NATURAL RESOURCES SYSTEMS PROGRAMME

***FINAL TECHNICAL REPORT*[1]**

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R8362

Project Title

Validation and communication of a community-led mechanism for livelihood improvement of remote marginalised communities in Bolivia

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NRSP Production System

Hillsides

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la Fuente, T Gündel, S and Preston, D. 2005. R8362: Validation and communication of a community-led mechanism for livelihood improvement of remote marginalised communities in Bolivia. R8362 Final Technical report, Scientific Annexe A. Revised September 2005. Leeds, United Kingdom: School of Geography, University of Leeds LS2 9JT. 49 pp.

Annexe B

1. Sánchez, J, 2005, Memoria del Taller de Socialización del Mecanismo de Vinculación de la Oferta y la Demanda de Información Agropecuaria 14-¡5 de febrero de 2005.,Tarija: VINCOSER, 63 pp.
2. la Fuente, T Gündel, S and Preston, D. 2005, Livelihood Impact assessment of first generation communities, Tarija, Bolivia VINCOSER, Working Paper 05/01 18 pp. (revised)
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Acronyms

1G	Communities with which collaboration was developed during R7584 research
2G	Communities with which the present project worked
ACLO	Jesuit-founded major Bolivian rurally-focused NGO
AGC	Local association of livestock owners
CLM	Community-led mechanism developed in R7584
FDTA	Regional organisations charged with stimulating agricultural production within the framework of SIBTA
FEGATAR	Tarija livestock owners grouping
FIT	DFID-funded organisation assisting SIBTA in developing an effective pro-poor focus
GO	Government organisation
HEDECOM	Acronym in Bolivia for R7584
IICA	Major national RD NGO
MHI	Mancomunidad Héroes de la Independencia – a regional association of municipalities
NGO	Non-government organisation
NR	Natural resources
NRM	Natural resource management
PROMETA	Tarija-based NGO focussed on environmental protection issues
RD	Rural development
SENASAG	Departmental veterinary department
SERNAP	National agencies charged with administering Protected Areas, similar to National Parks
SIBTA	Bolivian government agency within Ministry of Agriculture charged with stimulating commercially-oriented production through local projects
TT	Technology transfer
VINCOSER	Acronym in Bolivia for this research project

1 Executive Summary

This research examined the nature and effectiveness of a community-led mechanism to identify the needs and priorities of poor hillside communities. It then sought to assess whether it could offer livelihood improvement for the poor through better service provision and how it could be subject to revision by organisational learning. Finally, this research sought to communicate to a range of regional and national organisations the value of this mechanism to enable favourable changes in the use of natural resources by hillside communities that would particularly benefit poorer households.

By examining the work of a previous, related project (R7584) it was possible to study and then systematise the key elements of the community-led mechanism developed by it and refine it so that it could be applied in three rural communities close to those where the earlier project had worked. Field work in the three communities in which earlier work had been focussed – and where field work had concluded a year earlier – made it possible to determine the extent to which new practices had continued to be used and, in particular, which socio-economic strata in the communities had derived most benefit from these changes. It was concluded that adoption rates were higher in the middle and upper strata than in the low stratum. There was little difference between adoption of livestock health or fruit tree health management practices and few differences between the three communities. Work had thus most benefited the livelihoods of the middle and upper strata.

Further work was conducted to assess the response to collaboration with the new set of communities using a revised community-led mechanism. This was inevitably hampered by the short time frame in which the work had been carried out but responses were positive to the work, especially that with livestock, the results of which were rapidly evident. Differences between socio-economic strata were not marked but the poor were particularly enthusiastic about the learning process associated with the work. This increase in human capital may be particularly beneficial to the poor who can use it to work for others with more capital resources. Some in this stratum also expressed appreciation for the social interaction associated with work in small locality-based groups which may have further increased their social capital. This accords with research findings in Bolivia and elsewhere where social capital is believed to be of particular importance for the poor.

The community-led mechanism was effective in eliciting the deep-seated needs of communities, including in locating needs associated with natural resource use in the context of others such as flood protection and road and bridge building. A part of the mechanism also prepared villages to be able to identify their needs as a basis for preparing well-considered development plans for submission to municipal and national government agencies to attract development funds. In post-project reviews of the working of the mechanism, local professionals emphasised the importance of field teams being multi-disciplinary and comprising both men and women in order to improve the quality of communication with rural people.

Communicating the outcomes of the research was directed towards key stakeholders at a regional, departmental and national level. Links with peasant union organisations were developed at a departmental level and local professionals organised workshops to inform more communities of the nature and advantages in using the mechanism. Links with a departmental Mancomunidad (a federation of municipalities) and with the national government rural development organisation SIBTA were developed and the mechanism will be included in the portfolio of good practices for eliciting community needs and in the operating framework of future SIBTA work. A range of information materials – booklets, flip charts, a manual and a video allow a wider dissemination of knowledge about detailed aspects of the mechanism.

2 Background

NRSP project R7584 (known locally by the acronym HEDECOM) was commissioned as a three-year project in February 2000 as part of the portfolio of the Hillsides Production System. It was located in South-West Tarija in southern Bolivia and worked initially with two communities (Tojo and Juntas) located in temperate valleys (Valles) and one community (Chorcoya) located on high tableland (the Tarija Altiplano). The project extended NRSP's research in Bolivia away from the transitional and sub-tropical valleys of the Cochabamba and Santa Cruz areas to a more marginal and remote part of the country, arguably with greater need for investigation.

