

ANNEX VI  
FINAL NARRATIVE REPORT

# THE CUSICHACA TRUST



## FINAL REPORT

### FEBRUARY 2003 TO JULY 2007

#### 1. Description

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1.1. Name of beneficiary of grant contract:

Beneficiary of the grant contract:           The Cusichaca Trust

1.2. Name and title of the Contact person:

Person responsible for the Action:       Dr. Ann Kendall  
Position:                                        Director

1.3. Name of partners in the Action:

Partners:                                       Asociación Andina Cusichaca

1.4. Title of the Action:

Title:    Developing a practical and social model for the re-introduction of sustainable irrigated terracing systems and resource management to improve rural livelihoods in highland communities of Peru

1.5. Contract number:

Contract number:                            ONG/PVD/2002/020-509/PE

1.6. Start date and end date of the reporting period<sup>1</sup>:

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<sup>1</sup> The entire implementation period of the Action  
**2007**

Start date: 1<sup>st</sup> February 2003

End date: 31<sup>st</sup> July 2007

1.7. Target country(ies) or region(s):

Target country: Peru

1.8. Final beneficiaries &/or target groups<sup>2</sup> (if different) (including numbers of women and men):

Beneficiaries: A total of approximately 9,000 people will benefit directly from the project. A further 9,000 will be indirect beneficiaries

Target groups: Poor farmers  
Women and Children  
Returnees  
Staff working for other institutions and NGOs in the area

1.9. Country (ies) in which the activities take place (if different from 1.7):

Country: Peru

Regions: Apurimac and Ayacucho

Districts: Apurimac (Pampachiri, Pomacocha, Tumay Huaraca, Sañayca)

Ayacucho (Larcay, Soras, Carmen Salcedo, Chipao)

Note: 2 districts have been added to the original list – Cabana Sur and Aucara both in Ayacucho

## **2. Assessment of implementation of Action activities**

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### 2.1. Activities and results

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<sup>2</sup> “Target groups” are the groups/entities who will be directly positively affected by the project at the Project Purpose level, and “final beneficiaries” are those who will benefit from the project in the long term at the level of the society or sector at large.

Please list all the activities in line with Annex 1 of the contract since the last interim report if any or during the reporting period

Activity 1:

**Title of the activity: Conference at town W with X participants for Y days on Z dates**

Topics/activities covered <please elaborate>:

Reason for modification for the planned activity <please elaborate on the problems - including delay, cancellation, postponement of activities- which have arisen and how they have been addressed> (if applicable):

Results of this activity <please quantify these results, where possible; refer to the various assumptions of the Logframe>:

The external monitoring exercises organised by the EU in years 1 and 2 both recommended that we restructure the logical framework. As part of this revision a new structure for the presentation of activities was agreed by the delegation in Lima. The new structure represents more faithfully project management and implementation strategies and was the model followed in the year 3 progress report. Below are lists of the main activity headings used in reports for years 1 and 2 plus those which are used here and last year.

Original list of Activities: (As presented in original application and reports for years 1 and 2)

Feasibility studies and baseline data  
Major research activities  
Training preparations  
Training and capacity building  
Further capacity building  
Rehabilitation of irrigation and terrace systems  
Establishment and management of skills centres  
Promotion of tourism

Present list of Activities (Project Programmes) (As managed since evaluations and presented in year 3 and current report)

Traditional agricultural infrastructure  
Management of arable and livestock farming systems  
Community organisation  
Health and nutrition  
Commercialisation  
Tourist promotion  
Natural resource management  
Nature conservation  
Natural disaster management

Activity 1: **Traditional Agricultural Infrastructure**

This programme concentrated principally on the rehabilitation of ancient agricultural systems – canals, stone lined reservoirs (*cochas*) and terraces (*andenes*). Locally available materials such as stone, clay, sand and cactus juice were used to save costs and to improve maintenance of the structures.

The principal benefits of the programme have been to increase the area of farm land available, to improve water management efficiency and to increase crop yields. In addition terrace farming has helped to conserve water and soil locally and has reduced the negative effects of severe climatic events such as heavy frosts and prolonged droughts.

A total of 14 sub activities have been implemented within this programme.

**2007**

- a) Undertake feasibility studies on the canals, reservoirs and agricultural terraces to be restored.

A total of 6 technical expedients were prepared relating to the canal rehabilitation work. Five of these documents were for canals subsequently rehabilitated by project staff. These were for canals located in the districts of Larcay, Pomacocha, Chipao (2 canals) and Sañayca. The other document was prepared following a request made by the local authorities in Pampachiri for a canal in the Community of Santa Rosa.

Table 1: List of feasibility studies on canals

<u>District</u>	<u>Community or annex</u>
Larcay	Laymecocha
Pampachiri	Santa Rosa
Pomacocha	Pomacocha
Chipao	San Antonio
Chipao	Chipao
Sañayca	Sañayca

The feasibility study for the Laymecocha canal and reservoirs in Larcay was developed into a full scale study and investigation covering the complete rehabilitation process. This document included input from archaeologists, agronomists, a geologist and a master mason. It has been completed and copies have been presented to the National Cultural Institute (INC).

No feasibility studies were carried out for the canals in Tumayhuaraca and Ccenta (Pampachiri), although these also were rehabilitated.

- b) Train one local mason per district (8 in total).

During the first year of the project our Master Mason ran a long-term course to teach potential future masons the skills involved in restoring traditional agricultural systems (canals, *cochas* (reservoirs) and *andenes* (terraces)). Over 20 students participated in the course on, at least, a part time basis. Nine of these participated for over 50 days.

A group of 6 students accompanied the Master Mason to the Colca canyon. Here they were given a two-week training session by the NGO, DESCO which had been working in the area for many years. The course was mainly concerned with terrace restoration and was of great benefit to all of those who participated.

The 4 students who completed the whole course were taken on an interchange of experience exercise to Andamarca where they participated in the annual water festival. Here the group was able to witness some of the traditional Andean customs relating to water and the sowing of maize. It was also a chance to see the ceremonies organised around the cleaning out of the canals, a practice which was not well developed in other neighbouring districts.

Cusichaca has contracted a total of 6 local masons from several districts within the project area to help carry out the rehabilitation work. In addition a further 12 have been trained and were employed on a part time basis. All of these local masons have been given on-going practical field training by the Master Mason. Many have also participated in regional and national seminars on terrace rehabilitation and/or exchange visits within the project area and elsewhere.

- c) 2 exchange visits.

Exchange visits have been organised both within the project area and outside of it. Several trips were arranged for farmers in the Chicha – Soras valley to visit the Sondondo valley for a week or more at a time. Many of these have worked on terrace rehabilitation projects as part of the exchange visits. These trips are of immense value since farmers in Andamarca (located within the Sondondo valley) are amongst the foremost experts in Peru on terrace farming including rehabilitation and maintenance. Approximately 80 farmers have benefited from these trips.

In the first year of the project a group of 6 local masons were sent to the Colca canyon in Arequipa to receive two weeks training from the NGO, DESCO, which has many years of experience of rehabilitating terraces there.

In year 2 a delegation of 25 participants made the trip to Chivay to participate in a seminar/workshop on ancient agricultural systems. During year 3 Cusichaca sent 5 local farmers and masons to participate in a seminar/workshop organised by PRONAMACHCS in Cusco which covered the same theme, whilst in the final year of the project a large delegation attended a national forum on the subject. This was held in Lima. (see activity 1 m for more details of these events).

- d) Rehabilitate 6 canals, 3 ancient *cochas* (reservoirs) and 100 hectares of *andenes* (terraces) using local materials.

### Canals

We have completed the rehabilitation of 6 canals and advanced 75% of a seventh (subsequently increased to 85% following collaboration between the local Municipality and a Cusichaca mason). The completed canals are located in the districts of Larcay, Pampachiri, Pomacocha, Chipao (2 canals), and Tumayhuaraca. The unfinished canal is located in Sañayca. A total of 4.55km of canal have been rehabilitated. The work was carried out by locally trained masons. Costs were kept low through the use of stone, clay, sand and cactus juice which are all available locally. The farmers participated in Community work days to help transport the materials from their source to the canal. The canals irrigate around 128.60 hectares of terraces and benefit directly approximately 242 families.

Table 2: Canals rehabilitated during project

<u>District</u>	<u>Name/Community</u>	<u>Metres</u>	<u>Families</u>	<u>Hectares</u>
Larcay	Laymecocha	956	81	18.6
Pampachiri	Ccenta	70	1	5
Pomacocha	Llarcca Llusic	928	22	20
Chipao	Challhuacochayoc (San Antonio)	1,160	18	10
Chipao	Chipao	150	60	40
Tumayhuaraca	Huiscana	540	30	15
Sañayca	Q'echayarcca – Tumire	750	30	20
<b>TOTAL</b>		<b>4,554</b>	<b>242</b>	<b>128.6</b>

We have carried out an analysis of labour costs and the average monthly advance on 4 of the canals. The results are presented in the table below.

Table 3: Labour costs and monthly progress for canal rehabilitation activities

<u>Canal</u>	<u>Cost per metre</u>	<u>Metres per month</u>
Chipao (San Antonio)	S/.36.24	92.80
Larcay (Laymecocha)	S/.38.14	73.50
Pomacocha (Llarcca Llusic)	S/.38.53	71.40
Tumayhuaraca (Huiscana)	S/.33.25	67.50

Irrigation committees have been established to manage each of the restored irrigation systems. These have been operating well and it has been pleasing to note that the committees in the Chicha – Soras valley have begun to organise annual water festivals (*yaku raymi's*) (see activities 1e and 1f for more details). This is a custom which had been lost. Their importance lies in the fact that during the festival the canals are cleaned out helping to guarantee good maintenance practices.

The local authorities in Sañayca are continuing to employ labourers to complete work on the canal there. A further 200m need to be rehabilitated.

### Cochas

The Laymecocha canal is associated with 3 ancient stone lined reservoirs (*cochas*). All 3 of these substantial *cochas*, approximately circular in form, were cleaned out and strengthened to enable them to function in a normal fashion. The *cochas* have a capacity of about 950m<sup>3</sup>. We also completed work on the rehabilitation of a *cocha* called Chuspillo in Tumayhuaraca. This has rough dimensions of 7.4m in length, 5.2m in width and 1.7m is depth. A small *cocha* was also rehabilitated in Ccenta (Pampachiri). This *cocha* is 7m long by 3.4m wide and 1.3m deep.

A detailed report on the experience of rehabilitating the *cochas* and canals at laymecocha was prepared and presented to the National Institute of Culture (INC) since this is the first time example of an integrated rehabilitation project undertaken including archaeological investigations in the process.

At Laymecocha in the campaign before the *cochas* and canal were restored average maize yields were 2,727 kg/ha. In the 2005/6 campaign, following the opening of the canal, yields were between 5,350 and 6,195 kg/ha. Thus production doubled from one campaign to the next thanks to the irrigation.

[Table 4: Details of irrigation at Laymecocha](#)

<u>Sector</u>	<u>N° of Families</u>	<u>Irrigated Area Hectares</u>	<u>Irrigated Area per Family (Has)</u>
Chiupachca	11	5.3	0.419
Ccascañoso	57	9.4	0.165
Colcamachay	4	0.9	0.225
Ichimachay	1	0.1	0.100
Huancarcucho	8	2.9	0.363
<b>TOTALS</b>	<b>81</b>	<b>18.6</b>	<b>0.254</b>

### Terraces (*andenes*)

In addition to improving terraced agriculture by providing irrigation project staff and local masons have been rehabilitating *andenes* throughout the project area. Cusichaca provides a mason and up to two skilled workers, whilst the beneficiaries provide a minimum of two labourers. A total of 116 hectares of farm land have been reopened thanks to this work, benefiting directly 1,356 families. Approximately 70% of the rehabilitated terraces are located within the Sondondo valley (Andamarca and Chipao). This is partly because demand is higher there and partly because traditionally the local population has maintained their terraces in better condition thus requiring less work to rehabilitate.

Several important impacts relating to these activities have been achieved.

In Pomacocha the local Mayor has allocated funds for the construction of *andenes* in the Demonstration Centre and the rehabilitation of *andenes* below the canal which has been rehabilitated. To date, 15 very impressive terraces have been built in the Demonstration Centre. The municipality has provided 4 labourers plus the stones for this work.

A number of local farmers have begun to rehabilitate their own terraces without the intervention of Cusichaca. Staff report that approximately 20 farmers have been rehabilitating *andenes* in Sañayca, 13 in Pampachiri, 5 in Larcay and 3 in Tumayhuaraca. In Andamarca and Chipao where interest is greater more than 100 farmers have been rehabilitating their terraces using methods similar to those adopted by the Cusichaca masons.

In the district of Cabana which borders Andamarca the local authorities obtained funding to carry out work to rehabilitate terraces on the Government sponsored project – ‘A’ Trabajar. Their interest was sparked following a terrace construction competition which Cusichaca organised in their district in 2005 and 2006.

The Regional President of Apurimac has allocated more than US\$150,000 to the rehabilitation of terraces over the next 4 years thanks to the results achieved in the Chicha – Soras valley.

Table 5: Rehabilitation of *andenes*

<u>District</u>	<u>Families</u>	<u>Hectares</u>
Larcay	72	4.33
Pampachiri	250	8.03
Pomacocha	115	6.90
Chipao	242	30.04
Sañayca	135	9.55
Soras	28	1.13
Tumayhuaraca	120	7.13
Andamarca	394	49.07
<b>TOTALS</b>	<b>1,356</b>	<b>116.08</b>

- e) Propose the development of local festivities relating to water (*Yacu raymis*) and *andenes* (*Pata raymis*).

The *Yacu raymi* or water festival is of great importance both as an example of the present day Andean Culture and as a way of maintaining irrigation infrastructure. This festival remains strong and part of the festive calendar only in Andamarca and Pomacocha. Cusichaca staff held coordination meetings during 2005 with authorities and water management committees in other districts including Larcay and Pampachiri to encourage and support the reintroduction of this festival.

Similarly it was proposed that festivals could be developed in several districts with the *anden* as the centre of the festivities relating to sowing. Successful coordination meetings were held with the local authorities in 3 districts within the Sondondo valley – Carmen Salcedo, Cabana Sur and Chipao.

- f) Contribute towards the organisation of the water and terrace festivals in 4 districts.

This activity began in 2005.

It has been encouraging that a number of communities within the Chicha – Soras valley have begun to replicate the traditional water festivals and canal cleaning exercises still practiced in parts of the Sondondo valley. In Ayapampa (Pampachiri) an important event called Hatun Raymi Yacu Orcco Yarpunapaq has been organised for the past two years. Although on a smaller scale, this was organised on similar lines to the famous water festival in Andamarca. Similar though more modest events have also been held in Laymecocha and Ccenta. This shows impact, resulting from the interchange of experience exercises we have organised each year for representatives from the Chicha – Soras valley to participate in the Sondondo valley festivals. Such traditions ensure that the canals are well maintained.

New terrace festivals have been held in Cabana, Andamarca (twice) and Chipao. These festivals were organised by Cusichaca along with the local communities and authorities. In Cabana an *andén* reconstruction competition was the central feature of the activities. More than 100 local people participated including approximately 70 school children.

The event in Andamarca was very different. Here the community recaptured past traditions and customs not practiced for 70 years. The event was held on an extensive terrace system outside the town at Acco. The ancient sowing ceremony was re-enacted designed to bring good luck to that year's crop. The event was publicised widely and it is anticipated that, in the future, it will become an important tourist attraction. A total of 160 people participated in the first year and 180 in the second.

The third *Pata Raymi* was held in Chipao. At this event 9 groups took part with an average of 12 members per team. Each had to build a section of terrace 4m long by 70cm high (1.10m including the buried base). As at the Andamarca event, the participants wore traditional costumes and following the construction work sowing ceremonies were held. Food and drink was shared between the groups. Prizes were distributed to each team in the form of seeds and tools. The winning group came from the village of San Antonio.

In each case the local Community has agreed to organise future festivals.

The organization of Andean customs such as this has provided both practical and social benefits. The practical benefits include improving irrigation efficiency and restoring agricultural land. The social benefits include increased community cohesion and increased pride in local culture.

- g) Organize 8 terrace rehabilitation competitions.

Another way of stimulating interest in terrace rehabilitation has been the organisation of *anden* rehabilitation competitions. In these events teams compete against each other to restore or construct sections of terrace wall. A panel of judges selects the winners based upon speed and quality of work. The winning teams receive token prizes such as tools or seeds.

A total of 7 competitions were organised (in addition to those held in the 4 *pata raymis*), each in a different district – Chipao, Carmen Salcedo, Cabana Sur, Pomacocha, Larcay, Soras and Tumayhuaraca. There was an average of 80 participants in each event.

Table 6: Terrace Rehabilitation Competitions

<u>District</u>	<u>Competitions</u>
Chipao	1
Carmen Salcedo	1
Cabana Sur	1
Pomacocha	1
Larcay	1
Soras	1
Tumayhuaraca	1
<b>TOTAL</b>	<b>7</b>

- h) Map and produce an inventory of *andenes* within the Chicha – Soras and Sondondo valleys.

During year 3 we initiated two mapping studies of the terraces in the Chicha – Soras valley. One of the studies was carried out by Cusichaca staff and the other by a team of consultants. These studies have provided extensive and accurate information on terraced agricultural systems, water sources and irrigation canals and areas of natural resources such as woodland and pasture within the valley. This



work will form the basis for the preparation of natural resource management plans and for strategic rural development planning in the restoration of terrace systems in the future.

The consultants work classified *andenes* according to the currently accepted INRENA model, which differentiates between terraces in use and those which have been abandoned and also indicates which areas are irrigated. The principal results of this study are outlined below.

Table 7: Condition of *andenes* in the Chicha – Soras Valley  
Results of external Consultants study

<u>District</u>	<u>Good</u>		<u>OK</u>		<u>Poor</u>		<u>Total Has</u>
	<u>Has</u>	<u>%</u>	<u>Has</u>	<u>%</u>	<u>Has</u>	<u>%</u>	
Pampachiri	283	25	600	53	244	22	1,128
Pomacocha	241	57	110	26	75	17	425
Tumayhuaraca	569	65	292	33	10	1	871
Huayana	131	52	--	--	120	48	251
Paico	15	9	85	51	65	40	164
Paucaray	222	63	15	4	113	32	350
Soras	69	9	622	76	126	15	817
Larcay	561	55	--	--	463	45	1,024
<b>TOTALS</b>	<b>1,530</b>	<b>30</b>	<b>2,285</b>	<b>45</b>	<b>1,215</b>	<b>25</b>	<b>5,030</b>

Table 8: Present Use of *andenes* in the Chicha – Soras Valley  
Results of external Consultants study

<u>District</u>	<u>Frequent</u>		<u>Occasional</u>		<u>Abandoned</u>		<u>Total Has</u>
	<u>Has</u>	<u>%</u>	<u>Has</u>	<u>%</u>	<u>Has</u>	<u>%</u>	
Pampachiri	561	50	473	42	93	8	1,128
Pomacocha	425	100	--	--	--	--	425
Tumayhuaraca	861	99	--	--	10	1	871
Huayana	131	52	--	--	120	48	251
Paico	136	83	--	--	28	17	164
Paucaray	225	64	38	11	87	25	350
Soras	499	61	307	38	11	1	817
Larcay	303	30	366	36	355	35	1,024
<b>TOTALS</b>	<b>3,142</b>	<b>62</b>	<b>1,185</b>	<b>24</b>	<b>703</b>	<b>14</b>	<b>5,030</b>

Table 9: Irrigation of *andenes* in the Chicha – Soras Valley  
Results of external Consultants study

<u>District</u>	<u>Irrigated</u>		<u>Unirrigated</u>		<u>Total Has</u>
	<u>Has</u>	<u>%</u>	<u>Has</u>	<u>%</u>	
Pampachiri	508	45	620	55	1,128
Pomacocha	350	82	75	18	425
Tumayhuaraca	569	65	302	45	871
Huayana	251	100	--	--	251
Paico	118	72	46	28	164
Paucaray	260	74	90	26	350
Soras	573	70	244	30	817
Larcay	255	25	769	75	1,024
<b>TOTALS</b>	<b>2,884</b>	<b>57</b>	<b>2,146</b>	<b>43</b>	<b>5,030</b>

The Cusichaca team used an innovative system of classifying *andenes* according to a typology based upon construction methods and structure. The results help to provide chronological (cultural) associations which are useful in promoting rural tourism. The types are also associated with different ecological and crop production zones. The study was undertaken in 4 districts on the right hand margin of the Chicha – Soras valley. Information was also collected on crop types, water flows, yields over 3 years and altitude.

