23 percent. These differences are due to AKRSP's *VO-banking* program, which also offered credits to individual VO-members up to the limit of their individual savings within the collective VO-account.

With such a regional comparison of the dynamics of savings, regional disparities of welfare become visible. These disparities were already prevailing when AKRSP started its activities. In 1986, Baltistan was characterized as "one of the poorest, most remote and neglected districts of Pakistan" (AKRSP 1986: 77). By the year 1990, these disparities had not been balanced by AKRSP, as the differences in the dynamics of development indicate. According to internal surveys, however, the per capita income in Gilgit and Chitral was raised from 46 and 36 percent of the mean per capita income in Pakistan to 62 and 64 percent between 1982-83 and 1990-91 (World Bank 1995, after an AKRSP survey). Still there are significant wel-

fare differentials, although the percentage share of absolute poor was reduced from 47 to 34 percent within the entire *programme area*.¹⁹

3. Summary

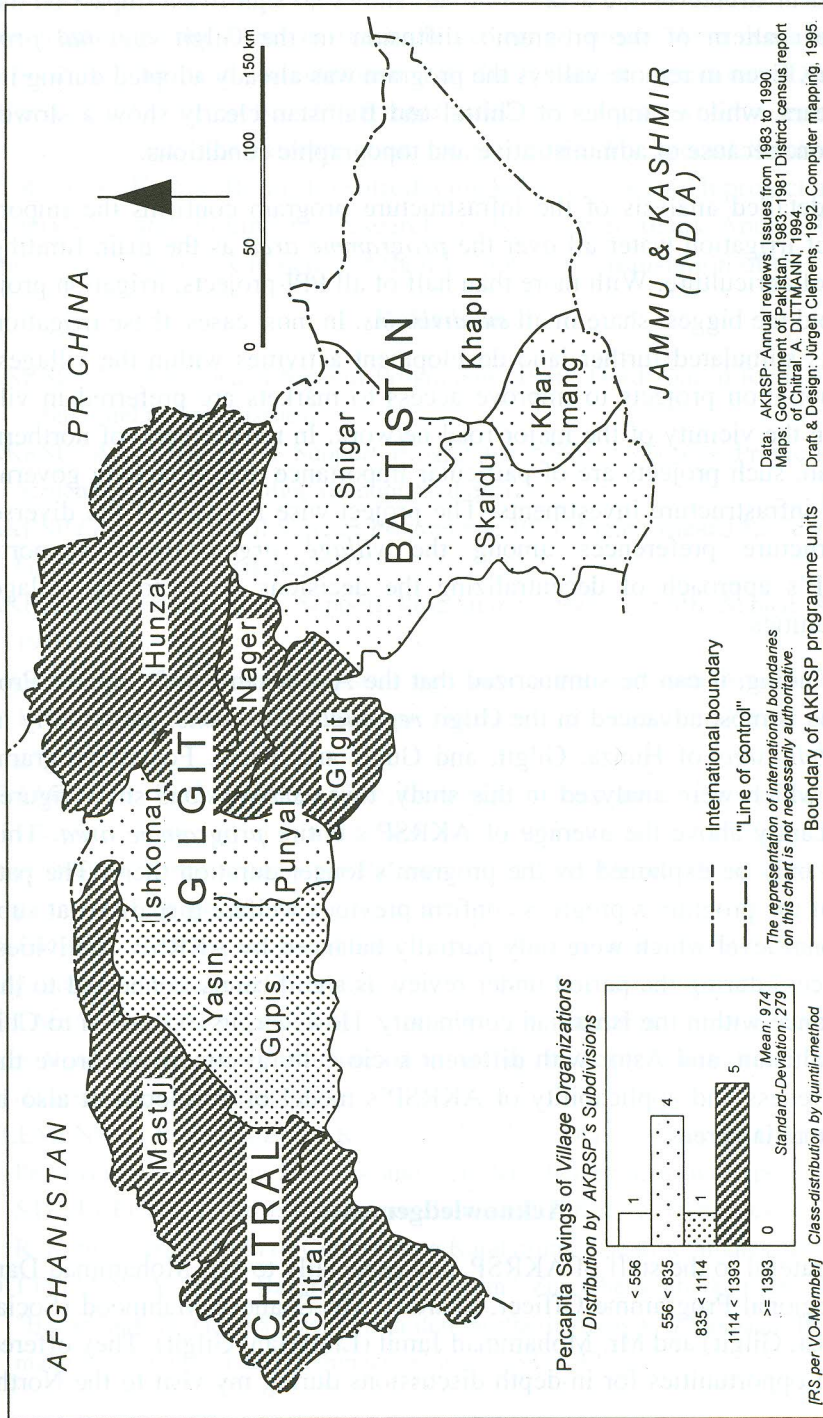
Since detailed data concerning the situation prior to AKRSP's activities is lacking as well as information with regard to direct program outputs, no quantitative evaluation of the program's impacts can be assessed. However, the analysis of the program inputs and of the local organizations' activities within the *subdivisions* and *social organization units* shows interesting results concerning the regional impact of the Aga Khan Rural Support Programme.