R7584 was strongly committed to developing and institutionalising means whereby isolated communities, and poor households and individuals within these communities, could articulate their natural resource management (NRM) concerns and priorities to local professionals (LPs) and then work closely with them on the solutions. The aims were:

a) To build the capacity of the target communities, including those community members with fewest resources, both to articulate their NRM priorities and adopt various NRM practices that could be beneficial to their livelihoods in the short and longer term; and
b) To stimulate LPs to listen and apply their knowledge in ways that respond to the needs of individuals, households and groups in the target communities, in particular those of the poorest households.

In addition, through communication with local NGOs and GOs (the local municipalities), the project aimed to make these organisations aware of the advantages of this way of working, such that a community-led process for setting priorities for NRM and for the ensuing service provision would be integrated into their rural development work.

Relative to these aims, the project performed well in the field (for example, see NRSP Research Highlights, 2000-2001, pp 6-8) and attracted the interest of other communities in villages around the two valley target communities. During the project, these communities initially sent representatives to the workshops that the project was conducting with the target communities in order to inform themselves of the improved NR practices that the communities and LPs had developed. Linked with this, and in response to demand, the LPs regularly visited five additional communities. The communities subsequently collaborated with the project LPs in various ways.

A distinctive feature of the work was its focus on broadly-defined NR problems seen in the context of diversified livelihood strategies and the specific concerns of households with few resources. This contrasted with the majority of development actions for such communities that focus on a particular area of work – small-scale irrigation or improving production of basic grains – and limit the freedom of LPs to respond to other local concerns.

In spite of this apparent local (grass roots) acceptance and adoption of a community-led mechanism for planning and action, the response of local development-related organisations (e.g., local NGOs and government municipalities) to the possible use of such mechanisms was ambivalent. On the positive side, there was evidence that local

NGOs and municipalities recognised the value of community-led mechanism insofar as they noted the relative success of the R7584-LPs' work as reported to them by community representatives. The principal local NGO partner (PROMETA) and to a lesser extent the other NGO partner (ACLO) came to recognise the value of a community-led approach to action on NR problems. The senior LP was regularly consulted on the development of PROMETA's future strategies and was asked to run training workshops for PROMETA staff. The PROMETA Director publicly recognised the high quality of the work, particularly in relation to its low cost. Indeed, the initial level of adoption and success of new practices in the R7584 communities and the comparatively low budget on which this was achieved was frequently the subject of comment at formal and informal meetings with staff of other NGOs and one national project working in Tarija. However, by the end of the project, there was no evidence that this had led to the incorporation of community-led approaches in the NGOs' modes of working.

In a similar way in the GO sector, the mayors of the two municipalities in which work was focused came to accept and appreciate the success of the improved NR practices adopted in the communities. However, this did not result in their overt acceptance that municipalities could use similar mechanisms to stimulate production and security in rural communities. This appeared to be because mayors are political appointments and believe that they depend for re-election on having visible symbols of their actions – a paved road, a new irrigation channel, new schools or meeting halls – rather than on much less visible increases in production and livelihood gains.

With respect to this latter point, R7584 failed to deliver research findings and appropriate briefs that convincingly documented the results of the community-led improved NR practices which would have impressed meso-level stakeholders. The project did not undertake research in the target communities to determine the nature and extent of livelihood benefits according to socio-economic strata and possible differentiated livelihood asset improvement that could be associated with their access to technical information relevant to their articulated needs. Moreover, in spite of various activities for monitoring the process of the community-led mechanism for NR service provision, R7584 did not specifically assess its performance with respect to mechanisms for the inclusion of poorer community members, and examination of the key drivers/main requirements for introducing and sustaining the use of such mechanisms for enabling better access to rural services. Performance assessment in such a short time frame (3 years) is, however of limited validity.

In order to improve the potential both for local adoption and wider adoption in other comparable circumstances (in respect of social, institutional, and NR factors) there was a need to strengthen the evidence that argues for the effectiveness of the R7584 community-led mechanism for service provision. It is therefore necessary to collect evidence that demonstrates: (a) livelihood impact (or significant indications of trends towards such impact) and (b) the suitability of the community-led mechanism for the enabling the achievement of this impact.

3. Project Purpose

The purpose of this project was to demonstrate and communicate the benefits of a community-led mechanism (CLM) for enabling access to and use of new knowledge by poor hillside communities to improve their livelihoods through sustainable management of natural resources. The main stakeholders targeted with a view to recognise the validity and use the CLM and use it independently of R8362 initiatives

are:

a) Local communities in SW Tarija who decide to use CLM to identify and communicate their needs and in order to influence the quality of NR service provision, including its relevance to livelihoods of poor people.
b) Representatives of rural communities in SW Tarija who express their preference for CLM through the formal institution which they customarily use (the *sindicato* – peasant/farmers' union) by organising meetings at a sub-regional level (*sub-central*) that were also proposed by the Departmental *sindicato* Federation. Such actions have the potential to influence developmental processes over a larger geographical area and in the longer term.
c) Local professionals (LPs) in SW Tarija (and perhaps in other areas with similar development challenges) who take up the CLM, or at least elements of it, in their own work with remote communities through local and regional NGOs and GOs.
d) SIBTA policy actors and practitioners in the target region and nationally for the RD and TT system and other agencies working with SIBTA.

Intentionally, at purpose level, the project has focused on enabling communities to recognise the potential power of being capable of articulating their needs rather than being passive recipients of actions representing the perceptions and priorities of outsiders. This tactic picks up on the stronger institutional aspects of the preceding project, R7584, and pursues what appear to be the better channels for influencing meso-level policy-related formal institutions through recognition of the need for grassroots participation in development planning and action.