Table 10: Distribution of *andenes* on the right hand margin of the Chicha – Soras valley, according to structural type

<u>District</u>	<u>Type 1 Hectares</u>	<u>Type 2 Hectares</u>	<u>Type 3 Hectares</u>	<u>Type 4 Hectares</u>	<u>Total Hectares</u>
Huayana	458.46	27.66	150.18	0	636.30
Tumayhuaraca	508.91	37.90	562.46	144.50	1,253.77
Pomacocha	573.64	87.51	94.28	51.20	806.63
Pampachiri	785.26	448.07	731.33	370.43	2,335.09
<b>TOTALS</b>	<b>2,326.27</b>	<b>601.14</b>	<b>1,538.25</b>	<b>566.13</b>	<b>5,031.79</b>

This system of mapping is beneficial in developing appropriate rural development and environmental conservation projects. The information from these studies has already been incorporated into proposals being presented by the local authorities to the Regional Presidents of Apurimac and Ayacucho. The Government programme *Sierra Exportadora* is also interested in the production of commercial crops on terraces and has been soliciting detailed information from these studies.

A separate more limited mapping exercise was also completed in the district of Carmen Salcedo in the Sondondo valley.

- i) Publish a book and a video on traditional agricultural infrastructure.

A fully illustrated book entitled “*Restauración Agrícola en los Andes: Recuperación de los sistemas tradicionales de riego y andenes agrícolas*” was published in Ayacucho in 2005. The author is the Director of The Cusichaca Trust, Ann Kendall. A total of 2,000 copies were printed. Several copies were handed to the National Library in Lima. This book has proven to be a very useful tool for networking.

The Cusichaca Trust has also produced a video entitled “*Infraestructura Agrícola Tradicional*”. This lasts approximately 15 minutes and contains material on the rehabilitation of canals, terraces and stone lined reservoirs. This video was completed in July 2007.

- j) Prepare a manual on traditional technology.

The Cusichaca Trust has published a manual entitled “*Manual de Tecnología para la Construcción y Rehabilitación de Canales de Riego*”. This has a total of 24 pages and included plenty of illustrations. It is designed to be of benefit for rural communities and is particularly useful for local masons interested in traditional technologies. The principal author was Tom Nickalls who worked as a Technical Advisor for Cusichaca.

- k) Provide 25 participatory workshops on the rehabilitation of Andean agricultural systems.

In order to ensure that the local population is able to maintain and administer successfully the canals and terraces rehabilitated as well as to restore their own in the future it is necessary to hold practical training sessions on the subject.

Over the course of the project 32 workshops and courses have been held in which 1,222 people participated (719 men and 503 women). In addition we have been training local masons and have employed 6 of them to help implement this programme.

Table 11: Workshops on the rehabilitation of canals and terraces

<u>District</u>	<u>Community/Annex</u>	<u>N° of Courses</u>	<u>Participants</u>		
			<u>Men</u>	<u>Women</u>	<u>Total</u>
Larcay	Chicha	1	15	14	29
	Larcay	1	15	4	19
Pampachiri	Ayapampa	3	183	114	297
	Ccenta	2	52	29	81
Pomacocha	Pomacocha	2	18	18	36
Tumayhuaraca	Umamarca	6	78	76	154
Sañayca	Sañayca	5	146	89	235
Soras	Soras	5	73	86	159
Carmen Salcedo	Andamarca	2	35	35	70
Chipao	San Antonio	2	60	14	74
	Chipao	3	44	24	68
<b>TOTALS</b>		<b>32</b>	<b>719</b>	<b>503</b>	<b>1,222</b>

- 1) Organise 4 regional seminars.

One of the key long term aims of the present project has been to promote the scaling up of terrace rehabilitation throughout the Peruvian Andes. To help achieve this goal Cusichaca has been involved in the organisation of a series of regional seminars and a national forum on this theme. In each case the local population from the project ambit have been active participants.

Two regional events were organised by Cusichaca independently and a third as part of a series of 3 regional events in alliance with PRONAMACHCS and DESCO.

The first of the independent events was a provincial seminar held in Kerobamba (Sucre) from the 25<sup>th</sup> to the 27<sup>th</sup> of February 2005. This was coordinated with the local municipality and the local branch of PRONAMACHCS. Approximately 120 people participated in the seminar. The majority of the participants belonged to conservation committees established by PRONAMACHCS. They represented 10 districts from the province of Sucre. This event has stimulated a good deal of interest throughout the province of Sucre and Cusichaca has received invitations to work in several new districts as a result.

The second of the independent events was a seminar on Andean Agriculture which was held in Chalhuanca on the 18<sup>th</sup> of November 2005. Approximately 100 farmers from the Aymaraes province participated.

An agreement was reached with PRONAMACHCS and DESCO to organise 3 Regional seminars on the role of terraced farming in Andean agriculture. Each would be responsible for one event; Cusichaca in Apurimac/Ayacucho, PRONAMACHCS in Cusco and DESCO in Chivay (Arequipa). The results of each event would be published and would feed into a national forum to be held subsequently on the same theme.

The seminar organised by Cusichaca was held in Pampachiri and Andamarca between the 13<sup>th</sup> and 17<sup>th</sup> of March 2006. This was well organised despite the complications of holding an event in two well dispersed districts. Up to 150 people participated at one time or another in the event with core participation over the 5 days of around 100. The participants were mainly from the districts where Cusichaca is working. A number of local authorities such as the Mayor of Sañayca and the presidents

of Pampachiri and Chipao were present throughout. Representatives from PRONAMACHCS Cusco, PRISMA, DESCO and ITDG also attended the event.

The second of the three planned regional seminars was held from July 13<sup>th</sup> to 15<sup>th</sup> 2005. This was organised by DESCO and was held in Chivay in the Colca canyon, Arequipa. There were approximately 70 participants, 30 of whom were sent by Cusichaca. The Cusichaca delegation consisted of staff and local beneficiaries. Other institutions involved in the event included AEDS who are working in Cotahuasi and PRONAMACHCS.

The third of the regional seminars was held in November 2005. This was organised by PRONAMACHCS and was staged in Cusco. Cusichaca sent a delegation of 7 to this event including 5 local farmers and masons. There were approximately 30 participants at this event.

m) Organise 1 national seminar.

The national forum on *andenes* was held in Lima from October 18<sup>th</sup> to 20<sup>th</sup> 2006. This event was organised by Cusichaca in alliance with PRONAMACHCS, IPROGA and DESCO. The forum itself was held in the amphitheatre of the La Molina Agraria University. Approximately 140 people registered for the event. Of these, approximately 100 were active participants throughout including at the second day work groups. Of these 60 was a delegation from our ambit.

This forum led to press and television coverage and Cusichaca's own reputation grew as a result. It is now widely considered to be the foremost institution in terrace rehabilitation in Peru.

Information generated at the event has been systemised and a set of conclusions have been prepared and distributed to the participants.

n) Provide the National Government with a proposal for a plan to rehabilitate *andenes* throughout the Andean region.

The main objective of the regional seminars and national forum was to produce the outline of a plan to rehabilitate *andenes* throughout the entire highland region of Peru. Although this has not been achieved yet the seminars have created renewed interest in the potential of terrace farming and Cusichaca has recently used its higher profile to make important progress in promoting this aim.

The Regional Governments of Apurimac, Ayacucho, Junin, Huanuco, Lima, Ica and Pasco have all expressed interest in rehabilitating terraces. The Regions of Apurimac and Ayacucho are already committed to funding this activity from 2008 onwards. A number of NGOs have also become interested in terrace rehabilitation – including the Instituto de Animación Campesina and AYUDES which work in Chumbivilcus (Region Cusco) and Canta (Region Lima) respectively. The Government Institution INRENA (dedicated to conservation) and the *Sierra Exportadora* Programme have also become very interested in terraces and have been coordinating with Cusichaca over developing strategies for their rehabilitation and management plans for their exploitation.

Activity 2: **Management of Arable and Livestock Farming Systems**

This was the most wide ranging programme, which required the greatest input in terms of staff time and resources. It included work to promote organic agriculture, the cultivation of Andean crops, soil and water management, pasture and livestock management.

The principal results of this programme have been improved crop yields, an increase in the areas sown with Andean crops (most noticeably native potatoes), a recovery of traditional soil and crop rotation

systems (*laymis*), a significant increase in areas of pasture sown and in the production of lactic products.

A total of 13 sub activities have been implemented within this programme.

- a) Carry out feasibility studies to establish demonstration centres.

Feasibility studies were carried out for 6 demonstration centres in year 1 of the project. The studies were undertaken in the districts of:

Pomacocha  
Tumayhuaraca  
Larcay  
Soras  
Carmen Salcedo  
Chipao

All of the studies apart from the one undertaken in Larcay showed that suitable conditions were available. In Larcay there was a lack of Community land.

- b) Establish the demonstration centres with different modules.

The demonstration centres are important training tools within the project. Five centres were established. Each has a guinea pig breeding centre and a greenhouse plus a tree nursery, worm culture pits and areas for pasture. A few have additional features such as *andenes*, bee hives, weather stations and/or wooden seed storage structures. Below is a brief outline of each centre:

- In Villa Santa Rosa (Tumayhuaraca) the centre has been implemented at the new agricultural college. Initially a number of difficulties had to be overcome here. Firstly due to the very high altitude some of the facilities – particularly the guinea pig centre – were not very successful to begin with. To prevent the guinea pigs dying of cold the centre was re-roofed with thatch below the tiles and glass windows were put in to maintain warmth. Secondly a change of teachers half way through the project meant a period of retraining was necessary.
- In Pomacocha the centre is managed by the Municipality. This centre is in very good condition. The greenhouse is well managed. The guinea pig breeding centre now has 90 animals from the original 14. Terraces have continued to be built and are fully utilised. Vegetable crops are grown on most, though in some cases space has been set aside for interesting uses such as for a cactus garden and for growing examples of typical local plants. The top terrace is cultivated by the women's group which belongs to the Government programme "*juntos*".

Interestingly the local authorities in Pomacocha are also establishing their own version of an experimental centre close to the main road. They have been inspired to do this having seen the potential of the skills centre established with training from Cusichaca. They are planting a variety of crops and installing a sprinkler irrigation system. This is a good example of positive impact.

- In Soras the centre is on land owned by the agricultural Institute (an educational establishment for school leavers) and is managed by it. This centre is also well run. There are 4 worm culture beds. Each is 1m by 10m by 0.3m deep. Originally they had 1 batch of worms (100,000 animals). They were able to multiply this original number by 16 in the first 2 years of operation. They have found that onions and parsley speed

up the reproductive process. Vegetables for a typical crop from the greenhouse (10m x 5m) were sold in the town of Soras for around S/.150. They now have three types of cage for their guinea pigs – adobe and wire mesh, which were constructed by Cusichaca, and wooden pens, which the Institute constructed themselves and which they say are the most efficient. They now have over 80 guinea pigs. A mix of red clover and Italian rye grass is grown to feed the guinea pigs. They have plans to increase the number of guinea pigs significantly in order to market the animals both locally and elsewhere.

- In Andamarca the demonstration centre is located on Community land and is being managed by local groups who are given licence to run and benefit from the centre for 2 years. Currently the second group is managing the centre. Each has a plot in the greenhouse and the produce is used for family consumption. A beehive has been installed here. Wire mesh cages are used in the guinea pig breeding centre. There are 40 cages stacked into two stories. Many of the guinea pigs, however, have been distributed to the homes of the beneficiaries who have formed an association to raise and sell these animals.
- In Chipao the centre is managed by the Community. The produce from the greenhouse has mainly been distributed to local community kitchens, though a little was also sold. The Community has been paying a guardian to look after the centre.

c) Transfer the demonstration centres to the communities.

Each of the 5 demonstration centres has been transferred. These transfers were undertaken in formal ceremonies and with documents signed by Cusichaca, the local authorities and representatives of the entity to whom the centres were handed over. Below is a list of outlining the current managers of each of the centres:

- The centre in Villa Santa Rosa is managed by the local agricultural college.
- The centre in Pomacocha is managed by the local authorities.
- The centre in Soras is managed by the agricultural institute.
- The centre in Andamarca belongs to the Community but has been leased out to an organised group of local families.
- The centre in Chipao is managed by the Community.

d) Sow 50 hectares of Andean crops on *andenes* plus 50 hectares of improved pasture within the ambit and monitor their progress.

Another of the project aims has been to encourage greater production of traditional Andean crops such as maize, quinoa, kiwicha, tarwi (all ideally grown on terraces) and maca (at higher altitudes) given that they have higher nutritional values than grain crops such as wheat and barley. To this end Cusichaca has distributed seed to local farmers, particularly those who have been rehabilitating their terraces. Approximately 85 hectares have been sown with 15 different types of crops during the project.

[Table 12: Areas of Andean crops sown each year](#)

<u>Campaign</u>	<u>Hectares</u>
2003 – 2004	8.90
2004 – 2005	36.53
2005 – 2006	16.56
2006 – 2007	22.87
<b>TOTAL</b>	<b>84.86</b>

The seeds have been provided for over 400 families, many organised groups and several schools and colleges. An assessment has been carried out on some of the different types of maize seed which we have been using. This suggests that the maize from Urubamba does not adapt well to the zone. It grows much higher than the native maize in the Sondondo valley (between 1.8 and 2m compared with 1 to 1.2 m for local varieties). It also produces two maize cobs compared with one. However, it takes so long to mature that it does not complete its development within the growing cycle. In contrast, however, maize bought in from closer districts such as Turpo (a district in Apurimac) has proven to be very successful. Likewise maize from Chipao sown in the Chicha – Soras valley has also adapted well. This is an important lesson learned. Whilst the maize from Cusco was highly prized by the locals it proved less successful than more local varieties.

As part of this programme we have also been promoting the use of organic fertilisers such as humus produced by worms and biol produced by fermenting a mix of organic products. A total of 138 families have benefited from the installation of worm beds. There is clear evidence that the use of humus on plants is very productive. An experiment held in Chipao shows that yields were increased by over 50% on each of 5 vegetables where 400 gms of humus were applied per plant. Despite this the activity has not proven to be very successfully. Few families have maintained their worm beds.

Table 13: Installation of worm beds

<u>DISTRICT</u>	<u>N° of BEDS</u>
Tumay Huaraca	12
Pomacocha	15
Pampachiri	15
Sañayca	25
Soras	16
Larcay	08
Andamarca	15
Chipao	30
Cabana Sur	02
TOTAL	138

Table 14: Results of experiment to test the effect of the use of humus on the yields of 5 vegetables in Chipao

<u>Vegetable</u>	<u>Humus applied</u>	<u>No Humus applied</u>
Cabbage	3,000 gms	2,000 gms
Beetroot	500 gms	190 gms
Cauliflower	2,000 gms	1,200 gms
Swedes	900 gms	500 gms
Carrots	300 gms	175 gms

Likewise the use of Biol definitely looks to be an interesting alternative though it is not being produced on a large scale. Experiments held in Cabana Sur indicate that its positive effects are similar to those obtained by humus. A total of 2,800 litres were produced benefiting 26 groups. The majority of the beneficiaries are schools, colleges and Institutes.

Table 15: Results of experiment to test the effect of the use

Of Biol on the yields of 4 vegetables in Cabana Sur

<u>Vegetable</u>	<u>Biol applied</u>	<u>No Biol applied</u>
Cabbage	2,000 gms	900 gms
Beetroot	900 gms	350 gms
Onion	950 gms	550 gms
Chard	60 cms tall	35 cms tall

Pasture management has been another key activity. This programme consisted of demonstrating the value of various types of pasture by providing farmers with seeds and offering them courses on the best way to control their fields and the animals grazing upon them.

During the project over 60 hectares of improved pasture have been sown benefiting 693 families. Varieties sowed included alfalfa, clover, rye grass, oats, dactyls etc. In addition in year 3 a total of 8.75 hectares of marshes were improved with additional pastures sown. These areas are ideal for grazing camelids.

Table 16: Areas of improved pasture sown each year

<u>Campaign</u>	<u>Families</u>	<u>Hectares</u>
2003 – 2004	190	8.15
2004 – 2005	154	19.28
2005 – 2006	322	31.85
2006 – 2007	27	2.05
TOTAL	693	61.33

Table 17: Pasture sown per district

<u>District</u>	<u>Hectares</u>
Chipao	10.88
Andamarca	5.86
Cabana	1.20
Aucara	1.60
Pampachiri	10.72
Tumayhuaraca	7.68
Pomacocha	4.90
Sañayca	9.03
Larcay	3.75
Soras	5.71
TOTALS	61.33

The pasture programme has proved to be one of the most popular and successful. Demand was particularly high in both Pomacocha and Andamarca. A number of the alfalfa varieties such as California, moapa and agp550 have been successful at altitudes of up to 3,600m – reaching yields of 25,000 Kgs/ha. Italian Rye grass has been very good in altitudes between 3,600m and 4,000m.

Table 18: Improvement of Marshes 2005/6

<u>Location</u>	<u>Hectares</u>
Pampachiri (Ocobamba)	1.50
Soras	2.00
Larcay (Sayhua)	1.00
Pomacocha	0.75



Umamarca (Yanama)	1.00
Umamarca (Calla Occo)	1.00
Sañayca	1.50
TOTAL	8.75

Many farmers have been purchasing improved breeds of cattle. In Pomacocha lots of cheese is now produced. Previously it had to be purchased from Andahuaylas or elsewhere. Now there is a surplus for sale. This is a direct result of the programme to introduce improved pasture.

At Maya Maya in Chipao we helped to sow 4 hectares of pasture early in the project cycle. This land is owned by the Community. There are now 20 cows grazing on this pasture. A corral has subsequently been installed on one corner of this land. This is a good example of impact with the pasture now being used to graze cattle and produce milk and cheese. A stone lined reservoir helps to irrigate the pasture here and project staff helped to improve irrigation efficiency here.

The increased production of improved pasture has also led to a massive increase in the rearing of guinea pigs for commercial reasons. At the outset of the project very few families were dedicated to this activity. Now formal associations of producers have been formed in both valleys and there are approximately 15,000 animals, of which 70% are improved strains.

e) Construct 24 improved corrals.