When compared to Chitral and Baltistan the *subdivisions* of the Gilgit *regional programme* show clear development advantages. This is based on the population's participation in the program (percentage of households "covered" by *village organizations*) and especially on their utilization of particular program activities like credits or training of village specialists as well as their higher degree of inter-village cooperation.

Although the Aga Khan Rural Support Programme first started in the Gilgit Region, the advanced development here, as compared to Chitral and Baltistan, can be attributed especially due to particular socio-cultural conditions. The early and faster expansion in the Gilgit *regional programme* showed almost no initial phase with moderate growth which is likely to happen with innovations. In most cases the population immediately adopted the program, and its implementation spread quickly. This indicates the existence and effects of program-exogenous factors. Here, the religious community of the Ismailia is of major importance. Obviously, AKRSP was understood here as a continuation and extension of previous Ismailian welfare programs. Therefore, the program was easily accepted and its incentives were utilized. Several case studies support this result, simultaneously contributing to explaining the differences in the process of *institution building* at village level between the *subdivisions* of Gilgit.

¹⁹ Cf. Safdar Parvez & Ehsan-ul-Haq Jan; the percentage of absolute poor in the *regional programmes* for 1991 and 1994 is as follows: Baltistan 56 / 41 %, Chitral 51 / 32 %, and Gilgit 38 / 19 %.

Map 6: AKRSP: Per Capita Savings of Village Organizations. "Sixth Regional Programme Year".



diple-6.fr3/fh5 100%
 J. Clemens, 07.1995/10.12.1998

Settlement structures and access to roads shows no significant impact on the regional pattern of the program's diffusion in the Gilgit *regional programme*. Even in remote valleys the program was already adopted during its first years, while examples of Chitral and Baltistan clearly show a slower diffusion, because of administrative and topographic conditions.

The detailed analysis of the infrastructure program confirms the importance of irrigation water all over the *programme area* as the main limiting factor of agriculture. With more than half of all PPI-projects, irrigation projects hold the biggest share in all *subdivisions*. In most cases, these irrigation projects stimulated further land development activities within the villages. Transportation projects to improve access to markets are preferred in villages in the vicinity of the major road network. In remote parts of northern Pakistan, such projects are of particular importance due to lacking governmental infrastructure investments. The project-wise analysis of the diverse infrastructure preferences among the *village organizations* supports AKRSP's approach of decentralizing the decisions down to the village communities.

Concluding, it can be summarized that the Aga Khan Rural Support Programme is most advanced in the Gilgit *regional programme*, particularly in the *subdivisions* of Hunza, Gilgit, and Gupis and Yasin. For all program-inputs which were analyzed in this study, these *subdivisions* show figures significantly above the average of AKRSP's entire *programme area*. This cannot only be explained by the program's longer duration there. The patterns of the program's progress confirm previous welfare disparities at sub-divisional level which were only partially balanced by AKRSP's activities. Its success during the period under review is significantly connected to the acceptance within the Ismailian community. However, its expansion to Chitral, Baltistan, and Astor with different socio-cultural conditions prove the effectiveness and applicability of AKRSP's model of development also in non-Ismailian areas.

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