The CLM, as further developed and documented during this research, has been recognised by communities and at a departmental level by grassroots-oriented organisations as a sound method for more rural voices to be heard. Through expression of demand (points (a) and (b)) and change in routine ways of service provision (point (c)) some pressure for change in the procedures and processes that local meso-level stakeholders follow in their development planning and service provision may be exerted. In the longer term, meso-level adoption and use of CLM by R&D agencies could occur (see logframe, goal level second OVI).

In addition, effective communication with key regional (FDTAs) and national stakeholders (SIBTA and DFID-Bolivia) should enable their adoption of CLMs in their project designs in the longer term (see logframe, goal level first OVI).

Evidence of the extent to which the project purpose has been achieved is presented in Section 7.3.

4. Outputs

Output 1: Determining the effectiveness of the service provision for livelihood improvement of the poor that was delivered in response to the R7584-CLM for demand assessment.

The effectiveness of service provision provided by the application of the community-led mechanism (CLM) was tested in two sets of communities – firstly in those in which collaboration had been concentrated during R7584, referred to as the first generation (1G) communities and, secondly, in those communities with which the team worked during the one year of work associated with the present research, the second generation (2G) communities. In the first (1G) communities a period of a year had passed since team work had been concluded, allowing time to judge the sustainability of the new resource uses developed. In the second generation (2G)

communities, although work had lasted less than a year, it was possible to evaluate responses to the work and to invite reflection on the methods used.

Conclusions from research in 1G and 2G communities

Information obtained by field research in the 1G and 2G communities forms the basis for the conclusions reported here. Particular emphasis was made on the effectiveness of service provision for livelihood improvement of the poor through the use of the CLM for demand assessment. The rationales for the identification of livelihood strategies of households in the different strata are described as well as the different technical actions promoted by the project. Lastly the adoption patterns and their impact on livelihoods are considered.

Livelihood situations and strategies

The analysis of livelihood impact is based on the general assumption that people in different socio-economic strata will have different livelihood strategies and thus different preferences for livelihood changes, since their strategies are based on different asset mixes with distinctive potentials and limitations. Understanding these livelihood differences will enable us to assess in qualitative terms the impact that HEDECOM's interventions obtained.

To gain a better understanding of these different livelihood situations, the research identified in each community different socio-economic strata which were mainly based on local criteria. This process led to the identification of three main strata (high, middle and low) in which households could be located. In both sets of communities the main criteria chosen to distinguish between strata were physical and natural assets, as well as specific household livelihood strategies. Differences in human capital were also important, in particular in levels of formal education, which may well be important in a household's propensity to adopt new practices which their education may influence their degree of confidence in the new knowledge. Below the main differences between these three strata are presented.

Table 1 provides further information about differences between strata in communities and the natural resource-based part of their livelihood strategies Livestock play a variable role, to some extent reflecting the nature of available resources. However, in Tojo, livestock are of limited importance but, in nearby Pueblo Viejo, pigs are important for all three strata but they are not important in any of the other communities. Similarly, in some communities fruit/grape production is more important, whereas in others such crops are unimportant.

- High stratum people have most capital and are more likely to be engaged in the transformation of products which are produced by them or bought from other community members. They have livestock (including cattle) for subsistence but also to sell when needs arise. Apart from natural capital, migration is of little importance for this stratum. Financial capital is obtained through wage earnings, pensions and profit from the transformation of produce and the provision of a range of other services such as shops or a vehicle to transport people and produce.

- For middle stratum households crop production and livestock management is for domestic consumption and also for sale within the community and at seasonal fairs and occasionally in towns nearby (Tarija/Villazón). Livestock kept are mainly sheep and goats but are fewer in number than are owned by the high stratum. For this stratum an important component of most livelihood strategies is migration.

- In low stratum households more emphasis is placed on social/human capital (see Grooteart and Narayan 2004). Natural capital is important but less so than for higher stratum households. Livelihoods are based on a small number of animals for their own consumption and occasionally for sale. Most households keep sheep or goats or, sometimes, pigs. Crops are grown for subsistence and sometimes for sale. Working for wages both locally and regionally is important as is some migration.

Table 1 *Natural resources and livelihood strategies*

Community and socio-economic stratum		NATURAL CAPITAL					
		Livestock			Land		Crops in order of importance
		Cattle	Sheep	Goats	Irrigated	Non-irrigated	
Juntas	High	≥25	-	≥25	2.5 ha	2.5 ha	**Potatoes, maize, onions, vegetables, peanuts, fodder, fruit trees in a small scale**
	Middle	c.20	-	c.5	2 ha	3 ha	**Maize, potatoes, peas, onions, and peanuts**
	Low	<3	<3	<10	¼ ha	¼ ha	**Maize, potatoes, peas, onions, peanuts, amaranth, wheat**
Tojo	High	-	-	-	≥ 1 ha	-	**Maize, grapes, quinces, apricots, potatoes**
	Middle	-	c.20	-	¼ -1 ha	-	**Maize, grapes, potatoes, apricots & quinces**
	Low	-	≤ 5	-	≤ ¼ ha	-	**Maize, grapes**
Chorcoya	High	≥20	≥300	-	2ha		**Potatoes, broad beans, vegetables, garlic, chamomile, barley, onions**
	Middle	5-10	100-300	-	>1 ha	Very limited	**Potatoes, broad beans, vegetables, garlic, chamomile, barley, onions**
	Low	1-5	20-50	-	-	¼ ha	**Potatoes, vegetables**
Tacuarita	High	≥25	20-50*		≥0.5		**Agriculture & livestock equally**
	middle	20-30	≥`50*		0.5		**Agriculture and livestock**
	Low	≤20	≤30*		0	some	**Livestock, agriculture**
Pujzara	High	≥5	≥100	5 llamas	Some		**Livestock, agriculture**
	Middle	2-5	50-100	0-7 llamas	Some		**Livestock, agriculture**
	Low	0-2	0	0-7 pigs	0.1-0.8		**Livestock, agriculture**
Pueblo Viejo	High	Some	25-40	≤20 pigs	1.2		**Grapes, other fruit, vegetables**
	Middle	Some	15-40	5-20 pigs	0.2-2.4		**Maize, fruit, grapes, vegetables**
	Low	0-2	0	0-7 pigs	0.1-0.8		**Maize, fruit, vegetables**