A total of 23 improved corrals were constructed. These provide shelter for animals in times of extreme weather conditions and have helped to reduce mortality, particularly in young animals. Of the corrals 22 are being well managed. Generally thatch roofs have proven to be more successful than those where sheets of corrugated tin have been used as they maintain warmth longer and do not scare the animals off when it rains.

Table 19: Distribution of Improved Corrals

<u>District</u>	<u>Annex</u>	<u>Number</u>	<u>Altitude</u>
Pampachiri	Chocceceñua	1	3,900
	Llamcama	2	3,700
Pomacocha	Titayhua	3	3,900
Tumayhuaraca	Pulperia	3	3,800
	Villa Santa Rosa	1	3,900
	Ischuorcco	1	4,000
	Cochapucro	1	3,800
Sañayca	Sañayca	3	3,700
Larcay	Hueccopampa	5	4,000
Soras	Soras	3	3,700
TOTAL		23	

f) Install 2 meteorological stations.

Feasibility studies concerning the installation of meteorological stations were completed in year 1. Originally it was planned to establish 6 stations but for reasons of cost just two were implemented – in Soras and Chipao. Each of these is on land owned by local agricultural institutes – helping to guarantee sustainability of data collection. Agreements for the installation and subsequent management of the stations were signed between Cusichaca, SENAMHI (the national meteorological organisation), the agricultural institutes and the local authorities. Cusichaca purchased all of the equipment in the first half of the 2004 but due to subsequent delays whilst trying to guarantee the active participation of all those involved, the stations were finally installed at the end of the 2004.

From 2005 onwards the stations have been generating data, which will be very useful in crop management planning in the future and for inclusion in the agricultural database.

Courses were offered by SENAMHI to the local observers in charge of the stations and monthly information is sent by the institutes to SENAMHI.

- g) Install 16 integrated field systems.

This activity has been undertaken at a number of local schools and colleges. It has been particularly encouraging to see the number of highly efficient integrated agricultural systems which have been established as a result. Each includes both arable and animal husbandry modules. There are very commendable systems in Soras, Cabana and Aucara. Much of this has been achieved through regular visits to the project demonstration centres and through requesting training from CT staff. The installations at the schools and institutes in Cabana and Aucara are now even more fully developed than our own centres. Below is a brief description of some.

- a) The school in Pomacocha has a greenhouse which is well managed and from where vegetables have been sold in the local markets.
  - b) The school in Soras has an integrated system. They have a greenhouse, a guinea pig breeding centre, pasture, compost and roofed worm culture pits. When the family of one of the students sets up guinea pig runs in their home animals are given to them by the school to help them get started.
  - c) The Institute in Aucara has an impressive centre. The greenhouse is used as a teaching tool. The guinea pig centre is run in agreement with INIA who provided the animals. There are wooden pens and everything is well ordered. Cusichaca provided the seeds for the pasture to feed the animals. The institute has carried out experiments with Biol. They found it effective as both a fertiliser for foliage and as an insect repellent.
  - d) The college in Aucara has invested much time and effort into establishing its own integrated system. They have built 3 greenhouses themselves. These are tunnel shaped. Two have fibre glass roofs. The other plastic. A 4<sup>th</sup> greenhouse has been built together with Cusichaca. The teachers say that they generate about S/.800 each year (US\$255) from the sale of produce from the greenhouses. Part of the crop is used to prepare the children's food. They also rear a few partridges as well as guinea pigs. They have built brick pens for the animals. CT provided the college with maize seed for their fields.
  - e) The college in Cabana also has a very complete centre. They have built several low *andenes* and have sown pasture and vegetables on these. They also have apple trees and beehives close by. They have used Biol with good results.
  - f) The primary school in Chipao is extremely well organised and motivated by the teachers. Each class has a plot of vegetables to manage and many have trees and flowers too. The vegetables are used in the school kitchen.
- h) Select apt communities for the reintroduction of traditional community rotational farming systems (*laymes*).

Work has also centred upon the recuperation of *laymes* (Community managed soil and crop rotation systems normally located above 3,600 metres), The *laymes* practice of cultivation had been declining in recent times despite its advantages relating to pest and fertility control. One of Cusichaca's aims has been to stimulate a return to this system in a number of selected communities. Initial focus was given to the district of Sañayca where arable farming is particularly important. In years 3 and 4 further

2007

groups and communities were selected in other districts such as Pampachiri, Soras, Chipao, Andamarca and Tumayhuaraca.

- i) Coordinate with selected groups to reintroduce the *layme* field systems.

The increase in the number of *laymes* in several districts is one of the important impacts of the project. Native potatoes are the crop most commonly grown. In Sañayca, when the work was initiated there were only two farmers growing native potatoes and no *layme* systems had been practised for over 15 years. In the 2005/6 campaign 7 hectares of native potatoes were sown on *laymes* with the participation of 70 families. In the latest campaign more than 120 families have been participating in the *laymes*. In Pucahuasi (Sañayca) the community has installed 14 hectares of native potatoes. In this community 100% of potatoes now produced are native, compared with 50% elsewhere in the district. In Ccallucco the community is using its own seed. Production levels were between 30 and 50 tonnes/ha which is outstanding and the potatoes were not affected by any of the common pests. Today native potatoes are much in demand by the new Government *Sierra Exportadora* commercialization programme.

A total of 69 courses and workshops have been held on Andean agriculture during the project. These courses emphasise the importance of traditional approaches to combating severe climatic events. There were 2,488 participants in these courses (1,502 men and 986 women).

- j) Hold 20 courses on water management.

Water management is another of the key aspects designed to develop more efficient farming methods. Over the project 20 workshops were held on water management attracting a total of 617 participants. Of these, 312 were men and 305 women. A farmer from Andamarca, Manicio Puza, helped to run 7 of these workshops in the Chicha – Soras valley. Local families often find that direct practical advice from someone living in the same conditions as themselves is very beneficial.

In addition to the courses and workshops staff have organised several interchange of experience trips for irrigation authorities and farmers from the Chicha – Soras valley to participate in the canal cleaning exercises in Andamarca held every August. More than 30 people have benefited from these trips.

Table 20: Courses held on water management

<u>Year</u>	<u>N° of Courses</u>	<u>Participants</u>
1	1	30
2	4	88
3	12	355
4	3	144
<b>TOTALS</b>	<b>20</b>	<b>617</b>

Table 21: Details of Workshops on Water Management

<u>District</u>	<u>N° of Courses</u>	<u>Participants</u>		
		<u>Men</u>	<u>Women</u>	<u>Total</u>
Larcay	4	58	51	109
Pampachiri	7	83	59	142
Soras	3	75	44	119
Sañayca	2	43	78	121
Tumayhuaraca	2	29	33	62
Pomacocha	2	24	40	64
<b>TOTALS</b>	<b>20</b>	<b>312</b>	<b>305</b>	<b>587</b>

- k) Hold 50 courses and workshops on agricultural themes.

Training on a variety of agricultural themes has been one of the key elements in the project. A total of 103 formal courses and workshops were held on agricultural themes during the project in which 3,472 people participated.

Various topics were covered in these courses:

- Andean Agriculture
- Andean crops
- Ecological pest and crop disease management
- Production of organic fertilisers

In addition to the organised training informal advice was given to individual farmers by the agronomists employed by Cusichaca throughout the entire project. In many cases advice issued at the farmer's field is of more value than information offered during structured courses.

Table 22: Types of courses offered on agricultural themes

<u>Theme of Courses</u>	<u>N° of Courses</u>	<u>Participants</u>		
		<u>Men</u>	<u>Women</u>	<u>Total</u>
Andean Agriculture	69	1,502	986	2,488
Andean Crops	7	50	27	77
Ecological pest and disease control	10			370
Production of organic fertilisers	17			537
<b>TOTALS</b>	<b>103</b>			<b>3,472</b>

- l) Hold 30 courses and workshops on livestock management.

Since in the project area animal husbandry is as or more important than arable farming comprehensive training has also been offered on this theme too. A total of 38 courses and workshops were held on livestock management over the project, in which 1,121 people participated. Of these 670 were men and 451 women.

A variety of topics have been covered in these courses:

- Cattle and Sheep management
- Camelids
- Animal health
- Classifying alpaca wool
- Preparation of alpaca skins and meat

Table 23: Courses and workshops held on livestock management

<u>Year</u>	<u>N° of Courses</u>	<u>Participants</u>
1	0	0
2	17	415
3	18	600
4	3	106
<b>TOTALS</b>	<b>38</b>	<b>1,121</b>

Table 24: Types of courses offered on livestock management

<u>Theme of Courses</u>	<u>N° of Courses</u>	<u>Participants</u>
Cattle and sheep	17	595
Camelids	4	111
Animal health	7	239
Classifying alpaca wool	4	75
Preparation of alpaca skins & meat	6	101
<b>TOTALS</b>	<b>38</b>	<b>1,121</b>

Staff organised the interchange of animals between alpaca breeders from the communities of Chillihua (Pampachiri), Hueccopampa (Larcay), Pulperia (Umamarca), Pucaorcco (Sañayca) and Pucaccasa (Pomacocha). A total of 27 alpacas were interchanged between 14 breeders. This activity has helped to strengthen the genetic pool. We also organised the participation of 7 alpaca breeders in the agricultural fair in Andahuaylas held in July 2005. Two were from Hueccopampa (Larcay) and five from Chillihua (Pampachiri). In addition to the training on animal husbandry a total of 18 courses have been held on pasture management. There were a total of 621 participants on these courses.

Table 25: Courses and workshops held on pasture management

<u>Year</u>	<u>N° of Courses</u>	<u>Participants</u>
1	3	105
2	0	0
3	11	325
4	4	191
<b>TOTALS</b>	<b>18</b>	<b>621</b>

Table 26: Distribution of Courses on Pasture,

<u>Location</u>	<u>N° of Participants</u>		
	<u>Men</u>	<u>Women</u>	<u>Total</u>
Pampachiri (Ocobamba)			20
Soras (2 courses)	54	27	81
Larcay			14
Larcay (Hueccopampa)	14	20	34
Umamarca			43
Umamarca(Calloocco)			10
Pomacocha (2 courses)	30	42	72
Sañayca	75	6	81
Sañayca (Pucahuasi)			43
Chipao (3 courses)	64	33	97
Andamarca (3 courses)	57	30	87
Cabana	25	14	39
<b>TOTALS</b>			<b>621</b>

m) Carry out a study on the agricultural cycle and crop yields.

As part of the mapping study of terraces data was also collected on crop distribution and yields. Yield data has also been collected for each of the 4 years of the project. This data has been stored on computer files. Another study was undertaken on *layme* systems. The project Director has been collating data on agricultural crop rotation systems to be included in a major book on terrace farming, co-authored with a socio economist, to be published later this year.

An example of the data which has been collected is shown below. Crop yields from the 2004/5 and 2005/6 campaigns for maize grown under 3 different systems were compared:-

1. Without rehabilitated *andenes*, without training and without irrigation.
2. Without rehabilitated *andenes*, without training but with irrigation.
3. With rehabilitated *andenes*, training and irrigation.

Table 27: Maize yields with and without *andenes*

<u>Form of Production</u>	<u>Average Yields Kg/ha, 2004/5</u>	<u>Average Yields Kg/ha, 2005/6</u>
Without rehabilitated <i>andenes</i> , no training, no irrigation	1,734	2,729
Without rehabilitated <i>andenes</i> , no training, with irrigation	2,385	4,041
With rehabilitated <i>andenes</i> , training and irrigation	3,121	4,546

These figures come from a genuine field survey – they are not based on interviews. Yields naturally vary from one year to the next due to weather conditions but for both campaigns production rises by between 40 and 45% for farmers who have rehabilitated *andenes*, training and irrigation compared with those that do not.

Activity 3:     **Community Organisation**

Impact and positive results can only be achieved when Communities are well organised. Thus this was another key programme within the project structure. In those districts such as Pomacocha, Carmen Salcedo and Chipao where Community Organisation has been particularly strong overall project impact has been greater than where it has been weaker (Pampachiri and Larcay for example). Notable impacts within this programme have included the formation of monthly discussion groups (*mesas de concertación*) in many districts, the formation of associations of native potato producers and guinea pig breeders throughout much of the ambit and the improvement in local leadership skills generally.

A total of 10 sub activities have been implemented within this programme.

- a) Cooperate with the local authorities in establishing monthly round table discussion groups (*mesas de concertación*).

The National Government has stipulated that each district should hold monthly meetings open to all local institutions and the general public at which issues can be discussed and voted upon in a democratic way. These meetings are known as “*mesas de concertación*”. These are meant to have a formal structure and statutes. Cusichaca has been active in helping the local authorities to establish the sessions. These are now operating well and on a monthly basis in Pampachiri, Sañayca, Pomacocha, Andamarca and Chipao. In Larcay the table has been formed but is still not operating as it should. In Soras and Tumayhuaraca they do not function. Typically there are between 50 and 80 participants, of whom 60% are men and 40% women.

- b) Participate in and strengthen the *mesas de concertación*.

Cusichaca has 4 staff members dedicated to working to strengthen community organisation and each has been actively participating in these meetings and helping to ensure that they are managed efficiently.

- c) Help to establish 8 district level project monitoring committees.

Since the outset of the project, Monitoring Committees have been established in each district. These committees have acted as a very useful means of communication between the project staff and community members. Their role has been to maintain the Community informed of Cusichaca's activities and to report to staff on any particular requests or problems. Members have participated actively in Community Assembly Meetings.

d) Carry out socio economic studies.

The project sociologists published diagnostics of social indicators in each valley. For each district information has been provided on population, means of communication, social services, education, health services, poverty index and local organizations. A more detailed socio economic study has also been initiated too. In order to gather information a very detailed set of questions were drawn up and interviews were held with 20% of the population. This information has been processed but the report has not been published.

Table 28: Interviews Held for the Socio – Economic Study - Sondondo Valley

<u>LOCATION</u>	<u>INTERVIEWS</u>
<u>Andamarca</u>	
Carmencca	17
Antara	10
Tuna	06
Pata	18
<u>Chipao</u>	
Chipao	36
Villa Ccecca	12
San Antonio	08
Mayobamba	24
<b>TOTAL</b>	<b>131</b>

e) Establish two leadership schools.

Two leadership schools were established in the districts of Pampachiri and Chipao which ran for 2 years on a monthly basis. Each school received training on different topics each month during day long sessions. In Chipao there was an average of 38 students per session, of whom 23 were women and 15 men. In Pampachiri average monthly participation was 25, of whom 18 were women and 7 men. Topics covered included:

- Community planning
- Community organisation
- Leadership skills
- Local development and participatory planning
- Human rights and land laws
- Domestic violence
- Communication skills
- Citizenship
- How to become involved with the local municipality
- Women's roles in local development
- Participatory budgets

This training model proved to be very valuable. Many of the participants were subsequently involved in Municipal elections and several women have become local authorities.

Table 29: Leadership schools held in Pampachiri and Chipao

<u>Location</u>	<u>Sessions</u>	<u>N° of Participants</u>		
		<u>Men</u>	<u>Women</u>	<u>Total</u>
Chipao	22	15	23	38
Pampachiri	20	7	18	25
<b>TOTALS</b>	42	22	41	63

f) Hold 20 courses and workshops on self esteem and values.

In order to create an environment where the poorest and most disadvantaged men and women feel able to participate actively in local decision making Cusichaca also offered 13 workshops on self esteem in which 221 men and 308 women have participated.

Table 30: Workshops on self esteem

<u>Location</u>	<u>Number of Workshops</u>	<u>N° of Participants</u>		
		<u>Men</u>	<u>Women</u>	<u>Total</u>
Andamarca	1	4	25	29
Chipao (Mayobamba)	1	4	18	22
Soras	3	105	114	219
Pampachiri	2	13	67	80
Pampachiri (Ccenta)	1	15	18	33
Sañayca	1	14	1	15
Larcay	1	2	8	10
Larcay (Chicha)	1	12	13	25
Tumayhuaraca (Pulperia)	1	44	28	72
Tumayhuaraca	1	8	16	24
<b>TOTALS</b>	13	221	308	529

g) Hold 20 courses and workshops on human rights.

A total of 9 workshops have been held on human rights issues. There were 256 participants (94 men and 162 women).

Cusichaca has also helped to organise several campaigns in which large numbers of the local population have participated.

In Pampachiri campaigns have been held to coincide with world environment day. In year 2 of the project a series of events were organised by Cusichaca relating to environmental conservation in coordination with the local schools. Approximately 600 students and teachers took part. There were marches and talks amongst other activities.

There have been a series of campaigns organised against alcoholism and family violence. Approximately 350 people took part in the first campaign organised in Pomacocha including women's groups, the alphabetization programme, students and local authorities. A further two major campaigns were run against family violence in Chipao and Andamarca with the involvement of schools and colleges, women's groups and local authorities. More than 1,000 people participated. Two street cleaning events have also been organised in Pampachiri with the full participation of local authorities, families and schools.

Two large scale campaigns were held to commemorate international women's day. These were held in Pampachiri and Soras. Likewise events were held in these districts to coincide with international water day and a further campaign was held in Pampachiri to encourage the protection and conservation of agricultural terraces. In each of these campaigns the local population and schools participate in a march and sometimes other activities such as street cleaning.



During the final year of the project Cusichaca has also been involved in the organisation of campaigns on mixed topics. A total of 5 campaigns were organised against alcohol abuse. One was held on family violence and one on the importance of protecting *andenes*. Most of these campaigns were held in schools. A total of 407 people participated in these campaigns (226 men and 181 women).

Table 31: Campaigns organised, Year 4

<u>Location</u>	<u>Type of Campaign</u>	<u>N° of Participants</u>		
		<u>Men</u>	<u>Women</u>	<u>Total</u>
Larcay	Protecting <i>andenes</i>	23	16	39
Larcay	Alcohol abuse	23	16	39
Soras	Alcohol abuse	25	18	43
Pampachiri (Ocobamba)	Alcohol abuse	4	7	11
Pampachiri (Ayapampa)	Alcohol abuse	23	30	53
Tumayhuaraca	Family violence	83	44	127
Cabana (Sondondo)	Alcohol abuse	45	50	95
<b>TOTALS</b>		<b>226</b>	<b>181</b>	<b>407</b>

h) Hold 20 courses and workshops on agrarian laws.

Since we are working with an entirely rural population agrarian laws relating to land and water rights are very important topics. Over the project 25 workshops have been held on these topics for 885 participants (468 men and 417 women).

Table 32: Courses on Agrarian Laws

<u>District</u>	<u>Community</u>	<u>Participants</u>
Pampachiri	Pampachiri (3 courses)	46
	Chontaya	24
	Ccascacha	42
	Ccenta	36
	Santa Rosa	19
	Llamcama	59
Soras	Soras (4 courses)	140
Larcay	Larcay	39
	Chicha	58
	Hueccopampa	32
Tumayhuaraca	Umamarca (3 courses)	91
Pomacocha	Pomacocha (3 courses)	162
Chipao	Chipao (2 courses)	82
Sanayca	Sañayca	55
<b>TOTAL</b>		<b>885</b>

i) Hold 16 courses for local authorities on decentralization.

This was not amongst the initial aims of the project. However, due to the importance of these issues for the local authorities, project staff held 5 workshops in the final year of the project on decentralization. These courses attracted 76 participants (33 men and 43 women).

Table 33: Courses on Decentralisation

<u>Location</u>	<u>N° of Participants</u>
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	<u>Men</u>	<u>Women</u>	<u>Total</u>
Pampachiri	11	12	23
Andamarca (2 courses)	10	5	15
Chipao (2 courses)	12	26	38
<b>TOTALS</b>	<b>33</b>	<b>43</b>	<b>76</b>

Elections were held in each of the districts in November 2006. Cusichaca staff organised full scale political debates in Pampachiri, Soras and Larcay and a debate for women candidates in Andamarca. There were a total of 438 members of the public who attended these debates. Of these 197 were men and 241 women.

Table 34: Debates organised by CT Staff for the district elections  
November 2006

<u>Location</u>	<u>N° of Participants</u>		
	<u>Men</u>	<u>Women</u>	<u>Total</u>
Andamarca (female candidates only)	28	92	120
Pampachiri	88	71	159
Soras	37	44	81
Larcay	44	34	78
<b>TOTALS</b>	<b>197</b>	<b>241</b>	<b>438</b>

Activity 4: **Health and Nutrition**

This programme concentrated on improving sanitation through the provision of piped water and the development of rubbish collection and disposal systems. It also focussed upon trying to improve nutrition – especially in young children through improved hygiene, the installation of family gardens and the construction of greenhouses. Special attention was given to the promotion of traditional Andean crops as a source of proteins and vitamins.

Achievements have included the development of ties with local Governments to increase the numbers of piped water systems which now cover 80% of the project area and the installation of rubbish pits away from population centres for the first time. Some success has also been achieved in reducing levels of malnutrition.

A total of 13 sub activities have been implemented within this programme.

- a) Carry out feasibility studies and provide technical expedients for potable water installations and rubbish pits.

The feasibility studies and technical expedients were prepared for each of the potable water systems and municipal rubbish pits by project staff within the first three years of the project.

- b) Install 6 potable water systems and 2 rubbish pits jointly with the local authorities.

Approximately 80% of households within the project area now have access to clean piped water.

Cusichaca staff installed 8 potable water systems. These benefited directly 213 families. Each was installed in collaboration with the local municipalities, which shared the costs. The beneficiaries have participated fully in this work, digging the trenches and providing free labour.

Potable water committees have been established in each community where water has been installed. A total of 16 Courses were held during the project on the administration of the systems for 529

participants (286 men and 243 women). These courses have been held in alliance with the local health posts.

Table 35: Potable Water Installations

<u>Location</u>	<u>Families</u>
Pallcapampa (Pampachiri)	13
Wiracochan (Pomacocha)	30
Titayhua (Pomacocha)	23
Huayara (Sañayca)	26
Ccenta (Pampachiri)	22
San Antonio (Chipao)	57
Santa Rosa (Pampachiri)	15
Apupampa (Pampachiri)	27
<b>TOTAL</b>	<b>213</b>

Table 36: Courses on the Management of Potable Water Systems

<u>District</u>	<u>Community</u>	<u>Participants</u>		
		<u>Men</u>	<u>Women</u>	<u>Total</u>
Pomacocha	Titayhua	16	16	32
Pomacocha	Wiracochan (2 courses)	24	41	65
Pampachiri	Ccenta (3 courses)	77	68	145
Pampachiri	Pallcapampa	8	4	12
Soras	Soras (2 courses)	30	39	69
Chipao	San Antonio (2 courses)	32	9	41
Pampachiri	Santa Rosa	11	16	27
Sañayca	Huayara	14	0	14
Pomacocha	Pomacocha	30	20	50
Larcay	Larcay	28	22	50
Pampachiri	Apupampa	16	8	24
<b>TOTAL</b>	<b>16 courses</b>	<b>286</b>	<b>243</b>	<b>529</b>

In order to improve basic sanitation, alliances have been established with the local authorities in Pampachiri, Tumay Huaraca, Larcay and Soras to put up rubbish bins, organise a collection system and excavate rubbish tips away from the town. A total of 77 bins were put up in 5 districts.

Table 37: Rubbish bins installed

<u>District</u>	<u>Bins</u>
Umamarca	8
Larcay	10
Soras	15
Andamarca	9
Pampachiri	35
<b>TOTAL</b>	<b>77</b>

- c) Build 30 greenhouses and monitor these.

A total of 26 greenhouses have been built to date in addition to those in the 5 demonstration centres giving an overall total of 31.

Table 38: List of greenhouses constructed during project

<u>District</u>	<u>N°</u>	<u>Location</u>
Aucara	2	Technological institute Secondary school
Cabana Sur	1	Municipal lands in capital of district
Chipao	10	Demonstration centre Primary school, Chipao Institute, Chipao Community of Tacalla Community of Huancaccolcca Community of Azabamba Community of Yanama Community of Palcca Community of Huataccocho Community of Huaytayocc
Andamarca	2	Demonstration centre Primary school, Andamarca
Soras	3	Demonstration centre Organised group “ASPAS” Community of Chaupihuasi
Larcay	2	Secondary school, Larcay Primary school, Hueccopampa
Sañayca	1	Community of Pucahuasi
Pampachiri	2	Primary school, Pampachiri Church, Pampachiri
Pomacocha	3	Demonstration centre Secondary school, Pomacocha Community of Wiracochan
Tumayhuaraca	5	Demonstration centre Primary school, Villa Santa Rosa Primary school, Ccallocco Community of Ischuorecco Community of Ccochapucro
<b>TOTAL</b>	<b>31</b>	

Normally the greenhouses are 10m by 5m. There is a sloping roof. At its highest point the structure is 3.2m high and at the lowest 2.8m. The beneficiaries provide the walls. Cusichaca provides the roof and technical assistance. The greenhouse in Cabana is a special case. This is more than double the normal size. In this case the municipality paid half of the roofing costs. Many of the greenhouses have been installed in school grounds and they prove to be important educational tools.

Constant monitoring has been undertaken, particularly by the local promoters. Nearly all of the greenhouses continue to be well maintained.

- d) Take height and weight measurements of at least 25% of children under 3.

Within the first two years of the project a total of 628 children were weighed out of 1020 identified. 67% of children in the Chicha – Soras valley showed some form of malnutrition, whilst in the Sondondo valley the figure was 49%.

As a result of this study the project nutritionist was able to identify 14 priority communities where malnutrition is a serious problem. These communities were selected for key activities such as vegetable gardens and cookery sessions.

In the final year of the project two follow up studies were made. One re-measured a sample of the children from the original survey and used the same form of analysis. The second was carried out on

infant school children in the Sondondo valley and gave more emphasis on weight per height rather than age. These studies provide interesting and varied results.

The results of the comparative study are not encouraging, at first glance. In the original study 66.78% of the children suffered from some kind of malnutrition. The figure for the second evaluation is 66.44%. The reduction is just 0.34%.

Table 39: Results of study to evaluate current levels of malnutrition compared with those at the start of the project

<u>Studies</u>	<u>Normal Children</u>	<u>Malnourished Children</u>
Initial (Start of Project)	33.22 %	66.78 %
Final (End of Project)	33.56 %	66.44 %
Difference	+ 0.34%	-0.34%

Although these results appear to be negative there are a number of factors to be taken into account. Firstly the figures are based on the same children weighed at the start and end of the project. It is known to be very difficult to achieve positive results in children already suffering the effects of malnutrition. It would be hoped that better results would be seen in newly born infants. Secondly the fact that one of the measurements is based upon height means that most children in highland Peru are always going to be registered as malnourished as they tend to be smaller than children elsewhere in Peru and the world (the measurements used are based on world charts, i.e. they are not specific to Peru let alone the highlands). No such charts have been drawn up for Latin America which is one of the reasons why all studies show high numbers of malnourished children here. Indeed if we look more closely at the results there are some positive signs since there have been variations in the different types of malnutrition. There has been a reduction of 4.45% in the number of children suffering the worst kind which is where both the weight to height and the height to age ratio is low. There has been a corresponding increase in a less severe kind of malnutrition where the height for age ratio is low but where the weight to height ratio is fine. This simply means that the children are short but that is to be expected.

Table 40: Results of study to evaluate current levels of malnutrition compared with those at the start of the project (Different forms of malnutrition)

<u>Descriptions</u>	<u>1<sup>st</sup> Study</u>	<u>2<sup>nd</sup> Study</u>
Normal Children	33.22 %	33.56 %
Height/Age ratio low, Weight/Height ratio fine	44.52 %	48.63 %
Height/Age ratio low, Weight/Height ratio low	19.52 %	15.07 %
Height/Age ratio fine, Weight/Height ratio low	2.74 %	2.74 %

The second study was carried out on children aged between 3 and 6 in Andamarca and Chipao. The tables have been presented in such a way as to give a more realistic figure of which children are affected by different kinds of malnutrition.

Table 41: Results of study to evaluate current levels of malnutrition - Sondondo valley

Weight/Height Ratio

<u>Description</u>	<u>Andamarca</u>	<u>Chipao</u>
Normal Children	64.20 %	80.80 %
Overweight Children	35.80 %	15.40 %
Underweight Children	0.00 %	3.80 %

Height/Age Ratio

<u>Description</u>	<u>Andamarca</u>	<u>Chipao</u>
Normal Children	38.80 %	42.30%

Small Children	61.20 %	57.70 %
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This study provides some interesting statistics. In terms of children's weight there is more of a problem of obesity than of under nourishment. Indeed in Andamarca there is not a single underweight child when compared with their height. This would suggest that the statistics we regularly see quoted on malnourished children are alarmist. It should not matter if the child is small so long as it is not underweight.

- e) Interview 250 families concerning their diets and hygiene at home.

This study was carried out mainly in year 2. It provides some useful socio economic data relating to the level of education reached by mothers, what is eaten most frequently and the numbers of children per family, for example. A total of 270 families were interviewed.

- f) Publish and diffuse the results of these studies.

The two studies have been published under the following titles:

*“Diagnostico del estado nutricional de niños menores de 3 años de edad en los valles de Chicha – Soras y Sondondo y el distrito de Sañayca”*

*“Estudio de hábitos alimenticios en niños menores de 3 años de edad en los valles de Chicha – Soras y Sondondo y el distrito de Sañayca”*

The studies were presented in hard copies and CDs to the local authorities in each district. The general public were invited to these presentations at which the project nutritionist outlined the principal results and conclusions. Copies of the studies have also been presented to a number of NGOs and provincial and regional authorities.

Table 42: Formal presentations of the studies on nutrition and diet, March/ April 2007

<u>Location</u>	<u>N° of Participants</u>		
	<u>Men</u>	<u>Women</u>	<u>Total</u>
Soras	4	1	5
Tumayhuaraca	17	18	35
Pampachiri	4	14	18
Andamarca	35	14	49
Chipao	6	60	66
Larcay	4	5	9
Pomacocha	20	5	25
Sañayca	28	22	50
<b>TOTALS</b>	<b>118</b>	<b>139</b>	<b>257</b>

- g) Sow vegetable gardens for those families with children suffering from malnutrition.

A total of 1,249 family vegetable gardens have been sown over the project as outlined below.

Table 43: Family vegetable gardens sown

<u>Campaign</u>	<u>Gardens</u>
2003 – 2004	388
2004 – 2005	428
2005 – 2006	361
2006 – 2007	72
<b>TOTAL</b>	<b>1,249</b>

In the Chicha – Soras valley most of these gardens were sown in the 14 priority communities selected as a result of the nutrition studies. In the Sondondo valley most of the gardens were sown at local schools and colleges and thus benefited a large number of children.

In order to help ensure the success of the gardens a total of 78 courses have been held on horticulture. A total of 2,289 people have participated (897 men and 1,392 women).

Table 44: Courses on horticulture

<u>Year</u>	<u>N° of Courses</u>	<u>Participants</u>		
		<u>Men</u>	<u>Women</u>	<u>Total</u>
2003 - 2004	32	445	485	930
2004 – 2005	17	135	321	456
2005 – 2006	21	202	441	643
2006 – 2007	8	115	145	260
<b>TOTAL</b>	<b>78</b>	<b>897</b>	<b>1,392</b>	<b>2,289</b>

- h) Make 500 house to house visits to discuss diets and family hygiene.

The project nutritionists and local promoters made house to house visits in order to discuss issues such as family diet and hygiene. This has been a very effective training method since discussions are held on a one to one basis and demonstrations of correct practice can be presented in an environment which the families relate to.

A total of 872 house to house visits were made.

Table 45: House to house visits

<u>Year</u>	<u>Number of visits</u>
1	95
2	324
3	453
4	0
<b>TOTALS</b>	<b>872</b>

- i) Hold 15 courses and workshops on environmental health issues.

A total of 15 workshops have been held by project staff in coordination with the local health authorities on environmental sanitation. These courses covered topics such as use of latrines, selecting organic and inorganic rubbish and the management of rubbish pits and bins etc. There were a total of 640 participants (301 men and 339 women).

Table 46: Courses on environmental sanitation

<u>District</u>	<u>Community</u>	<u>N° of Courses</u>	<u>Participants</u>		
			<u>Men</u>	<u>Women</u>	<u>Total</u>
Pampachiri	Pampachiri	2	41	63	104

	Ccachccacha	1	21	24	45
Larcay	Hueccopampa	1	1	10	11
Sañayca	Pucahuasi	1	11	9	20
	Sañayca	1	22	44	66
Tumayhuaraca	Umamarca	1	47	37	84
	Pulperia	1	39	33	72
Soras	Soras	1	27	18	45
Pomacocha	Pomacocha	1	27	22	49
	Wiracochan	1	10	29	39
Carmen Salcedo	Andamarca	1	11	21	32
Chipao	Chipao	1	13	10	23
	San Antonio	1	20	10	30
	Mayobamba	1	11	9	20
<b>TOTALS</b>		<b>15</b>	<b>301</b>	<b>339</b>	<b>640</b>

j) Hold 20 workshops on nutrition.

A total of 30 workshops have been held on nutrition in which there have been 1,223 participants (441 men and 738 women).

Table 47: Courses and workshops on nutrition

<u>District</u>	<u>Community</u>	<u>N° of Courses</u>	<u>Participants</u>		
			<u>Men</u>	<u>Women</u>	<u>Total</u>
Pampachiri	Pampachiri	2	27	29	56
Larcay	Larcay	2	4	33	37
	Chicha	1	1	18	19
	Hueccopampa	1	6	16	22
Sañayca	Sañayca	2	34	97	131
Tumayhuaraca	Umamarca	2	20	59	79
	Cochapucro	1	1	19	20
	Villa Santa Rosa	2	18	59	77
	Pulperia	1	4	20	24
Soras	Soras	2	5	32	37
Pomacocha	Pomacocha	3	74	104	178
Carmen Salcedo	Andamarca	4	118	44	162
	Chiricre	1	9	6	15
Chipao	Chipao	2	10	101	111
	San Antonio	3	98	84	182
	Santa Cruz	1	12	17	29
<b>TOTALS</b>		<b>30</b>	<b>441</b>	<b>738</b>	<b>1,179</b>

Table 48: Courses and workshops held on Nutrition per year

<u>Year</u>	<u>N° of Courses</u>	<u>Participants</u>
1	0	0
2	13	411
3	4	185
4	13	627
<b>TOTALS</b>	<b>30</b>	<b>1,223</b>



- k) Hold 50 cooking sessions.

Cookery sessions were held principally in the priority communities determined by the levels of malnutrition in children. At these sessions practical advice is given on balanced diets and also on how to prepare the vegetables the families have been growing. The nutritionists also focus upon local products such as mashua, oca, potatoes, olluco, beans and quinoa.

In each of the 13 priority communities organised groups of women have been formed who participate in the cooking sessions and receive additional benefits such as seeds and talks. These have names such as *Las Manzanitas de Pomacocha*, *Virgen del Carmen de Cusichaca (Larcay)* and *Retamitas de Cusichaca (Sorás)*. The *manzanitas* are the best organised of the groups. They generate a little funding for themselves. The project nutritionist confirms that houses in Pomacocha tend to be cleaner now and better ordered. Also new dishes are being prepared at home.

The two project nutritionists each prepared recipe booklets for use in the demonstration sessions and courses on nutrition. These contain miscellaneous recipes with mainly local ingredients such as quinoa, swedes and alpaca meat.

A total of 102 sessions were held in which 1,530 people participated, predominantly women. Many of these were held in coordination with the local health authorities.

- l) Hold 10 courses on parasites in children.

Quite apart from a poor diet one of the main causes of malnutrition in children are the numbers of harmful parasites they intake through failure to treat water and problems relating to hygiene. To help to reduce this problem 12 courses have been held on parasites in children. A total of 312 people participated (142 men and 170 women).

Table 49: Courses on Parasites in Children

<u>LOCATION</u>	<u>PARTICIPANTS</u>		
	<u>Men</u>	<u>Women</u>	<u>Total</u>
Pomacocha	0	22	22
Tumayhuaraca (Villa Santa Rosa)	0	12	12
Tumayhuaraca (Pulperia)	4	15	19
Sañayca (Pucahuasi)	27	14	41
Larcay (Chicha)	0	9	9
Pampachiri (Ccachccacha)	23	15	38
Andamarca	13	17	30
Chipao (2 courses)	52	33	85
Chipao (Mayobamba)	11	9	20
Chipao (San Antonio) (2 courses)	12	24	36
<b>TOTALS</b>	<b>142</b>	<b>170</b>	<b>312</b>

- m) Produce a manual on vegetable production and use.

*A Manual de Hortalizas* has been published and has been used in courses on horticulture.

#### Activity 5: Commercialisation

This was not one of the principal programmes within the project structure in terms of staff and resources available. Nevertheless it is extremely important that families have the opportunity to increase their incomes in order to be able to move away from poverty and the varied initiatives taken have been an extremely important step in helping to achieve this.

Under this programme production chains have been well advanced for guinea pigs in both valleys and native potatoes in the Chicha – Soras valley and Sañayca. Lactic products and honey have also begun to generate additional incomes in several districts. The Government *Sierra Exportadora* programme is also interested in the potential of several Andean crops. We have also helped to stimulate commercial links between the local villages and the migrant populations in Lima.

A total of 6 sub activities have been implemented within this programme.

- a) Carry out a study on production chains.

A detailed study was carried out during year 2 of the project concerning the production of maize. The project economist also carried out an analysis on the potential of alfalfa production which was presented at the Regional seminar in Pampachiri in 2006 and subsequently published in the booklet summarising the event. Another was carried out on alpaca wool. Information has been gathered on crop distribution within the project ambit. The potential income that can be earned from different crops grown within the zone has also been analyzed. It should be noted that prices can vary and, in particular potato prices can fall very sharply.

Table 50: Distribution of crops in project ambit

<u>CROP</u>	<u>AREA (%)</u>
MAIZE	60
POTATOES	20
PASTURE	6
BARLEY	6
OLLUCO	5
QUINOA	2
BEANS	1

Table 51: Potential income per hectare from different crops

<u>Crop</u>	<u>Yield kg/ha</u>	<u>Price S./kg</u>	<u>Total Price (S./ha)</u>	<u>Cost of Production (S./ha)</u>	<u>Net Income S./ha</u>
Maize	2,600	2.00	5,200	5,087.25	112.75
Beans	2,000	2.00	4,000	2,693.25	1,306.75
Peas	3,200	1.60	5,120	3,492.30	1,627.70
Quinoa	2,000	1.80	3,600	2,887.50	712.50
Potatoes	20,000	0.80	16,000	11,240.25	4,759.75
Olluco	10,000	1.00	10,000	6,087.38	3,912.63

Another base line study focussed upon the production of alpaca wool within the project area. The study focussed on 126 families. In 2004 they generated a total of S/.78,000 through the sale of wool, an average of S/.619 per family.