* combined numbers for sheep and goats

Principal interventions by local professionals

The technologies/interventions promoted in the communities were very similar in the 1G and 2G communities. There were few major ecological differences between the two groups of communities. The similarity in interventions chosen may partly be explained by the fact that the same local professionals worked in both sets of communities. Their professional background (as an agronomist and veterinarian respectively) probably encouraged some preference for interventions in these fields. Another bias was in the general focus of the project towards improved natural resource management, reflecting the priority area of interest of the research. The practices promoted included:

- Fruit tree disease control and management (especially focused on grape vines and peach trees) including biological and integrated pest management practices, grafting and pruning.
- Experimentation with alternative crops, including legumes and improved varieties of local crops[2]
- Restoration of old terraces[3]
- Livestock health and management, including disease diagnosis, de-worming and other relevant practices.
- Participatory/ consultative research in livestock diseases.

Observations in the field and interviews with household members of the six communities revealed a number of common, important characteristics of livelihoods.

- Dependence on external inputs, which require a financial and logistical effort to purchase (e.g. veterinary medication, etc)
- Based on higher labour input (e.g. pruning and grafting, biological pest control, etc.)
- Based on the use of existing resources of the practising households (restoration of terraces)
- Based on an intensive learning process (e.g. integrated pest management, livestock breed improvement, etc.) – creating new human capital
- Requiring a high enough level of social organisation to successful implement actions such as integrated pest management and de-worming – thereby creating new social capital

Establishing community priorities for action that corresponds to their collective vision of what was wanted for the future was conducted in more detail with 2G communities. For them, it was possible to recognise the relative importance of other desired actions outside the area of competence of the local professionals. They frequently gave high priority to the provision of water for irrigation, the construction of bridges to guarantee access throughout the year and flood defences. This demonstrates the importance of environmental protection to bolster defences against a range of regularly occurring natural hazards and in the context of which any interventions with livestock and agriculture must be considered (See Fairbairn 2000 and 2001).

[2] These practices were only introduced in one of the three 1G communities but in all the 2G communities.

[3] This action was confined to a single community (Chorcoya) but by 2005 had extended to seven further communities associated with action by PROMETA.

The methods used with both 1G and 2G communities to promote these practices included workshops, training sessions, practical work with individuals and groups, distribution of materials and inputs, and the distribution of flyers and other training materials, etc. In the more recent work with 2G communities particular attention was given to the socio-economic level of participants in the work in order to ensure the participation of members of households from each stratum. Specific actions were not targeted at people from different socio-economic strata because, as is mentioned later, the training of LPs has not given them sufficient knowledge of low-cost treatments which might be more easily accepted by the poorer households.

A noteworthy part of the working practices of local professionals was the focus on work with small locality groups. In each community collective decisions were made to form working groups, usually in different parts of each community. The groups nominated leaders and it was by this means that actions were carried out. In 2G communities it was noted that, in the smaller groups, participation of some people from poorer households was more enthusiastic than in larger open community meetings.

An important issue which arises from work with both sets of communities is the lack of differentiation between the different socio-economic strata with respect to the technical actions developed. Taking into account the differences in livelihood assets and livelihood strategies one might expect more marked differences in the technologies promoted by LPs to people from rich or poor households. However, it seems that the process of the CLM led to community-specific rather than stratum-specific interventions. This issue will be discussed further when we look at the adoption patterns across the different strata.

Continuation and abandonment of new practices

The information from both groups of communities shows clearly that the rates of adoption or satisfaction were not uniform across different socio-economic strata. The main evidence is taken from the 1G communities, since they have completed a full project cycle and project interventions had been discontinued for a year before field visits were made to investigate whether new practices had been adopted. We refer to adoption as the *successful* integration of a *new* practice into the production system. Successful means that the practice remains part of the production system over a longer time, which may also include a process of adaptation of the practice.

In the case of the 2G communities the evidence is based on the participation of household members and their degree of appreciation of different categories of interventions[4]. It is too early to draw any conclusions on adoption patterns in these communities since they are in the stage of experimentation with new technologies.

[4] The relevant tabulation is based on answers to a question about which actions farmers had most liked.

The adoption pattern across 1G communities shows clearly that the highest adoption rates occurred in the high socio-economic stratum, followed by the middle stratum.

The adoption rate and consequently the impact of the practices on livelihoods within the lowest socio-economic stratum have been limited. This is partly a consequence of the better resource situation of households in the upper strata. This enables them to invest in a range of production activities, and to take risks. This agrees with findings reported in an extensive literature on farming innovations (Rogers 1962, Feder et al. 1982).

Data collected during field interviews were intended primarily for qualitative analysis and were the outcome of both group and individual interviews which allowed a good understanding of values and motivations. Statistics collected were not intended for formal statistical analysis. Sample sizes are too small for tests of statistical significance.