The mapping studies on the terraces referred to in *activity (1) h* above has also provided a great deal of information for the future planning of commercial activities.

- b) Publish and divulge the results of the study.

Some of the key results of the various studies have been shared with the Regional Governments of Ayacucho and Apurimac and with the Government programme “*Sierra Exportadora*”.

- c) Select potential products for marketing.

Products selected with a commercial potential include guinea pigs, honey, native potatoes, quinoa, lactic products and alpaca wool and meat.

- d) Reach agreements with commercial enterprises.

The only formal agreement reached has been with alpaca wool trading enterprises in Arequipa. This agreement was established in year 2 of the project when 62 families benefited from the arrangement.

Table 52: Families benefiting from the sale of alpaca wool

<u>LOCATION</u>	<u>FAMILIES</u>
<u>Tumay Huaraca</u> Pulperia	21
<u>Pomacocha</u> Yanapata Titayhua	03 10
<u>Pampachiri</u> Chillihua Llamcama Huaccoto Pallcapampa	23 02 01 01
<u>Larcay</u> Hueccopampa	01
<b>TOTAL</b>	<b>62</b>

- e) Establish two production chains.

Although no formal production chains have been established to date there are many positive signs, indicating that commercial activities are increasing.

One of the activities which Cusichaca staff have been promoting with notable success is the breeding of guinea pigs for commercial ends. We distributed 300 guinea pigs in a total of 36 modules, each of which consists of between 6 and 10 animals (usually 9 females and 1 male). At the same time we offered a total of 37 courses on rearing guinea pigs at which there were 1,832 participants (1,016 men and 816 women). (See next section)

Table 53: Distribution of guinea pigs

<u>Location</u>	<u>Beneficiaries</u>	<u>N° of Animals</u>
<u>Pampachiri (Ccenta)</u>	5 families	10
<u>Larcay</u>	5 families	10
<u>Larcay (Chicha)</u>	5 families	10
<u>Tumayhuaraca (Pulperia)</u>	8 families	10
<u>Tumayhuaraca (Pulperia)</u>	School	10
<u>Tumayhuaraca (Villa Santa Rosa)</u>	Demonstration Centre	34
<u>Tumayhuaraca (Ccalocco)</u>	School	8
<u>Tumayhuaraca (Umamarca)</u>	Women's group	8
<u>Tumayhuaraca (Umamarca)</u>	Organised group	10
<u>Sañayca (Pucahuasi)</u>	5 families	10

Sañayca	3 organised groups	30
Pomacocha	2 organised groups	20
Pomacocha	Demonstration Centre	20
Soras	College	10
Soras	Demonstration Centre	20
Carmen Salcedo	Demonstration Centre	20
Cabana Sur	College	10
Chipao	Demonstration Centre	20
Chipao	Local group – APROA	10
Chipao (Mayobamba)	Local group – APROCUY	10
Chipao (Santa Rosa)	Local group	10
TOTAL		300

Very important initiatives have been taken in both valleys to help stimulate commercial initiatives amongst the guinea pig breeders. Legally registered associations of guinea pig breeders have been established in each. In the Sondondo valley this is an alliance of 17 groups all of which are dedicated to this activity. Between them this group has approximately 1,000 animals and their intention is to operate as a commercial enterprise.

Raising guinea pigs has become the most an important new commercial activity in much of the project area. In the villages close to the main road in Tumayhuaraca there are several families with around 700 guinea pigs each which are being sold locally and in Andahuaylas. According to a sample survey carried out by project staff there are approximately 15,000 guinea pigs in the Sondondo valley and right hand side of the Chicha – Soras valley combined. Of these around 70% are improved strains and 30% are local varieties. There are more animals in the Chicha – Soras valley but the quality is higher in the Sondondo valley. A number of potential markets have been identified.

Table 54: Potential Markets for Guinea Pigs

<u>Market</u>	<u>Location</u>	<u>S/.</u>	<u>Notes</u>
Empresa Empezas de Huancayo	Ministry of Agriculture Andahuaylas	12	Guinea Pigs with a live weight of 1.3kg. Light coloured. 3 months old.
Quintas de Abancay	Abancay	11	Skinned guinea pigs. Dead weight of 650g to 700g.
Ministry of Agriculture (office of animal promotion)	Abancay	7	Guinea pigs weighing from 700g to 1kg but only for special events.

Cusichaca has also been working with families in the high altitude villages who are dedicated to herding alpacas. An agreement was reached with the Belgian Cooperation to promote the production and sale of alpaca wool. Practical training was offered in two key aspects relating to the quality and marketing of the wool. Firstly Belgian Cooperation arranged for specialists in wool shearing from Huancavelica and Junin to visit the project area. Cusichaca staff took them to all of the communities where there are families with alpacas. Good quality shearing increases the price at which the wool can be sold. Once the wool had been collected together in storehouses other specialists in wool classification were brought in from Arequipa. The price of the wool varies according to its quality. Practical courses on this subject were organised in 4 communities, benefiting 75 alpaca breeders, who united to sell their product.

Table 55 Courses on alpaca wool classification

<u>COMMUNITY</u>	<u>BENEFICIARIES</u>
Pulperia (Umamarca)	20
Titayhua (Pomacocha)	16
Hueccopampa (Larcay)	11

Pampachiri	28
TOTAL	75

In the first year following the training a total of 52 quintals of wool (1 quintal = 46 pounds) was gathered together, classified and sold, benefiting a total of 62 families. The average price obtained was US\$1.30 per pound of wool. This meant that wool worth about US\$3,000 was sold in total, representing an average of US\$50 per family. Subsequently we helped to construct with Community participation a wool store in Hueccopampa (Larcay). This store remains in use and good prices have been achieved for the wool which continues to be sold in Arequipa. Most of the wool is now 2<sup>nd</sup> and 3<sup>rd</sup> category (rather than 4<sup>th</sup> category which predominated in the first year).

Pasture production has increased significantly in many districts in the past 4 years – most notably in Pomacocha and Chipao. This has led to a many farmers purchasing improved cattle strains and has contributed to an increase in the production of lactic products. Families in Pomacocha used to have to buy cheese in Andahuaylas. Now there is a surplus for sale.

Another area where commercial impact has been achieved is in the production of native potatoes. An association of farmers from the districts of Sañayca, Pampachiri, Pomacocha and Tumayhuaraca has been formed to exploit this product. These districts have a combined annual production of about 50 tonnes of native potatoes.

Farmers in Sañayca were supported in developing a novel approach to selling their surplus produce. They have found a very receptive market amongst residents from Sañayca living in Lima. At a recent event they were able to sell a variety of products including native potatoes, Andean grains, cheese and alpaca meat etc. The district of Pampachiri has also held a similar event in September 2007.

Table 56: Produce sold at event organised by Lima Residents from Sañayca

<u>Produce</u>	<u>% Sold</u>
6 tonnes of native potatoes	100
Maize and quinoa	100
850kgs of charqui (alpaca meat)	70
6 sheep	100
2 pigs	100
20 guinea pigs	100
150 cheeses	100

More recently the *Sierra Exportadora* programme has become keen to investigate the potential of commercial activities within both valleys. The district of Pomacocha, in particular, is developing strategies for the commercialization on a major scale of Andean grains, native potatoes and tara. They have also expressed interest in the strategy of Cusichaca's support of the two pilot experiments with the districts of Sañayca and Pampachiri in organising farmers to take their products to urban community markets in Lima.

- f) Hold 10 courses on marketing.

A total of 4 courses were offered in years 1 and 2 on marketing. There were 188 participants in these courses.

In addition a total of 37 courses have been held on rearing guinea pigs as a commercial enterprise. These courses have attracted 1,832 participants.

Table 57: Courses on rearing guinea pigs as a commercial enterprise

<u>Year</u>	<u>N° of courses</u>	<u>Participants</u>
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1	0	0
2	6	231
3	19	960
4	12	641
TOTALS	37	1,832

Table 58: Courses on Rearing Guinea Pigs

Location	Participants		
	Men	Women	Total
Andamarca (community (3))	70	25	95
Andamarca (college Amauta)	11	6	17
Andamarca (Huayllahuarmi) (3)	1	18	19
Cabana Sur (community (3))	52	65	117
Cabana Sur (college & school)	45	26	71
Aucara	40	14	54
Chipao	74	44	118
Chipao (Association (2))	33	6	39
Chipao (Santa Rosa)	12	7	19
Chipao (Mayobamba)	15	10	25
Chipao (institute)	20	11	31
Chipao (San Antonio)	74	54	128
Huaycahuacho	50	27	77
Tumayhuaraca (Umamarca) (2)	25	24	49
Tumayhuaraca (Santa Rosa) (4)	170	130	300
Tumayhuaraca (Pulperia) (4)	91	79	170
Pampachiri	60	65	125
Pomacocha	8	4	12
Soras (2)	103	63	166
Larcay	34	42	76
Sañayca	6	75	81
Sañayca (Pucahuasi)	22	21	43
TOTAL	1,016	816	1,832

Activity 6: **Tourist Promotion**

The numbers of tourists visiting Peru from abroad and also the levels of internal tourism have both been increasing significantly over the past decade. Whilst the majority of tourists plan to visit the traditional sites a growing number are keen to explore. This has presented a good opportunity to develop rural tourism in parts of Peru as a means to increase income generating opportunities for local families.

Both the Sondondo and Chicha – Soras valleys have the potential to develop as important destinations for rural and ecotourism. Activities have been carried out to stimulate this potential through preparing inventories of sites to visit and of local customs, holding schools for local guides, designing tourist circuits and participating in regional and national tourist promotion events. The principal results of this programme have been the completion of a number of important studies and raising the levels of awareness of the potential of the Sondondo valley as a tourist destination both amongst the local population and among tourist promotion bodies (PromPeru, Mincetur, and the Regional Government of Ayacucho etc.)

A total of 13 sub activities have been implemented within this programme.

- a) Produce an inventory and maps of sites of archaeological, geological, landscape and wildlife interest.

Cusichaca employed specialists to undertake studies for the purpose of tourist development by the local districts. These included the preparation of inventories of geological formations and features, archaeological sites and Andean wildlife with tourist potential. These were completed within the first 2 years of the project.

- b) Publicise the results of the inventory.

The results of the studies have been presented to the local authorities in each district in the form of DVDs.

- c) Carry out a study of cultural activities.

Information was gathered on local customs and festivities by the project sociologists and was included in their diagnostics of each valley. Some of the information has also been included in tour guides produced for each of the 4 districts in the Sondondo valley.

- d) Design two tourist circuits.

Cusichaca has also been working with the local communities to establish conditions for future eco tourism activities, particularly in the Sondondo valley. By utilising the information in the inventories referred to above 4 tourist circuits have been designed within the District of Andamarca. Prior to designing these circuits Cusichaca also helped to establish a local organisation dedicated to tourist promotion in Andamarca, ADETURC. Members of this organisation provided valuable input in the exploration and preparation of the circuits.

- Tourist Circuits

Each of the circuits described below are based upon treks requiring between a half and full day to complete.

- The first circuit offers an overview of the upper Sondondo valley. This trek reaches a Look Out point at Accaimarca (high above Andamarca) via the *andenes* of Chimpa and the lake of Cciriycha.
- The second circuit concentrates on a number of landscape features. The route leads to two geological depressions at Pachapamanca, following a path via Puquiota (Underground canal), Campanero (musical stone quarry), the Chullpas at Ninaquero, the *andenes* of Balcon, Yarpo lake and a stone forest.
- An archaeologically based circuit starts and ends in the main square in Andamarca and requires a good half day to enjoy fully. The route takes in two stone quarries, the archaeological site of Caniche, several sectors of *andenes* with features such as steps and underground canal systems as well as a couple of burial structures. An *anden* which is surrounded by eucalyptus trees has been designated as a rest area.
- The final circuit is a nature trail which ends up at some thermal baths. The route runs to the waterfall of Puzapaccha via a stone with fossilised vicuña footprints, a cross etched into a cliff face and the *andenes* of Huaylla before returning via the river Negro mayo and the hot baths.

- e) Establish offices of tourist information in Pampachiri and Andamarca.

We were unable to establish official tourist information offices. However, the group ADETURC referred to above have set up their own information centre and also local museum and library. In Pampachiri the local authorities also have an office with basic information for visitors.

- f) Sign agreements with Dircetur, Mincetur and Promperu to promote the tourist circuits.

General agreements have been signed with Dircetur in both Apurimac and Ayacucho. Cusichaca is also a member of the *Camara de Turismo* in Ayacucho. This is a network to which most local and regional tourist agencies and organisations belong. Information on tourist activities and promotion are shared amongst the members.

- g) Produce publicity materials.

Specialist staff have prepared draft booklets with detailed information on each of the 4 districts in the Sondondo valley – Andamarca, Chipao, Cabana and Aucara following consultations with the local population. A tour package which envisages a stay of one week with visits to each of the 4 districts has also been designed.

In addition several leaflets and posters were prepared for use in regional and national tourism promotion events. A publicity magazine on Pampachiri has been printed and distributed widely.

- h) Establish two schools for local tourist guides.

Since it is important that local families benefit from any future tourist activities Cusichaca organised and ran a school for local tour guides in each valley. Two sessions were held on a monthly basis for 6 months. A total of 14 people completed the full courses (9 men and 5 women)

Table 59: Schools for tourist guides.

<u>Location</u>	<u>N° of Participants</u>		
	<u>Men</u>	<u>Women</u>	<u>Total</u>
<u>Andamarca</u>	6	3	9
<u>Pampachiri</u>	3	2	5
<u>TOTALS</u>	9	5	14

- i) Hold 10 courses and workshops for local people offering services to tourists.

Two workshops were held for those offering services to tourists. Both were held in Andamarca with the participation of 51 men and 17 women. The participants were mainly owners of hostels or restaurants.

Sessions were also held each month with the organised group, ADETURC, to help strengthen this association. This work has led to very positive results since ADETURC has become very active in



promoting tourism in the Sondondo valley. Some of their members own hotels and cafes. Others have trained as guides. A few own vehicles.

Table 60: Courses and workshops on tourism

<u>Year</u>	<u>N° of courses</u>	<u>Participants</u>
1	0	0
2	0	0
3	1	49
4	1	19
<b>TOTALS</b>	<b>2</b>	<b>68</b>

Table 61: Courses and workshops on tourism

<u>Location</u>	<u>Participants</u>		
	<u>Men</u>	<u>Women</u>	<u>Total</u>
<u>Andamarca (2 courses)</u>	51	17	68
<b>TOTALS</b>	<b>51</b>	<b>17</b>	<b>68</b>

- j) Sign an agreement with Mincetur to put up signs in the Sondondo valley.

At the outset of year 3 Mincetur and Promperu confirmed that they would fund the placing of 21 tourist signs in the Sondondo valley. However, procedural delays have meant that this activity has yet to be implemented. Since the population has become impatient with the delays a number of signs have been made locally by a group of French student volunteers and have been put up at some key sites.

- k) Organise a trip to the zone for tourist agencies.

This activity was not undertaken.

- l) Participate in 8 tourist promotion events nationwide.

Specialist staff have taken part in a variety of regional and national tourist promotion events, often with representative from the local communities. These activities have ensured that the Sondondo valley, in particular, is now considered as a priority for tourist development both in PromPeru and in the Regional Government of Ayacucho. Dircetur in Ayacucho have selected the Sondondo valley as one of 3 circuits they propose to develop at Regional level.

The tourist promotion events in which Cusichaca has been present include those described below.

- In March 2004 staff participated in a national symposium held in Ayacucho to promote sustainable tourism. Four Cusichaca staff plus a representative from each of Andamarca and Pampachiri attended. We had a stand at this event and also gave a talk to promote the two valleys.
- Cusichaca participated in an event organised by Promperu in Lima in 2004. This was to promote tourism within the Department of Ayacucho. There were some talks and then stands were set up and representatives of tour agencies invited to visit these. We had a stand and received enquiries from more than 50 agencies.
- Cusichaca was also present in 3 separate large-scale promotional events in Lima within the first two years of the project. The first was held in the Hotel Maria Angola and was an international event. The others were held in Larcomar and Jockey plaza. At Jockey Plaza we

formed part of the stand given to the Department of Ayacucho. 35,000 people visited this event.

- Cusichaca participated in a workshop held in Arequipa in November 2004 concerning marketing of tourism.
- During 2005 Cusichaca staff also attended 3 further promotional events in Lima, Ayacucho and Arequipa.
- During the final year of the project Cusichaca helped to organise the participation of ADETURC in a major tourist promotion fair held at Jockey Plaza in Lima in May. There was a strong representation from Andamarca at this event, with the participants running a successful stand. We prepared a leaflet which was handed out at the Fair.
- Cusichaca staff have also been participating in a series of national and regional meetings called Pentur which are contributing towards Peru's strategic tourism plan. Meetings have been held in Ica, Cusco, and Arequipa etc. At each of these meetings the Cusichaca representatives have taken the opportunity of promoting the Sondondo valley.

m) Prepare new projects to develop tourism locally.

A number of project proposals have been developed recently, many of which include tourism as a key element.

#### Activity 7: **Natural Resource Management**

Natural resources such as soil, water, native pasture, fish and woodland are all particularly important to rural economies and Communities able to manage these resources effectively and efficiently are more likely to prosper than those which have poor or no management policies. Under this programme Cusichaca worked to improve forestry management and also ran courses on soil and water conservation and the importance of protecting the local trout populations.

As a result of this programme improvements have been noted in forestry and pasture management.

A total of 8 sub activities have been implemented within this programme.

a) Contract a consultant to carry out an inventory of natural resources.

A partial inventory of natural resources was undertaken as part of the terrace mapping studies. This covered, principally the Chicha – Soras valley. Full inventories were not completed due to cost.

b) Develop natural resource management plans with the participation of the authorities and Communities.

This activity was not completed.

c) Establish tree nurseries in each district.

Tree nurseries were established in each district and were managed throughout the project. In some districts, such as Tumayhuaraca and Andamarca more than one nursery were installed. Most are small - with a capacity to produce between 5,000 and 10,000 trees.

- d) Produce and transplant 100,000 trees (a mix of native, exotic and fruit trees).

A total of 172,901 trees were transplanted during the project.

Table 62: Trees transplanted

<u>Year</u>	<u>N° of trees</u>
1	10,600
2	66,569
3	78,432
4	17,300
<b>TOTAL</b>	<b>172,901</b>

Many were distributed to schools, colleges and institutes. Others went to organised groups within the communities and a few to families. The trees are a mix of native, fruit and exotic (pine and eucalyptus).

We have been monitoring previous plantations. Two studies were carried out showing that there is a variation in survival rates depending upon the location, types of plantation and level of security but typically between 60% and 80% of trees survive the first year and between 50% and 70% develop fully. Thus approximately 105,000 trees will have survived to date.

- e) Carry out a study relating to the repopulation of rivers with fish.

Studies have been carried out for the stocking of two major rivers with trout. In addition feasibility studies have been carried out for establishing 3 artisan trout farms in Chipaocasa (Chipao), Ccochapucro (Tumayhuaraca) and Andamarca.

- f) Repopulate 4 rivers with trout and establish two local artisan fish farms.

No repopulation has been undertaken in the rivers since the regional fisheries department have been sowing rivers with trout hatchlings and it was agreed that it was best not to duplicate activities.

Approximately 9,000 baby trout were purchased to stock two small fish farms at Chipaocasa in Chipao and Ccochapucro in Tumay Huaraca.

The two rustic fish farms are both being well managed to date. In Chipao they have 4 tanks. One of these is for hatchlings and is 1.5m<sup>2</sup> x 1m deep. Two are for juvenile fish and are 10m long by 4m wide by 1.2m deep. The fourth has the same dimension and is for adult fish. In Tumayhuaraca there are also 4 tanks. The hatchling tanks is much larger, being 12m long by 1.6m wide by 1.2m deep. The juvenile tanks are 11m long by 2.5m wide by 1.2m deep and the adult tank is 10.5m long by 3m wide by 1m deep.

In the district of Chipao 8 vigilance committees have been established in different annexes. These will be responsible for protecting the rivers from the over fishing of the wild trout population. A total of 5 courses have been offered on trout farming at which there have been 135 participants (119 men and 16 women).

Table 63: Courses on Trout Farming

<u>LOCATION</u>	<u>PARTICIPANTS</u>		
	<u>Men</u>	<u>Women</u>	<u>Total</u>

Chipao (Chipaoccasa) (2 courses)	44	1	45
Andamarca	6	0	6
Pampachiri	22	6	28
Tumayhuaraca	47	9	56
TOTALS	119	16	119

g) Hold 20 workshops on tree nursery management.

A total of 37 workshops were held on tree nursery and forestry management. Most of these workshops have been undertaken at the tree nurseries in order to include a practical element. A total of 1,036 people participated in these workshops (512 men and 524 women).

Table 64: Courses and workshops on tree nursery  
And forestry management

<u>Year</u>	<u>N° of courses</u>	<u>Participants</u>
1	15	361
2	7	215
3	11	329
4	4	131
TOTALS	37	1,036

h) Hold 20 courses on the conservation and protection of water resources.

A total of 7 courses have been held on the conservation and protection of water resources. There were a total of 283 participants at these courses (136 men and 147 women). In addition a further 8 courses were held on the conservation of soil and water. These courses attracted 206 participants (100 men and 106 women).

Table 65: Courses and workshops on the conservation  
And protection of water resources

<u>Year</u>	<u>N° of courses</u>	<u>Participants</u>
1	1	18
2	0	0
3	4	190
4	2	75
TOTALS	7	283

Table 66: Courses on Conservation and Protection of Water Resources

<u>DISTRICT</u>	<u>PARTICIPANTS</u>		
	<u>Men</u>	<u>Women</u>	<u>Total</u>
Pampachiri (2 courses)*	20	10	30
Pomacocha	20	5	25
Sañayca	28	22	50
Soras	10	40	50
Andamarca	5	25	30
Chipao	53	45	98
TOTALS	136	147	283

\* One of the courses held in Pampachiri received participants from Larcay and Pomacocha in addition to those from Pampachiri.

Table 67: Courses on Soil Conservation

<u>DISTRICT</u>	<u>PARTICIPANTS</u>		
	<u>Men</u>	<u>Women</u>	<u>Total</u>
Pampachiri	12	19	31
Sañayca	23	25	48
Larcay (2 courses)	30	20	50
Soras	07	13	20
Tumay Huaraca	05	06	11
Aucara	13	15	28
Andamarca	10	8	18
<b>TOTAL</b>	<b>100</b>	<b>106</b>	<b>206</b>

Activity 8: **Nature Conservation**

Both valleys are particularly rich in terms of Andean flora and fauna – with the Chicha – Soras valley especially so. It is important that the local population appreciates the value of the native species living in their districts both in terms of the conservation of endangered wildlife and habitats and in the potential some plants and animals have in stimulating ecotourism.

This programme has concentrated principally on concluding inventories of local species and in providing training concerning nature conservation. The principal results have been the identification of parts of the Chicha – Soras valley as a potential future Andean nature reserve and the interest of the population in Soras of reintroducing guanacos to their district.

A total of 5 sub activities have been implemented within this programme.

- a) Carry out an inventory of native flora and fauna.

The inventory of native flora and fauna was completed during year 1 of the project.

Table 68: Number of Recorded animal and plant species in  
The Chicha – Soras and Sondondo Valleys

<u>Type</u>	<u>Number of Species Chicha – Soras</u>	<u>Number of Species Sondondo</u>
Mammals	10	12
Amphibians	4	4
Reptiles	3	3
Fish	3	3
Birds	30	29
Plants	241	187

- b) Coordinate with Inrena and the local and regional authorities concerning the possible creation of a local nature reserve.

Owing to the extraordinary range of landscape, wildlife, geological and archaeological sites within the Chicha – Soras valley a proposal was developed to establish a local nature reserve. INRENA were contacted and visited the valley in 2005. They were impressed with the potential and suggested the most suitable form of reserve would be a “*Reserva Pasajística*”, of which there are two in Peru – Nor Yauyos and Cotahuasi. Such a reserve provides status and a degree of protection but allows locals to continue to farm and to utilise natural resources.

The proposal is to create the reserve in the three districts of Pampachiri, Soras and Larcay which are located on either side of the Chicha – Soras river with direct road connections to Lima. Several meetings have been held with the local authorities in each district to gauge interest. However, to undertake all of the work necessary to achieve this status would require another project as the preparation of the documentation necessary would be both time consuming and costly.

- c) Improve an enclosure for guanacos.

Considering that the reintroduction of guanacos into the Chicha – Soras valley would provide an additional tourist attraction as well as potential economic benefits an agreement was reached with the Community and local authorities in Soras to initiate the first phase of this activity in their district.

A plan of the enclosure area was carried out using GPS equipment. The area runs round the base of a hill and has a circumference of nearly 20kms. There is a total of 1,515 hectares. There was a previous enclosure in this sector designed for managing vicuñas. This, however, had become damaged due to neglect.

The Community provided 2,000 wooden eucalyptus posts for the guanaco enclosure. A Community work day was also held to dig out the holes for these posts. Cusichaca purchased 50 rolls of wire mesh fencing. Each roll was 1.8m tall by 50m long. The wooden posts were treated with brea in order to ensure that they would not be damaged by the damp conditions. All of the materials were transported to the site of the guanaco enclosure using a Municipal lorry and the fencing was put up by the Community with guidance from project staff. Part of the original enclosure has also been recovered so that the whole area is now sealed off.

An inventory of the pasture within the enclosure was undertaken by a specialist staff member. A total of 15 transects, each of 500m were studied. Of the 36 species identified 6 are very good for guanacos, 15 are good and 15 are not edible.

Cusichaca staff have helped to regenerate and strengthen the committee responsible for the management of vicuñas. This organisation is legally registered and the most adequate for the purpose of overseeing the reintroduction of guanacos.

- d) Hold 10 courses on nature conservation.

A total of 4 courses have been held on themes relating to nature conservation. There have been 199 participants at these courses (111 men and 88 women).

Table 69: Courses and workshops on nature conservation

<u>Year</u>	<u>N° of courses</u>	<u>Participants</u>
1	1	50
2	0	0
3	2	86
4	2	63
<b>TOTALS</b>	<b>5</b>	<b>199</b>

Table 70: Courses on nature conservation

<u>DISTRICT</u>	<u>PARTICIPANTS</u>		
	<u>Men</u>	<u>Women</u>	<u>Total</u>
Pampachiri	20	20	40
Larcay	30	20	50
Soras (3)	61	48	109

<b>TOTALS</b>	<b>111</b>	<b>88</b>	<b>199</b>
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- e) Organise a visit to an established nature reserve such as Cotahuasi or Nor Yauyos Cochas.

Although we have been in contact with representatives from both reserves we were unable to coordinate a visit.

Activity 9: **Management of Natural Disasters**

Natural disasters can create havoc in rural communities. It is important that the local authorities and populations have plans in place to deal with the different forms of natural disaster that can affect their districts. In this programme activities have been concentrated mainly on the prevention and mitigation of climatic extremes – hail, frost, prolonged drought etc.

This was the smallest of the 9 programmes in terms of resources available. Some positive impacts have been achieved through the use of irrigated terraces to protect against frost and to help conserve water plus the adoption of improved corrals to protect animals in extreme cold. However, more needs to be done to develop effective disaster management plans.

A total of 3 sub activities have been implemented within this programme.

- a) Carry out an inventory of areas at risk.

A partial inventory of areas at risk has been carried out including natural fault lines, areas at risk from landslips and areas most at risk from severe cold snaps.

- b) Hold 10 courses on the prevention and management of natural disasters.

Four courses have been held on the prevention of natural disasters with a total of 196 participants (108 men and 88 women).

**Table 71: Courses on the Prevention of Natural Disasters**

<b><u>DISTRICT</u></b>	<b><u>PARTICIPANTS</u></b>		
	<b><u>Men</u></b>	<b><u>Women</u></b>	<b><u>Total</u></b>
Pampachiri (Chillihua)	11	14	25
Pomacocha	56	40	96
Larcay	18	13	31
Pampachiri (Pucaorco)	23	21	44
<b>TOTALS</b>	<b>108</b>	<b>88</b>	<b>196</b>

- c) Coordinate with the local authorities on issues relating to natural disasters.

Co ordinations have been carried out with the local authorities in Andamarca concerning an area of terraces at Chimpaq at risk from water damage caused by overflows.

The weather stations in both Soras and Chipao are being used to measure temperatures and the readings are used to issue warnings of cold snaps to the health posts and to the general population by passing messages by loudspeaker. Farmers are then able to take actions to protect their crops and to provide shelter and food for their animals.

2.2. What is your assessment of the results of the Action? Include observations on the extent to which foreseen specific objective and overall objectives were met and whether the Action has had any unforeseen positive or negative results. (please quantify where possible; refer to Logframe Indicators).

Below is a table which outlines the results achieved corresponding to the agreed logframe.

Table 72: Results of activities

<u>Expected Results</u>	<u>Results Achieved</u>
<u>Traditional Agricultural Infrastructure</u> - 6kms of canal rehabilitated. - 3 ancient reservoirs rehabilitated. - 100 hectares of terraces rehabilitated. - Greater interest shown by authorities. - A book published on terraces. - A video on traditional agricultural systems. - 500 farmers trained. - A network of institutions interested in the rehabilitation of andenes formed.	- 4.55km rehabilitated (Larcay, Pomacocha, Sañayca Chipao (2), Tumayhuaraca). - 5 cochas rehabilitated (Larcay (3), Tumayhuaraca, Ccenta) - 116.19 hectares rehabilitated. - The municipality of Pomacocha has allocated funds to this activity, all others are seeking funds from the Regional Governments to rehabilitate terraces. - 1 book on terraces published in year 2. - A video was completed in year 4. - 32 workshops held (1,214 people trained). - Cusichaca, Pronamachs, Desco and Iproga have organised regional events to promote this activity. Regional governments of Ayacucho and Apurimac committed to funding the rehabilitation of terraces. Sierra Exportadora keen to develop terraced farming for commercial ends. NGOs such as Instituto de Animación Campesina and Ayudes keen to rehabilitate terraces.
<u>Management of agricultural systems</u> - 5 demonstration centres established. - 50 hectares sown with Andean crops. - 50 hectares of improved pasture. - 24 improved corrals constructed. - 2 systems of laymes established. - 200 farmers trained in water management. - 1,000 farmers trained in organic Andean agriculture. - 500 farmers trained in rearing camelids, cattle and sheep. - An increase in average yields of 10%.	- 5 demonstration centres established. - 84.86 hectares sown. - 61.33 hectares sown (& 8.75 hectares of improved marshland). - 23 corrals constructed. - 27 laymes established - 20 workshops held, 627 farmers trained. - 103 workshops held, 3,472 farmers trained. - 38 workshops held, 1,121 farmers trained. - Yields up approximately 40% on terrace fields.
<u>Community Organisation</u>	



<ul style="list-style-type: none"> <li>- 8 “mesas de concertación” operating.</li> <li>- 8 monitoring committees.</li> <li>- 50 people trained in leadership skills.</li> <li>- 1,000 beneficiaries trained in mixed subjects such as human rights, agrarian laws and self esteem.</li> <li>- Local authorities trained in the process of decentralization.</li> </ul>	<ul style="list-style-type: none"> <li>- 5 “mesas” are fully operational.</li> <li>- 8 monitoring committees are operational.</li> <li>- 2 leadership schools ran for 2 years in Chipao and Pampachiri. 63 participants</li> <li>- A total of 42 training events held on related issues for a total of 1,476 participants.</li> <li>- Advice given to all local authorities. 5 workshops held, 76 participants</li> </ul>
<p><u>Health and nutrition</u></p> <ul style="list-style-type: none"> <li>- 6 potable water systems constructed.</li> <li>- 60 rubbish bins installed.</li> <li>- 2 rubbish pits established.</li> <li>- 30 greenhouses constructed.</li> <li>- 2 studies published on malnutrition and diet in children.</li> <li>- 500 vegetable gardens sown.</li> <li>- 2,500 people trained in nutrition and balanced diets.</li> <li>- A reduction in malnutrition levels amongst children of 10%.</li> </ul>	<ul style="list-style-type: none"> <li>- 8 systems installed benefiting 213 families.</li> <li>- 77 bins installed.</li> <li>- 3 rubbish pits opened in Larcay, Pampachiri and Tumayhuaraca.</li> <li>- 31 greenhouses constructed (includes 5 in demonstration centres).</li> <li>- 2 studies published and distributed.</li> <li>- 1,249 family gardens sown, plus 21 communal gardens and 8 gardens for schools.</li> <li>- 78 courses on horticulture with 2,289 participants, 30 courses on nutrition with 1,223 participants, 102 cooking demonstrations with 1530 participants, 12 courses on parasites in children for 312 participants, 872 house to house visits.</li> <li>- Reduction of 5% of severest form of malnutrition.</li> </ul>
<p><u>Commercialization and Marketing</u></p> <ul style="list-style-type: none"> <li>- 1 study of production chains.</li> <li>- 2 production chains established.</li> <li>- 200 beneficiaries trained in production chains.</li> </ul>	<ul style="list-style-type: none"> <li>- Study complete.</li> <li>- Associations of native potato producers and guinea pig breeders established and selling their products.</li> <li>- 4 courses held on production chains for 188 participants, 37 courses on rearing guinea pigs for 1,832 participants.</li> </ul>
<p><u>Tourist Promotion</u></p> <ul style="list-style-type: none"> <li>- 1 inventory of landscape, wildlife, geological and archaeological sites.</li> <li>- 2 tourist circuits established.</li> <li>- 2 promotional videos.</li> </ul>	<ul style="list-style-type: none"> <li>- Inventories completed.</li> <li>- 4 tourist circuits in the Sondondo valley designed.</li> <li>- 1 promotional video made showing the 2005</li> </ul>

<ul style="list-style-type: none"> <li>- 2 tourist guides published.</li> <li>- 20 local tourist guides trained.</li> <li>- 30 people offering services to tourists trained.</li> <li>- Tourist signs placed in the Sondondo valley.</li> <li>- 2 tourist promotion offices established in Pampachiri and Andamarca.</li> </ul>	<p>pataraymi (anden festival) held in Andamarca.</p> <ul style="list-style-type: none"> <li>- Material prepared to publish 4 tourist guides for the districts of Carmen Salcedo, Chipao, Aucara and Cabana..</li> <li>- 2 schools for tour guides established in Pampachiri and Andamarca, 14 participants</li> <li>- 2 workshops held with 68 participants.</li> <li>- Agreement signed with Mincetur but signs have not been put up.</li> <li>- ADETURC has established a tourist information centre in Andamarca. Municipality in Pampachiri also has basic information office.</li> </ul>
<p><u>Natural Resource Management</u></p> <ul style="list-style-type: none"> <li>- An inventory and map of major natural resources per district.</li> <li>- Natural resource management plans for each district.</li> <li>- 100,000 trees transplanted.</li> <li>- 4 rivers restocked with trout.</li> <li>- 400 beneficiaries trained in tree nursery and forestry management.</li> <li>- 400 beneficiaries trained in the conservation and protection of water resources.</li> </ul>	<ul style="list-style-type: none"> <li>- A partial inventory has been completed in the Chicha – Soras valley.</li> <li>- No management plans prepared.</li> <li>- 172,901 trees transplanted.</li> <li>- No rivers restocked. 2 artisan fish farms have been established.</li> <li>- 37 workshops held, 1,036 beneficiaries trained.</li> <li>- 7 workshops held, 283 beneficiaries trained.</li> </ul>
<p><u>Nature Conservation</u></p> <ul style="list-style-type: none"> <li>- The creation of a local nature reserve under negotiation.</li> <li>- An inventory of local flora and fauna.</li> <li>- A programme to reintroduce guanacos initiated.</li> <li>- 250 people trained in the importance of nature conservation.</li> </ul>	<ul style="list-style-type: none"> <li>- Negotiations held with Inrena and local authorities.</li> <li>- Inventory complete.</li> <li>- First phase of programme to reintroduce guanacos initiated.</li> <li>- 5 courses held for 199 participants.</li> </ul>
<p><u>Natural Disaster Management</u></p> <ul style="list-style-type: none"> <li>- A document detailing areas at risk from natural disasters.</li> <li>- 200 people trained in the management of natural disasters</li> </ul>	<ul style="list-style-type: none"> <li>- No formal document was completed.</li> <li>- 4 workshops held for 196 participants.</li> </ul>

**A number of key results have been achieved over the project.**

We have been able to stimulate a significant increase in the area available for arable farming within the project area. Through direct project activities a total of 275 hectares has been bought back into production.

Table 73: Land bought back into production

<u>Type of activity</u>	<u>Hectares</u>
Rehabilitation of canals	128.60
Rehabilitation of terraces	116.08
Re-introduction of <i>laymes</i>	30
TOTAL	274.68

One of the greatest impacts has been the increased interest in terrace rehabilitation, not only within the project area but also regionally and even nationally. All of the district *alcaldes* are committed to looking for funding to continue to rehabilitate terraces. The Regional Governments of Ayacucho and Apurimac are preparing funding programmes. The *Sierra Exportadora* project is hoping to include a national scheme to promote cultivation on terraces in 2008.

Field data has shown that crop yields on well maintained terraces with irrigation are between 40% and 45% above those obtained on sloping fields or unirrigated, unmaintained terraces. (figures from field studies at Laymecocha).

Another important result of the project has been the recovery of the “*layme*” system of farming, particularly in the Chicha – Soras valley. This has led to a more than doubling of the production of native potatoes in the past 4 years. As a result an Association of Native Potato growers has been formed which is actively looking for markets and selling part of their crop in Community markets in Lima.

An increase in the areas and varieties of improved pasture sown in several districts has led to the purchase of more cattle and a significant growth in the production of lactic products. Districts, such as Pomacocha, which were net importers of lactic products now have an surplus to sell.

There has been a decline in overall levels malnutrition of just 0.34% since year 1 of the project. However, there has been a reduction of 4.45% of the most severe form of malnutrition. Indeed if we only examine the key statistic of weight per height than in the Sondondo valley less than 10% of children are underweight and there is, conversely, a greater problem in terms of children being overweight.