Data in Tables 2 and 3 suggest that the production areas targeted by the project had a different adoption rates. A higher adoption rate occurs in practices relating to fruit tree management than in livestock management. Differences in adoptions according to socio-economic stratum can be clearly observed and adoptions by the lowest stratum are consistently much lower than the higher strata.

A factor that may have limited adoption of some practices was the series of climatic hazards which had affected all communities – hail and drought in the valley communities, frost and drought in the altiplano communities – but even if this did depress adoption rates it would probably not have differentially affected those of the poorest.

Table 2 *Adoption of any fruit production practice, 1G communities*

Community and socio-economic stratum		Number of participants	Number of adopters of any new fruit production practice
Juntas	High	5	5
	Middle	6	4
	Low	3	0
Tojo	High	5	5
	Middle	8	8
	Low	8	3

Table 3 *Adoption rates in livestock management*

Community and socio-economic stratum		Number of participants	Number of adopters of any livestock management practice
Juntas	High	5	4
	Middle	6	2
	Low	0	-
Tojo	High	5	1
	Middle	7	0
	Low	8	3
Chorcoya	High	5	5
	Middle	6	4
	Low	0	-

The data presented in Tables 2 and 3 also show some differences between communities. Reasons for these differences are on one hand that the relevance of certain production areas differs between villages and on the other hand the level of community organisation which varies between communities.

Table 4 below presents the overall adoption rate in all 1G communities expressed as percentages. These data summarise dramatically the considerable differences in adoption rates between different socio-economic strata. While two-thirds of those in the middle and higher strata adopted any of the practices promoted, only one-third of those in the lowest stratum had adopted any such practice.

Table 4 *Overall adoption rates in 1G communities*

(Number of participants adopting)

Stratum	N=	Any fruit or livestock practice
High	25	20
Middle	33	18
Low	19	6

In the 2G communities the response to livestock actions might be expected to be particularly positive because the visible results of actions were rapid while crop-based work would only show results as the farming year progressed. Interviews with farmers took place in November before any crops had been harvested. One potentially important difference in the methods used in recent veterinary work with 2G communities was the use of medicine chests for livestock, one of which was kept

by each working group in every community. Livestock owners paid half of the cost of the dosage when a medicine was used and the money accumulated was used to restock the chest. When informants were asked which actions they had liked most the results were more complex (Table 5).

Table 5 *Action content most liked in 2G communities*[5]

Stratum	Veterinary actions	Methods of learning	Agricultural actions	N=
High	5	3	2	10
Middle	9	7	10	26
Low	14	12	15	41

Although veterinary actions were most liked by those in the high stratum, whose members have most animals, particularly large animals; agricultural actions were as important as veterinary actions to those in the middle and lower strata. The third action mentioned by many people was those associated with the process of learning.

An important finding of the research with 2G communities is the importance attached to the quality of the learning process. That this was remarked on by people from households in all strata further underlines its importance. The acquisition of knowledge that relates to several aspects of livelihoods adds to the stock of human capital and is a resource that can be used at any time and in various ways – to improve the quality of ones own physical resources and, for those whose physical resources are limited, to earn money by using such knowledge for the benefit of others.

Although this emerged as an important conclusion with regard to 2G communities, it is worthy of note that it was also mentioned by 10 of the 44 households interviewed in the 1G communities who had participated in the earlier project (HEDECOM).

Conclusions

The summary table (Table 4 above) shows clearly the differences in adoption between the three strata in 1G communities. The low stratum shows the lowest adoption rate, which indicates that either the technology promoted was least relevant for this group or the requirements for adopting this technology were beyond the resource capacity of the poor. It may therefore be concluded that the impact of these interventions was least on the poor.

[5] Number of the mentions of each category of action in response to a request for comments on which collective actions farmers liked most.

These findings show the importance of considering the differentiated impact of technology promotion. Very few technologies can be considered as neutral in terms of socio-economic impact and resource requirements. For instance, there is no evidence that the benefits accruing from the treatment of sheep or fruit tree diseases would outweigh the costs for all households involved. Without taking into account the different needs and priorities within rural communities, successful adoption of new practices will be limited. Different strata may have different needs and priorities but it remains to be proved whether it is the difference in their assets rather than the nature of the practices promoted that accounts for inter-stratum differences. Had low-input practices been strategically promoted for the poor households, it might have been possible to observe whether this resulted in a higher rate of adoption. The training of local professionals in Bolivia does, however, give limited importance to low-input actions. It can be argued that an apparent failure of HEDECOM was not to take into account this differentiated impact of technologies on peoples livelihoods.

An important issue closely related to the process of the CLM is the positive impact on social/human capital. Those interviewed in the lowest stratum emphasised how important the learning process and the working in groups had been for them. This aspect was especially highlighted in the 2G communities, where the full impact of the technology adoption is too early to appreciate.

Output 2: Process and organisational learning of the R7584-CLM documented and evaluated.

In this section of the report we document and evaluate the process of organisational learning through which the team as a whole and the LPs in particular learnt and modified the CLM during both projects. The CLM developed during R7584 HEDECOM was formalised at the beginning of R8362 through study of the records of the HEDECOM work as it developed and through interviews with UK-based and Bolivian team leaders. This necessitated the identification of the underlying philosophy and linking it more explicitly with the structure of the mechanism. In a later stage the application of the newly-systematised CLM developed by LPs during current work facilitated their retrospective evaluation of their experience at project end and completed the necessary learning process.