Approximately 90% of families within the project area now have access to clean piped water, compared with 70% at the outset of the project.

The majority of municipalities have begun to implement rubbish collection schemes, with Cusichaca having contributed through courses on sanitation, the provision of rubbish bins and the presentation of feasibility studies for rubbish pits away from the village centres.

Although formal production chains have not been established conditions for commercial activities have improved greatly. The associations of native potato producers in the Chicha – Soras valley and guinea pig breeders in both valleys have the potential to supply markets locally and nationally. The links which have been established between the farmers in the highlands and the migrants from their villages living in Lima have already proven to be of mutual benefit and are opening up a defined market for a variety of Andean crops and animal by-products.

The Sondondo valley has taken important steps in its development as a key future tourist destination. The local group, ADETURC, is a very active and efficient organisation dedicated to tourist promotion. There is a local information centre, museum and library all run by this organisation. They have continued to participate in tourist promotion events (in Arequipa, for example) on their own initiative since the conclusion of the project. They are also currently playing host to a group of French students

who are helping on tourist related activities. Local tourist circuits have been designed and material for tour guide booklets has been collected. Local tourist guides have also completed an extensive course and are prepared for the reception of visitors. Thanks to our participation in numerous national and regional events and close ties with DIRCETUR in Ayacucho, and PromPeru and Mncetur in Lima, the Sondondo valley is now well publicised and is included in the strategic development plans of each. A project on developing tourist circuits in the Sondondo valley for which Cusichaca won first prize in a competition organised by the Belgian Cooperation is now being implemented by DIRCETUR Ayacucho. This is an important achievement.

Many of the districts have become more aware of the importance of natural resource protection. Specific activities have included a more effective control over the numbers and types of animals grazing on native pasture on the highest parts of the districts – with a reduction in the numbers of semi wild horses and an increase in alpacas. More effective vigilance committees have been established to prevent the over fishing of trout.

The project has also helped to stimulate interest in nature conservation with the proposals to reintroduce guanacos and to create a local reserve in the Chicha – Soras valley.

2.3. What has been the outcome on both the final beneficiaries &/or target group (if different) and the situation in the target country or target region which the Action addressed?

A very high percentage of the local population within all of the districts of the project ambit have identified very strongly with the work being undertaken by Cusichaca. This has been demonstrated extensively in all monitoring trips to the zone – both internal and external. Populations, which had been declining, have increased by approximately 10% in the majority of the districts in the past 5 years.

Interest has been growing in the rehabilitation of *andenes* as evidenced by the fact that some groups of farmers in the Chicha – Soras valley are carrying out the work by themselves. Likewise people are beginning to recover pride and belief in Andean traditions and farming systems. This is shown, for example by the interest in all the Sondondo districts in reintroducing traditional festivities relating to terraced farming and also by the reintroduction of the *layme* farming systems in the Chicha – Soras valley and the re-establishing of ancient seed routes with the district of Turpo. Local agricultural institutes have now opted to include courses on organic Andean agriculture in their curriculum, which is a very important achievement. Many of the institutes and schools now also manage well-implemented experimental centres, which offer a similar function to the skills centres established during this project. Many have incorporated suggestions made by Cusichaca staff.

2.4. Please list all publications (and no. of copies) produced during the Action on whatever format, amongst others containing new approaches, innovative ways of communicating... (please enclose a copy of each item, except if you have already done so in the past).

*Please state how your publications are being distributed and to whom.*

The transfer of knowledge is an important aspect of Cusichaca's work. Copies of Cusichaca publications are handed out at all events in which we participate and to all institutions with which we develop a positive working relationship.

### Books

Two books have been published:-

- a) *Restauración Agrícola en los Andes: Recuperación de los sistemas tradicionales de riego y andenes agrícolas*, author Ann Kendall (2,000 copies). This book has been distributed at the regional seminars and to institutions and individuals interested in terraced agriculture in Lima, Andahuaylas, Ayacucho, Cusco and elsewhere. It is an easy to read summary of the

importance of andenes, their structure and rehabilitation techniques. It draws upon Cusichaca's experiences and has proven to be a very valuable tool in networking.

- b) *Memoria del Seminario Taller "Los Andenes y su Impacto en la Agricultura Sustentable"*, author *The Cusichaca Trust* (1,000 copies). This book has been distributed to all participants in the seminar held in Pampachiri and Andamarca from March 13 to 17<sup>th</sup> 2005 and also to participants in the regional seminars in Chivay and Cusco. It is a summary of the regional seminar on andenes organised by Cusichaca and includes the talks, field visits and workshops.

The project Director, Ann Kendall, along with her co-author, Abelardo Rodriguez have continued to work on a major book relating to terrace systems. This book is entitled '**Desarrollo y Perspectivas de los Sistemas de Andeneria en los Andes Central del Peru**' and is due to be published by Bartolomé de las Casas by early 2008. (not directly financed by this project).

We deposited 4 copies of each of the two books described above in the National Library in Lima.

A book entitled "*Historia y Tradiciones de Villa Pampachiri*" has been published by the author Edgard Zamora Osorio. He used a number of photos taken by Cusichaca staff in this book.

### Magazines

- a) *Qapaq Kaqñinchik – Pampachiri*, author *The Cusichaca Trust* (2000 copies). This magazine has been distributed during festivities in Pampachiri and also has been handed out at tourist promotion events in Lima, Ayacucho and Arequipa. It is a magazine with photos and information relating to tourist attractions within the district of Pampachiri.
- b) *Rumbos*. Two journalists working for the prestigious magazine, Rumbos, visited the Sondondo valley in May 2006 and wrote an article concerning their trip for the June addition in which the work of Cusichaca is referred to.

### Newspapers

*La Republica*. Two journalists, Jorge Loayza and Claudia Alva from the "Republica" newspaper visited the project in August 2005. As a result 3 articles were published in the papers' Sunday supplement.

*El Comercio*. An article about Andamarca also appeared in the **Comercio** newspaper during the final year of the project. This is the most important Peruvian newspaper. The work of Asociación Andina Cusichaca is mentioned in the article.

### Television

*Canal N*. The project Director, Ann Kendall, participated in a live interview on the cable channel, **Canal N**, following the national forum on andenes held in October 2007. This led to interest and expressions of interest relating to the work on terraces.

*Tiempo de Viaje*. Rafo Leon, who is a well know producer of documentaries in Peru visited both the Sondondo and Chicha – Soras valleys in September 2007 and presented the resulting video on the programme **Tiempo de viaje** in October.

### Videos

*Pataraymi, Andamarca 2005*. A DVD of the *anden* and sowing festival (*Pata raymi*) held in Andamarca in September 2005 has been produced. Copies will be distributed shortly to the local community and to tourist agencies.

*Infraestructura Agrícola Tradicional.* Cusichaca staff produced a DVD relating to the rehabilitation of terraces, canals and reservoirs using material filmed over the 4 years of the project. This was published in 2007.

### Leaflets

*Promotional leaflet* (1,000 copies). A promotional leaflet for the institution covering basic information on The Cusichaca Trust and the Asociación Andina Cusichaca was printed in both English and Spanish and was distributed at information exchange events organised by the World Bank in Washington and the EU in Lima.

*Descubrir el Valle Sondondo* (500 copies). This leaflet was produced for the tourist weeks held in different parts of the valley and was distributed to visitors. It was also distributed in Lima to those present in an official ceremony held at the National cultural Institution (INC) declaring the local scissor dance as a national cultural treasure.

*Corredor Turístico Valles Sondondo y Chicha – Soras* (1,000 copies). This is another leaflet designed to be handed out at tourist promotion events and includes basic information on both valleys.

*Valle del Sondondo* (1,000 copies). This leaflet was published in May 2007 for use in the tourist promotion Fair in Jockey Plaza, Lima at which the local organisation, ADETURC, had a stand.

### Manuals

Staff members have produced a number of short manuals and leaflets as training tools which are distributed during courses. Raquel (sociologist) has written four such manuals on Self esteem, alcoholism, planning and reproductive health. Ofelia (sociologist) has produced a leaflet on governing structures. Jenny (agronomist) has produced leaflets on vegetables and water management. Soraida (nutritionist) has prepared a small recipe booklet describing 6 dishes prepared with quinoa or kiwicha. Edith (nutritionist) has also produced two recipe booklets, one using local grains and vegetables as the base for the dishes and the other focusing on alpaca meat. Both Vilma and Prisco (animal husbandry experts) have prepared manuals on pasture and also alpaca calendars. Prisco has also written a manual on guinea pigs. Alfonso (agronomist) has produced an agricultural calendar and manuals on vegetables and reforestation. Gissella (biologist) has produced a manual on rearing trout. Tom (technical consultant) wrote a manual on using traditional technologies to rehabilitate canals.

### Principal Reports

Below is a list of the principal reports and studies which have been produced as a result of the project.

- 1) Magazine on Pampachiri, Qapaq Kaqninchik. July 2004.
- 2) Memoria Seminario Taller “Los Andenes y su impacto en la Agricultura Sustentable”, Pampachiri – Andamarca, 13 – 17 de Marzo de 2005.
- 3) Booklet: Restauración Agrícola en los Andes: “Recuperación de los sistemas tradicionales de riego y andenes agrícolas” – Ann Kendall 2005
- 4) Leaflet with general information on CT and AAC.
- 5) Leaflet “Corredor Turístico Valles Sondondo y Chicha – Soras”.
- 6) Leaflet “Descubrir Valle Sondondo”.
- 7) 2 pocket calendars 2004/5 (Chicha – Soras and Sondondo valleys).

- 8) Archaeological report on excavations of Andenes in Andamarca. Handed to the Instituto Nacional de Cultura, March 2006. Ann Kendall, Manuel Aguirre and Danna Aramburu.
- 9) Inventario de Organizaciones, Valle Sondondo – Ofelia Pallqui, August 2006.
- 10) Diagnostico Social Organizativo Distrito Carmen Salcedo – Ofelia Pallqui, August 2006.
- 11) Diagnostico Social Organizativo Distrito Chipao – Ofelia Pallqui, August 2006.
- 12) Diagnostico Social Organizativo Valle Chicha Soras – Raquel Quispe, Jan 2006.
- 13) Estudio de Base sobre Organizaciones Campesinas en el Valle Sondondo – Ofelia Pallqui – 2006.
- 14) Informe “Proyecto de Rehabilitación del Patrimonio Vivo Agrícola en Laymecocha – Ann Kendall (et al), Presented to the Instituto Nacional de Cultura Julio 2006.
- 15) Inventario y Mapeo de Sitios Arqueológicos, Valles Chicha Soras y Sondondo – Danna Aramburu, 2006
- 16) Estudio de seguimiento de los proyectos de rehabilitación de infraestructura agrícola prehispánica de las zonas de intervención de Ollantaytambo – Arlet Arce & César Abanto, Marzo 2005
- 17) Expediente Técnico, Sistema de agua potable, San Antonio, Guillermo Maldonado, Junio 2006
- 18) Expediente Técnico, Sistema de agua potable, Huayara, Guillermo Maldonado, Junio 2006
- 19) Informe Preliminar “Mapeo e Inventario de Sistemas de Andenerías y Distribución de Riego Margen Derechas de Rio Chicha – Soras – Danna Aramburu, Dic 2006.
- 20) Folleto de Flora y Fauna Representativa de los Valles Chicha – Soras y Sondondo – Gissella Barrientos.
- 21) Estudio Técnico para la Zonificación del Sistema de Riego – Ayapampa – Prisco Iruri, Febrero 2006.
- 22) Evaluación uso de Biol, Valle Chicha – Soras – Jenny Mondragón.
- 23) El manejo de Sistemas de Laymi en Sañayca, Adripino Jayo, 2006.
- 24) Estudio Técnico para la construcción de un relleno sanitario artesanal en el distrito de Tumayhuaraca – Gely Mora, abril 2005.
- 25) Estudio de Factibilidad para el repoblamiento de ríos y crianza artesanal de truchas en los valles Chicha Soras y Sondondo – Gely Mora, 2005.
- 26) Informe de análisis de material cultural Laymecocha – Carmen Cazorla, Febrero 2006.
- 27) Informe de análisis de material cultural Andamarca – Carmen Cazorla, Junio 2006.
- 28) Situación actual del anden y posibles alternativas agro económicas a partir de la aplicación de la metodología Cusichaca – Felix Choquehuanca, Octubre 2006
- 29) Manual de Crianza de Truchas – Gissella Barrientos, 2006.

- 30) Propuesta de Creación de área natural protegida por el estado en las partes altas de la cuenca del río Chicha – Soras (Distritos de Pampachiri, Larcay y Soras) – Luis Vargas, nov 2004.
- 31) Estudio de Factibilidad de Instalación de sistemas de agua potable, Tom Nickalls, Mayo 2004.
- 32) Análisis de cadenas productivas en 8 distritos, en los departamentos de Ayacucho y Apurímac – Felix Choquehuanca, Diciembre 2004.
- 33) Evaluación Económica del Centro experimental de Hatun Cerco – Felix Choquehuanca, Marzo 2005.
- 34) Diagnostico de Comercialización (maíz, olluco, papa nativa) – Felix Choquehuanca, Noviembre 2004.
- 35) Estudio de Mercado de la Fibra de la Alpaca en 8 distritos, en los departamentos de Ayacucho y Apurímac – Felix Choquehuanca, Diciembre 2004.
- 36) Estudio de factibilidad del canal de riego Chahuachayoc en el Distrito de Chipao, Anexo de San Antonio - Erica Abarca, Abril 2004.
- 37) Informe sobre Laymecocho – Fernando Vaquerizo, Abril 2004.
- 38) Rendimientos de Maíz, Campañas 2004/5 & 2005/6 – Adripino Jayo, setiembre 2006.
- 39) Fichado de atractivos turísticos culturales y naturales que intervienen o componen los diferentes circuitos turísticos en el valle Sondondo, Diómedes Holgado, diciembre 2006.
- 40) Circuito Turístico Pachapamanca (Crater) (Valle Sondondo) – Diómedes Holgado, diciembre 2006.
- 41) Circuito Turístico Puzapaccha (Caída de agua) (Valle Sondondo) – Diómedes Holgado, diciembre 2006.
- 42) Circuito Turístico Peatonal (Andamarca Histórico) (Valle Sondondo) – Diómedes Holgado, diciembre 2006.
- 43) Circuito Turístico Accaimarca (Mirador) (Valle Sondondo) – Diómedes Holgado, diciembre 2006.
- 44) Plantas y animales nativos de las sub cuencas Chicha – Soras y Sondondo – Luis Vargas, diciembre 2004.
- 45) Estudio de la Flora y Fauna nativa según zonas de vida – Luis Vargas, diciembre 2004.
- 46) Memoria descriptiva “Replamamiento en ríos con alevinos de trucha en Pampachiri y Tumayhuaraca” – Gissella Barrientos, 2006.
- 47) Estudio de factibilidad para la introducción de truchas en los valles Chicha Soras y Sondondo – Gissella Barrientos, Octubre 2005.
- 48) Estudio de factibilidad para la instalación de criadero artesanal de truchas en el distrito de Andamarca – Gissella Barrientos, Mayo 2006.
- 49) Recetario a base de charqui de alpaca – Edith Chacón, 2006.
- 50) Recetario para sesiones demostrativos – Edith Chacón, 2006.



- 51) Recetario a base de quinua & kiwicha – Soraida Herrera, 2004.
- 52) Evaluación Nutricional, Valle Sondondo – Edith Chacón, Diciembre 2006.
- 53) Informe de la primera evaluación de peso y talla, Valle Chicha – Soras – Soraida Herrera, Diciembre 2006.
- 54) Estudio de factibilidad del canal de riego Yarccallucsic en el Distrito de Pomacocha - Erica Abarca, Abril 2004.
- 55) Estudio Técnico para la construcción de un Relleno Sanitario artesanal en el distrito de Larcay – Gissella Barrientos, Noviembre 2005.
- 56) Estudio Técnico para la construcción de un Relleno Sanitario artesanal en el distrito de Soras – Gissella Barrientos, Noviembre 2005.
- 57) Estudio de mapeo e inventario del sistema de andenería en el valle Chicha – Soras – Guillermo Vilchez, Febrero 2007.
- 58) Diagnostico del estado nutricional de niños menores de tres años de edad en el valle Chicha-Soras, Sondondo y distrito de Sañayca – Soraida Herrera Espejo, 2005.
- 59) Diagnóstico del estado nutricional de niños menores de tres años y hábitos alimenticios en el Valle Chicha – Soras, Sondondo y distrito de Sañayca – Soraida Herrera Espejo, 2005.
- 60) Guía Turística del Valle Sondondo – Andamarca – Diomedes Holgado, Marzo 2007.
- 61) Leaflet – Valle del Sondondo, Mayo 2007.
- 62) Manual de Tecnología Tradicional para la Construcción y Rehabilitación de Canales de Riego – Tom Nickalls, 2006
- 63) Manual de Hortalizas – Alfonso Mantilla, 2007.

The Director has produced a number of PowerPoint's on Terracing solutions for Climate Change for Cusichaca and seminar events throughout the project years including key presentations to academic and government audiences in Lima and the Regions, as well as at the 51st and 52nd International Congress of Americanist meetings in 2003 in Chile and 2006 in Seville, and in June 2007 to the ESEN Environmental Meeting, Amsterdam, June 2007, and at several Universities in Peru and the UK.

2.5. Please list all contracts (works, supplies, services) above 5000€ awarded for the implementation of the action since the last interim report if any or during the reporting period, giving for each contract the amount, the award procedure followed and the name of the contractor.

The only contract awarded for more than 5,000 Euros was to the consultant who carried out the mapping study in the Chicha – Soras valley. This contract was worth about S/.60,000 (14,285 euros).

Before awarding this contract we organised an open competition for consultants with experience in mapping work. Seven consultant teams expressed an interest, of which 3 presented full proposals. These proposals were evaluated by several team members and points were awarded according to a previously designed scoring system. The consultant team who obtained the highest marks was awarded the contract. The team was led by Guillermo Vilchez who works as a professor at the La Universidad Agraria, La Molina in Lima. Most of his team has links with the University too.

2.6. Describe if the Action will continue after the support from the European Community has ended. Are there any follow up activities envisaged? What will ensure the sustainability of the Action?

We certainly hope to continue to work within the project ambit to build upon the achievements to date, particularly in the areas of terrace farming, commercialisation and tourism. Currently we have only one small project funded by the British Embassy in the district of Pomacocha. This project aims to stimulate the production of Andean crops for commercialisation and envisages the involvement of *Sierra Exportadora*.

The local district level Governments have all submitted projects to the Regional Governments seeking funds to continue to rehabilitate canals and terraces and to fund training in agricultural and commercial activities.

Even without additional funding the majority of the project activities will be sustainable over time.

All of the infrastructures constructed during the project have been transferred to different family and community groups. The demonstration centre in Soras is managed by the local agricultural institute. That in Villa Santa Rosa is managed by an agricultural college. The centre in Chipao is managed by the Community and the one in Andamarca by an organised group of beneficiaries.

The canals and potable water systems have all been transferred to the local communities, represented by administrative committees which have received full training from Cusichaca staff.

Greenhouses have mostly been transferred to local schools. Improved corrals have been transferred to individual families and the two weather stations in Soras and Chipao to the local agricultural institutes.

In addition to the infrastructure we also transferred 10 computers to the local communities. Two went to each of Pampachiri and Pomacocha. The rest were distributed between the 6 other principal districts.

Training has been the key component of this project, enabling the project beneficiaries more than enough knowledge to maintain their canals and potable water systems, manage their greenhouses, cultivate their fields and gardens and to promote their goods and tourist potential etc. Over 600 training events have been organised by project staff over the project, all of which were designed to improve skills and/or management abilities amongst the beneficiaries. In addition 55 Community based organisations received training on how to administer and manage themselves more efficiently.

The leadership schools have helped to build management and leadership skills amongst the beneficiaries. Several of those who attended the schools have subsequently been elected to key roles within Community organisations and as municipal authorities. Project staff have been working to create and strengthen local organisations which focus upon irrigation management, tourist promotion, marketing of agricultural products and women's rights etc.

Table 75: Details of infrastructure formally handed over to beneficiaries

<u>Description</u>	<u>Number</u>	<u>Districts</u>
Demonstration Centres	5	Chipao, Andamarca, Soras, Pomacocha, Tumayhuaraca
Integrated production systems	2	Chipao, Soras
Greenhouses	26	Aucara (2), Cabana (1), Chipao (9) Andamarca (1), Soras (2), Larcay (2), Sañayca (1),

		Pampachiri (2), Pomacocha (2), Tumayhuaraca (4)
Improved Corrals	23	Pampachiri (3), Pomacocha (3), Tumayhuaraca (6), Sañayca (3), Larcay (5), Soras (3)
Potable Water Systems	7	Chipao (1), Sañayca (1), Pampachiri (4), Pomacocha (1)
Canals	5	Chipao (2), Larcay (1), Pomacocha (1), Tumayhuaraca (1)
Fish farms	1	Chipao
Drinking trough systems, for vicuñas	2	Sañayca (1), Pampachiri (1)
Meteorological stations	2	Chipao (1), Soras (1)
Alpaca wool stores	1	Larcay
Computers	10	Pampachiri (2), Pomacocha (2), Tumayhuaraca (1), Sañayca (1), Larcay (1), Soras (1), Chipao (1), Andamarca (1)

Table 76: Organisations strengthened

<u>Type of Organisation</u>	<u>Number</u>
Women's organisations	8
Monitoring committees	8
Potable water committees	6
Local security committees	1
Irrigation committees	8
Production committees (arable)	7
Production committees (livestock)	8
Mixed community organisations	9
<b>TOTAL</b>	<b>55</b>

Some activities clearly require some funding in order to remain sustainable. Again there are already clear indications that where need be local organisations are generating the funds necessary.

The potable water and irrigation committees are raising small amounts of cash from the beneficiaries.

A number of activities have begun to generate small amounts of income. The associations of guinea pig breeders, being legally registered have access to legitimate markets animals have been sold in batches of up to 100 at a time. The demonstration centre in Pomacocha provides approximately 70% of all vegetables consumed locally. The institute in Soras and the school in Aucara have been selling vegetables from their greenhouses locally and thus maintaining and improving the infrastructure. In Pomacocha many families have planted pasture, purchased improved strains of cattle and are now selling milk and cheese on a daily basis, whereas previously these products had to be purchased in Andahuaylas. Alpaca breeders in the Chicha – Soras valley have been generating more income through the sale of better quality and well classified wool than previously. The native potato growers in the Chicha – Soras valley and in Sañayca have formed associations of farmers which have also been active in seeking markets including those mentioned above amongst the residents in Lima.

The organised tourist promotion body, ADETURC in the Sondondo valley has been generating small amounts of income for its members through its hostels, cafes and museum.

## 2.7. Has the Action promoted gender equality, disabilities etc. If yes, please explain<sup>3</sup>

<sup>3</sup> To refer to EC Guidelines on gender equality, disabilities...

Whilst gender equality is considered an important aim and cross-cutting issue. Cusichaca has a mixed team and amongst local promoters there are equal numbers of men and women.

Cusichaca works with entire families throughout the project ambit and provides access to all those who wish to participate actively in its courses and other activities. Based upon the studies on nutrition and diet, certain activities have been directed over the past year at those communities and families suffering higher levels of malnutrition and poverty indicators. In each case groups of women have organised themselves in these communities and as a result have greater access to courses on diets, seeds for vegetable gardens etc.

Overall participation in the project by the beneficiaries is also split evenly between men and women. Approximately 55% of participants in all courses throughout the project have been women. In the leadership schools run by Cusichaca in both valleys over 70% of the participants were women and many have gone on to perform active roles within their communities. Cusichaca has also been active in supporting women’s groups and in running courses for the whole family on important issues such as family violence and alcohol abuse which are often factors involved in damaging gender equality.

We have noted a number of positive signs of impact as a result of work on this cross cutting outcome. The women’s group “*Las manzanitas*” in Pomacocha is registered and remains active locally. This has enabled good results on commercial activities in the district. Several women have reached positions of authority. Women have been in charge of the irrigation committees in Ayapampa and Laymecocha and have been effective in improving local water management policies. A woman held office as Mayor in Tumayhuaraca for 3 years. Maria – Luz who was previously the President of the Monitoring Committee in Soras is now President of the Community. Cusichaca’s local promoters in Chipao both assisted the leadership school in their district and both are now elected authorities.

2.8. How and by whom have the activities been monitored/evaluated? Please summarise the results of the feedback received, including from the beneficiaries.

We organised an external evaluation in the final year of the project. This was undertaken by Sarah Thomas who is an expert in monitoring projects and who has worked as an external monitor for the European Union.

The evaluator made two field visits. These were held from February 22<sup>nd</sup> to February 26<sup>th</sup> and March 5<sup>th</sup> to March 9<sup>th</sup> 2007. She was able to visit all 10 districts and held a participatory workshop in each valley. Beneficiaries and authorities but not staff were invited to these. She also interviewed many of the staff.

Table 76: Workshops – external evaluation

<u>Location</u>	<u>Participants</u>
Pampachiri (Chicha – Soras)	22
Andamarca (Sondondo)	35
TOTAL	57

The evaluation report was generally very positive with ‘B’ scores on all aspects marked. The evaluator felt that impact had been high and that there was a good chance of sustainability for most programmes. She did observe that the ambit was very large and that there were probably too many programmes to have a solid and even impact throughout. Also that given the last point the Cusichaca staff had achieved a remarkable level of service and success for most of the project programmes.

We also received 3 official EU external monitoring visits and an additional unofficial monitoring trip from the EU delegation in Lima.

In each district a monitoring committee was established consisting entirely of local people. This committee monitored the progress of the project and presented verbal reports in general community meetings. In addition it had the role of informing Cusichaca staff of local opinions and initiatives relating to project activities. These committees had an important role in building confidence between the communities and project staff.

Cusichaca staff also monitored project progress on an internal basis. One of the project Directors was responsible for monitoring. Monthly programming meetings were held in each valley during which advances were monitored. Every 3 months all staff including local promoters from both valleys held comprehensive evaluations of project progress and the annual operational plan is modified as necessary. Staff also provided monthly and 3 monthly written reports which are useful monitoring tools. The CT Director also made annual monitoring visits to evaluate progress and make positive contributions where necessary.

2.9. What has your organisation/partner learned from the Action and how has this learning been utilised and disseminated?

It is very important to base the project staff within the ambit. The majority of projects set up their main base in a Regional Capital (Abancay, Ayacucho for example) and make occasional forays out from there. Cusichaca established bases in the district capitals and 90% of staff worked out of these bases. This creates a much greater level of confidence and understanding between the staff and the local families. Often a casual conversation or the willingness to help with a menial task can achieve more than a structured course given by professionals who come into the district for a few hours only.

In a similar vane it has been important to employ local promoters and masons on a permanent basis. They are able to gain better access to even the most remote communities. At the same time the local promoters must feel an integral part of the team. They are always invited to all 3 monthly meetings and to many training events.

It is also good to employ professional staff who speak the local language (Quechua) and who feel at home living in rural communities. Staff should not be selected solely on the quality of their university grades.

Within the project ambit it is best to be willing to work with everyone. If the project works exclusively with a certain section of the population the rest can feel excluded.

It is important to be flexible. Some communities are by nature arable farmers, for example, whilst others regard livestock farming as more important. In such cases programmes have to be designed to suit each situation.

To have real impact a minimum of 10 years is needed in any one ambit.

Many aspects of Cusichaca's work are innovative and have allowed those involved in the project to learn from these experiences.

Adopting the rehabilitation of terrace farming systems as the core of the project is an innovative approach. Staff and local participants have learned that this is an excellent cheap route for increasing production and increasing land availability and that terrace rehabilitation can form the core of an integral project. Andean crops cultivated on terraces lead into the health and nutrition programme. Part of the crop can be sold and thus contribute towards the commercialisation programme. Terraces help to conserve water, a key element in the programme dedicated to the management of natural resources. Well kept terraces also provide a tourist attraction thus justifying the work on tourist promotion. Rehabilitating and maintaining the terraces requires a strong Community organisation – another important cross cutting programme.

The use of traditional technologies and locally available materials has also been an innovative approach to rehabilitating canals. Almost all other institutions dedicated to this activity use cement. This, however, is costly and once it deteriorates the community cannot maintain the canals, which thus require further outside intervention. Canals built of clay, stone, sand and cactus juice last just as long and are more easily maintained. They can be nearly as efficient and any infiltration provides some humidity beneficial to maintaining the environment. Material costs are extremely low. Local farmers are trained to maintain the canals.

Staff and local participants have also learned that the promotion of once widely celebrated traditional Andean *Fiestas* such as the *Yaku Raymi* (water festival) and the *Pata Raymi* (terrace sowing festival) has a key role in ensuring that canals and terraces are well maintained.. As part of the festivities the canals are cleaned out and terraces restored. At the same time these festivities improve community cohesion and pride in their customs plus create a possibility for tourism.

Information is available on the Cusichaca web page, [www.cusichaca.org](http://www.cusichaca.org) .

The project Director has co-authored a book on the potential of terrace rehabilitation with a socio-economist, which is due to be published in Peru later this year or early 2008. This is entitled “Desarrollo y perspectivas de los sistemas de andenería en los andes centrales del Perú” – by Ann Kendall and Abelardo Rodríguez. Other booklets and manuals have been published throughout the project.

Cusichaca staff have participated in several seminars to publicise the work and will continue to do so. The project Director gives regular presentations in the UK, Peru, Spain and elsewhere in Europe and South America.

Several Peruvian film crews and newspapers have visited the project area to witness the implementation methods employed.

### **3. Partners and other Co-operation**

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- 3.1. How do you assess the relationship between the formal partners of this Action (i.e. those partners which have signed a partnership statement)? Please specify for each partner organisation

The only formal partner is the Peruvian NGO, Asociación Andina Cusichaca (AAC). This relationship has not been a typical one in the sense that one of the initial goals of the project was the formation of the local partner. Thus the relationship was not in place prior to the outset of the project.

The initial goal has been achieved. AAC has been legally registered since 2003. It has also been registered in the APCI (Charity Commission) since 2003. It has a strong independent Board (*Consejo Directivo*).

To date both CT and AAC have been fully occupied with the implementation of the recently concluded project. Staff and resources have been shared and the missions of each institution are very similar. For these reasons the relationship has been a very close and positive one up to now.

- 3.2. Is the partnership to continue? If so, how? If not, why?

We hope to continue and to build upon the partnership.

The details and nature of the relationship are currently being evaluated by the two Boards of Directors with guidance from the external monitor, Sarah Thomas. A “Road Map” is being discussed and should be agreed upon before the end of the year. The External Monitoring assessment and meetings of both

Boards recognise that AAC should be provided with some CT support for a further period of at least two years for it to become fully financially independent.

### 3.3. How would you assess the relationship between your organisation and State authorities in the Action countries? How has this relationship affected the Action?

The Cusichaca Trust has positive relationships with a number of national and regional government organisations and also with local district authorities within the project ambit. These relationships have been beneficial in project implementation and have been detailed in the description of activities (above).

At national government level the most important relationships developed are with **PRONAMACHCS**, **Inrena** and **Mincetur**. PRONAMACHCS works on natural resource management. PRONAMACHCS were joint organisers with Cusichaca of the provincial seminar in Kerobamba and have also organised a regional seminar in Cusco. They were an important partner in the organisation of the national forum held in Lima.

Inrena is responsible for promoting biodiversity and managing protected areas. Cusichaca has been in coordination with this government organisation concerning the possibility of declaring parts of the project ambit as an area of outstanding natural beauty. Inrena has also been seeking support from Cusichaca in establishing an interpretation centre in the sacred valley in Cusco and in doing some work relating to terraces in Yauyos (Lima province).

Mincetur is a government body involved in tourist promotion at a national level. Cusichaca staff have been informing this department of its activities to promote tourism in the project area. As a result Mincetur invited Cusichaca to submit a proposal for the installation of tourist signs in the Sondondo valley. This was done and the proposal has been approved.

At a regional level Cusichaca has signed agreements with **Dircetur** in both Ayacucho and Abancay. The agreements concern the development and promotion of tourist circuits in the Chicha-Soras and Sondondo valleys. Cusichaca provides them with results of its research whilst the Dircetur in both regions have invited Cusichaca to participate in a variety of promotional events. The Dircetur in Ayacucho has included the Sondondo valley as one of three priority tourist circuits to be developed in its strategic plan.

At provincial level Cusichaca has been able to sign positive agreements with **Senasa** which is a branch of the Ministry of Agriculture dedicated to animal and plant health. A number of courses were organised jointly, mainly concerning camelids.

At district level Cusichaca has developed positive relationships with all of the municipalities. A number of specific benefits have been achieved. Each of the potable water systems installed have been constructed with joint funding from both CT and the authorities. Likewise local governments have been very supportive in establishing the skills centres, providing land and funding for specific materials such as adobe bricks. The municipality in Pomacocha has been implementing productive programmes such as terrace rehabilitation. Cusichaca staff have also been invited to participate in round table meetings and participatory fund distribution sessions. Local government officials from neighbouring districts such as cabana, Aucara, Paucaray and Paico have actively sought the presence of Cusichaca in their districts. It is planned to work with them in future projects.

The relationship with Regional Presidents and Government have developed greatly, especially in the final year of the project. Currently CT/AAC are regularly invited to meeting for discussion and inputting experiences to Regional Government rural development strategies and have been invited to submit innovative small pilot projects. All the districts involved in the EU project and some additional new adjacent districts want a further stage of rural development support from CT/AAC and have prepared formal requests for a continuation of the work, expressing also that they are prepared to contribute some local funding.

3.4. Where applicable, describe your relationship with any other organisations involved in implementing the Action:

- Associate(s) (if any)
- Sub-contractor(s) (if any)
- Final Beneficiaries and Target groups
- Other third parties involved.

In addition to forging useful alliances with Government institutions Cusichaca has also developed mutually beneficial relationships with other organisations as outlined below.

- In order to establish the meteorological stations in Soras and Chipao CT entered into an alliance with **SENAMHI – Ica** (national meteorological organization) and the local Agricultural Institutes. Cusichaca purchased the equipment. **SENAMHI** installed the stations and the Institutes are providing security and taking the readings.
- CT coordinated successfully with the **health posts** in all districts. The health centre in Pampachiri participated actively in the campaign against family violence and alcoholism in Pomacocha and along with the staff from the health post in Umamarca (Tumayhuaraca) worked with the nutritionist in collecting information for a study on malnutrition in that district. Many of the courses on nutrition and demonstration sessions on diet were held jointly with staff from the health posts.
- CT held a series of co ordinations with the **Belgian Cooperation** based in Ayacucho concerning the sale of alpaca wool. They sent specialists in wool shearing and classification to our ambit and CT provided all of the logistical support. The wool was subsequently sold in Arequipa and Lima.
- **IPROGA**, an NGO from Lima dedicated to water conservation participated in the coordination of the regional and national seminars on agricultural terraces described above.
- CT has also worked with an NGO based in Arequipa, **DESCO**. They were one of the joint organizers of the series of seminars on terrace rehabilitation. In addition they hosted a couple of interchanges of experience and helped to train several of CT's local masons.
- CT joined the **red de turismo** in Ayacucho. Most tourist agencies, hotels and others involved in tourism belong to this network. The network provides access to up to date information and communications concerning events etc. for a small monthly fee.
- CT developed a positive relationship with the Portuguese NGO, **Acción Ambiental**. They are funding a small reforestation and Camelid project in Pomacocha and Aucara and also a more general conservation and tourism project in both valleys.
- CT signed an agreement with the NGO **Vecinos Peru** in Puquio. A number of joint training events were organised with them on the subject of alpacas.
- CT held several meetings with representatives of the **Richmond Foundation** in Lima to explore possible partnership arrangements with them. They have expertise on social issues, whereas Cusichaca has more experience with productive projects. It has been agreed to present some joint projects in the future.
- The NGO **AgroAccion** participated in the school of leaders run by project staff in Pampachiri on several occasions.
- Project nutritionists have both run some of their courses in collaboration with the government programme **Juntos**. Likewise some courses on health and nutrition have been held jointly with the EU funded project **Amaraes**.

3.5. Where applicable, outline any links you have developed with other actions

CT has not developed any specific links with other EC funded projects in Peru. This is chiefly because there are no other institutions working within the same ambit and few whose core activities are similar to those of CT.



3.6. If your organisation has received previous EC grants in view of strengthening the same target group, in how far has this Action been able to build upon/complement the previous one(s)? (List all previous relevant EC grants).

The Cusichaca Trust received a grant from the EC for a 4-year project in the district of Pampachiri from 1998 to 2002. Pampachiri is one of the 8 districts covered in the present project and the target groups are similar in both cases. During the first project a considerable amount of infrastructure was built. In the present project Cusichaca has been offering more training and concentrating more on community organisation. In Pampachiri staff have been able to accompany the target groups in processes of transfer and utilisation of assets. A metal mechanics and carpentry workshop has been successfully transferred to Community management. Likewise Cusichaca has been able to transfer responsibility for the management of the Demonstration Centre in Ayapampa to the Municipality. The canal rehabilitated in Ayapampa is now being managed more efficiently by the local committee. The community now organises regular canal cleaning sessions and has reintroduced a traditional water festival. Cusichaca has been working with them to encourage a zonification of the irrigated areas to cover areas for arable farming and areas for pasture. One of the two leadership schools has been established in Pampachiri in order to strengthen community organisation. In summary, a considerable amount of follow-up work has re-enforced and improved the sustainability of the achievements of the previous project.

3.7. How do you evaluate co-operation with the services of the Contracting Authority?

Cusichaca has maintained a positive relationship with the European Commission delegation in Lima. Now that the process of decentralisation has been completed co-operation has become fluid and valuable.

#### 4. Visibility

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How is the visibility of the EU contribution being ensured in the Action?

The EU logo is used in all publications and reports produced by Cusichaca staff. Signs and placards have been put up for each infrastructure, always with the logo included. At all meetings concerning project activities with authorities or other institutions the funding sources are cited. The EU is also cited in the programmes of events such as seminars. The EU is mentioned as a funding source on the Cusichaca web site and their logo is used.

**The European Commission may wish to publicise the results of Actions. Do you have any objection to this report being published on EuropeAid Co-operation Office website? If so, please state your objections here.**

We do not have any objections to this report being published on the website mentioned.

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