The methods developed by HEDECOM over the three years of the project's life were adapted to the needs and characteristics of each of the communities rather than just reflecting the professional expertise of field staff

The systematised mechanism comprises four main stages, in each of which particular attention is paid to the more disadvantaged households in order that they be included in actions and can obtain the same access to the activities of the project. Even so and, on account of the difficulties of inclusion, additional activities for such households were developed.

Stage 1: Diagnosis

The main objective is to raise self-awareness of the problems surrounding the rural populations, so the bases for future changes can be established.

Stage 2: Vision

The main objective is to instigate local planning capacities for future changes. The vision reflects on the values, aspirations and shared community objectives.

Stage 3: Plan

This stage aims to strengthen processes of participative planning for the community's future development. The plan is a set of activities focused on achieving the community's vision and objectives. The plan allows for the identification of actions, the assignation of responsibilities and work organisation.

Stage 4: Management

This part aims to strengthen participative processes of communal management, in the articulation of and formation of alliances between the different actors at the municipal, provincial, departmental and national level.

Development of the CLM in the light of lessons learnt during further community collaboration

The experience of systematising the community-led mechanism that was an integral first stage of work with VINCOSER was in itself a learning process and the CLM which was formalised contained new ways of expressing what had been learnt during the earlier research. The field team therefore organised their work and, in particular, their reporting of it in ways that they had not previously practised. A more important modification was the change of the pro-poor focus from work with individual households identified as particularly poor to a broader focus through the use of the socio-economic strata as integral to all field work and reporting.

A team meeting in Tarija at the end of field work at which the CLM was reconsidered once more, reached the following conclusions on what had been most recently learned:

- The use, from the start, of community-identified socio-economic strata was valuable in helping LPs ensure that all strata were adequately represented in the working groups formed in each community.
- The necessary work of collecting social and economic data and liaising with community leaders and organising meetings is time-consuming and also needs to be continued informally during workshops and training sessions. The assistance in the field and in the office of Cristina Morales during the first part of HEDECOM and of María Isabel Cano during VINCOSER was of great importance in this respect. As a matter of principle, field teams should be inter-disciplinary and also should not just comprise men [or women]. Men and women communicate in different ways and a mixed team is as important as having a mixed group of community participants.
- Work with groups within communities makes better face-to-face contact feasible and facilitates identification and verification of social strata and also encourages a wider range of people to take leadership responsibilities. Attendance at and participation in group meetings and activities may enable greater community solidarity. Households from lower strata can more easily be encouraged to join groups when taking part openly during a community meeting, might seem intimidating. Leadership qualities may be demonstrated

by some of the individuals from such households and, by encouraging them to accept such responsibility, social capital is created for them.

- Recognition of the potential role of children as capable representatives of their household is important and comparatively young children, often accustomed to being with livestock, can accept onerous responsibilities and may be able to offer leadership, particularly at a group level. They are also a valuable source of knowledge both for and of the community.
- Work with households from the lowest stratum needs time just as much as a range of activities designed to facilitate their participation.
- The recognition of the existence of dominant leaders who may pose problems to work within the community is critical, in particular since such individuals do not readily appear to be dominant in the presence of LPs.
- The use of the term 'mechanism' for community-led strategy development is perhaps unfortunate since it implies a mechanical process[6]. A crucial characteristic of the work developed during both projects has been its capacity to develop organically in response to the needs of the LPs, community members as well as the particular the climatic situation or seasonal priorities.

The most important conclusions that should be drawn from these findings, which relate to future project management, are the potential that exists for inclusion of women and children in work at a community level in lower level management. Furthermore, at a project field management level, the importance of an inter-disciplinary team, including both men and women, to ensure optimum communication with the widest possible range of rural householders is demonstrable.

Livelihood changes and the community-led mechanism

The community-led mechanism is a way of uncovering the deep-seated demands of communities and the households in them in ways that ensure that the voice of the community is dulled as little as possible by the beliefs and values of those who work with and for them. It is therefore a path to be followed even if the destination at its end is uncertain and subject to continual review. If the work of the LPs as facilitators allows community demands to be truthfully expressed and recorded, this in itself is an achievement. Indicators of the relative success of such activities should thus be the views of community people of the extent that their demands have been recorded and their voices heard. This responds clearly to the project goal in the logical framework.

At a second level and in relation to the purpose of this research, it is necessary to determine the extent to which livelihoods have been improved by use of the CLM. The analysis of the degree to which new practices developed and tested during HEDECOM has been presented in part 1 of this section. It was clear that, although households in the middle and upper socio-economic strata had adopted some of the farming practices developed with HEDECOM and were satisfied with them, fewer poorer households had done so. Such livelihood benefits as had accrued had thus favoured the better-off in the communities.

[6] This point was also made by several participants from NGOs and GOs in the final workshop held in Tarija in February 2005.

Households from to each stratum in 2G communities – those currently co-operating with the LPs - were still in the early stages of the adoption process and were enthusiastic that they would derive benefits, and presumably improved livelihoods, from this work. They were asked specifically whether the actions of the LPs responded to community priorities: all responded positively but a few added that other actions such as flood defences were very important. This therefore demonstrates that there was a positive response to the actions but that some people were conscious of other needs to which the LPs were not directly able to respond. This demonstrates to some extent the effectiveness of the CLM as recently applied in creating awareness of a broad range of issues that communities wish to address, necessarily beyond those directly associated with farming.

In conclusion it is necessary to address the extent to which the CLM enables the poorest stratum of households to derive benefits from work targeting community priorities. It is clear from the contrast between responses from people in 1G and 2G communities that, however much at least some poorer households feel incorporated into actions to improve their livelihoods, over time and once direct inputs from LPs have ceased, their scarce stock of capitals, in particular financial, makes continued improvements unlikely. Whether actions specifically directed at the poor, requiring lower capital inputs, would have had more lasting success needs further investigation. The mechanism may make possible the identification of the specific needs of the poorest stratum of a community but it is the development of appropriate collaborative actions that may determine livelihood impact. This depends less on the mechanism as such but more on the stock of knowledge available to local professionals. If such professionals are most aware, from the nature of their professional training, of relatively costly technical solutions to common farm problems – such as crop or livestock disease - the lack of lasting impact of work with the poor should be attributed to the available technology more than the method by which community demands are revealed.

Output 3: Target institutions made aware of the value of the R7584-CLM for assisting livelihood improvement through pro-poor mediated services that can enable favourable changes in NR management practices

A communication strategy was drafted and budgeted for at the beginning of the project according to the NRSP guidelines. This was particularly important in the context of this project, because a criticism of the previous project (R7584) was that it did not achieve a strong level of engagement with local actors beyond the community level. The aim of VINCOSER was to demonstrate from the beginning openness and willingness to engage with ongoing processes to increase local ownership of the envisaged products. One of the first important decisions taken by the team was to contract a local communication specialist who was knowledgeable about contemporary issues concerning Bolivian rural development and policies, specifically relating to technology transfer. The main advantage of a local specialist was her well-established relations with local and regional actors at different levels, She also had some field experience and a wide range of contacts at the municipal level, with farmer organisations, NGOs and other political bodies. Once appointed, her task was to develop a more detailed communication plan comprising three main communication objectives, which are outlined below.

1. Target organisations are made aware of the value of the CLM for assisting livelihood improvement through demand-based pro-poor mediated services that can enable favourable changes in NR management practices.

The main activity in relation to this objective was a stakeholder analysis. The table below summaries the main stakeholders, the activities and the results achieved (Refer also to Gündel, S. et al. 2001). The stakeholder analysis allowed a detailed identification of the main actors, a better understanding of the rural processes taking place in Bolivia and the type of products and strategies needed to engage with ongoing development processes. A detailed table of findings of this analysis is in Appendix 1 of Annexe A. The analysis showed that there is a lack of suitable methodologies for articulating local demands. Most projects in Bolivia have worked from those articulated at the municipal level, not taking sufficiently into account the heterogeneous nature of local communities, and their different demands. It was clear that there was a need to work at the community level, developing local capacities to identify and articulate local demands.

Following the results obtained in the stakeholder analysis a range of training materials were developed to actively engage communities in articulating their needs. These were presented to participants in the Final Workshop and sets of materials on CD, as printed booklets and coloured flip-charts were distributed to a range of agencies present and to other NGOs and GOs and local professionals who subsequently requested them.

The final workshop, attended by all stakeholders, allowed dialogue between them and with R8362 staff and identified more clearly how best the CLM could improve bottom-up communication of deep-seated community needs to improve the performance of development initiatives. This occasion was the basis for immediate end of project and subsequent actions that are reported later, in particular in Sections 7.3 and 7.4.

The following table summaries the activities and results achieved in terms of communication.

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Table 6 *Communication with stakeholders/actors*

Actor	Activity	Results	Comments
National government agency – SIBTA through DFID FIT programme	Informed of progress of work validating the CLM during life of R8362 at regional meetings and their attendance at Final Workshop	I) The CLM incorporated as a component of the Operating Procedures for SIBTA's work in the FDTAs, such that evidence of community participation is required in submissions of proposals. II) Results: Information packages passed to FIT projects 22,16,9 & 7 for appropriate use in the course of their work.	Further discussion planned on ways of collaboration through meetings of the FDTAs with the Mancomunidad Héroes de la Independencia [MHHI] not held as planned following national government change.
Regional government – Prefecture and Municipal government	Documentation on CLM provided for further study and possible application	Municipal government links developed – through briefings held in three of four municipalities of the Mancomunidad for their field staff following senior staff participation in Final Workshop.	Further request from Municipality of Chiquiaca [in different ecological zone] east of Tarija part funded by PROMETA and work planned up to end of 2005 to training NGO staff at CLM use and, for communities, the articulation of their needs.
Departmental Federation of Peasant Unions	Sub-central workshops requested and held to develop awareness of the potential of the CLM for preparation and presentation of their needs and priorities associated with concrete funding proposals. Visits and workshops held in Tojo, Copacabana and Uriondo/Valle and contact ongoing.	Departmental Federation informed of progress and advised of ongoing work with sub-centrales	Subsequently a project proposal has been developed by one group of communities and is ready to be submitted for funding.

2. Strengthening SIBTA's efforts to increase its pro-poor impact through improved networking and alliances allowing for longer-term sustainability and wider impact of this current technology transfer system.

From the beginning of this research contact was made with SIBTA and FIT. The communications specialist and the principal researcher attended several SIBTA workshops, and SIBTA & FIT staff attended the project's final workshop. VINCOSER agreed to work with two of the projects (FIT 22 and FIT 9) and has provided a full suite of documents to develop use of the CLM. In these meetings the project informed SIBTA of possible modifications to their system that would allow for a more efficient strategy in reaching poor farmers. The incorporation of the CLM into SIBTA Operational Procedures will help to ensure this.

3. Linking first and second generation communities' demands to extension services at the local, regional and national levels.

The main activities undertaken were the strengthening of local demands through a competitive fund for NRM project profiles; and the support of the round table debates about ideas necessary for the achievement of "Bolivia Productiva". In addition, communities at a sub-central level were trained – at their request - to use the CLM to present coherent demands in response to funding opportunities.

Conclusions

In VINCOSER it proved efficient to plan and budget for communication early in the project cycle. This allowed for the development of a thoughtful strategy, taking into account important factors such as the national context, the different stakeholders and their attitudes towards the products, and, most important of all, it permitted the appointment of a communication specialist with a lot of experience in the area of rural development in Bolivia, especially Tarija. It proved extremely useful that the person employed had a wide range of knowledge of the various actors. This allowed a fully effective system for the communication of the project results. The tools used for communicating proved efficient in the effective diffusion of products.

In the elaboration of the communication plan it was important to define concrete products in relation to the project log frame. With regard to the first product – the community-led mechanism - several activities were developed which later showed success. For instance, all the communication materials, which were designed to reflect farmers' criteria, were of profound interest to participants in the final project workshop. The radio programmes were successful as they diffused information not just about the project but other related events taken place in the rural sphere.

With regard to the second product, the project successfully engaged with three main actors: the Mancomunidad Héroes de la Independencia, and ICCA (Instituto de Investigaciones Campesinas), and with the Departmental Federación de Campesinos, the main regional peasant union organisation. Following agreements with these organisations, the project proposal was shown in several SIBTA/FIT workshops, where participants showed interest in the proposal since it offered a realistic way to

work with disadvantaged farmers. This interest has been solidified in the introduction of the proposal to their operative regulatory plans.

At the end of VINCOSER more activities are being developed in conjunction with FIT. The first of these is the inclusion of VINCOSER's methodology in FIT 9 collection of demand-led methodologies and the second is the facilitation of pilot projects between FIT 22 and the MHI in agreement with other entities such as the Federación de Campesinos, etc.

In conjunction with this activity the local professionals are also diffusing their practical experience of using the mechanism in three regional peasant union sub-centrales and representatives from other union centres have asked to be allowed to take part, including one from the neighbouring department of Chuquisaca. This enables us to feel confident that interest in and knowledge of the work of both HEDECOM and VINCOSER has continued to grow, very much aided by the information materials distributed.

5 Research Activities

1.1 *Assessing the impact on livelihoods of R7584, in the context of its specific technical actions (e.g. fruit tree introduction, livestock disease control, terrace rehabilitation) with the 1G communities*.

The research was carried out in the HEDECOM target communities of Juntas, Tojo and Chorcoya. In each community an intensive period of 20 days of field work was undertaken during which approximately 50% of the community households were interviewed. Semi-structured interviews with key informants, individuals and groups have been carried out. Since it was important to understand the reasons for which some of the community members, especially those in the lowest stratum, did not participate in the project, care was taken to select for interview key individuals from different socio-economic strata who had been participants and non-participants of the HEDECOM. The participation rate in the communities seemed to be uneven: the major reasons for this were the variable level of organisation within the communities. While in Tojo, for instance, mostly of the people from the different socio-economic strata actively participate in the peasant union, in Juntas people in the lower stratum are highly marginalised and few attend such meetings. In other cases people in the lower stratum do not have the time or the resources to participate, this is mainly the case of single women in Chorcoya. It was also concluded that the levels of participation depend upon location in the community: those households living away from the centre tend to be excluded. Time availability is also important; this is usually proportionate to the social status. In order to obtain information on the differentiated impact HEDECOM achieved within different socio-economic strata, emphasis of the research was placed on understanding the heterogeneity of the target communities. Changes instigated by HEDECOM were assessed in terms of their contribution to people's livelihood activities and strategies in the absence of quantitative data.

1.2 *To determine the trends in livelihood activity changes and the degree to which they may be influenced by the technical actions with the 2G communities*.

During 2004, the work of local professionals [LPs] was concentrated in three communities adjacent to areas where earlier work in association with R7584 had taken place. In one of the communities, Tacuarita, contact had already been made and work started in 2001-2002 but in the other two areas – Pueblo Viejo and Pujzara – no previous visits had been made.

This activity was carried out between March 2004 and March 2005, a period of 12 months. During this time, the mechanism of community-led articulation of needs, especially related to natural resource use, was applied by and guided the actions of local professionals in their collaboration with communities. The characteristics of the communities are described as well as the structure of livelihood strategies of households in different socio-economic strata. This activity's report presents preliminary findings on the trends in livelihood changes that are associated with the current actions of the LPs and their possible impact of households of different socio-economic status[7].

This research is based on reporting by LPs on the stages of their work with communities and on 32 semi-structured interviews conducted individually by the LPs, accompanied by the Project Leader with about ten households in each community conducted during the week of 8 November 2004. The interviews focussed on the household's livelihood strategy, the principal threats to their livelihoods, their responses to the work of the LPs with them, their hopes for the future and their views on how the poorest in the community can best be helped (See Working Paper 05/02, Appendices 1 and 2). Important information used to complement the interview data was derived from the community workshops during which members of the community developed their vision of the direction in which they wished their community to progress.

1.3 *To complete a cross-cutting analysis of the findings of Activities 1.1 and 1.2 in order to determine the effectiveness for pro-poor livelihood improvement of the technical actions that arose from the use of a community-led mechanism for service support*.

This activity was engaged by continuous discussion between principal members of the team in which a range of interpretations of the data were tested.

2.1 To identify key elements of CLM through a review of R7584 documents and records, and discussions with local informants.

The Principal Investigator based in Tarija, at the start of the research period, discussed the conduct of the work of R7584 with Raimundo Montaño, the senior local professional who has worked with the two projects since 2000. Further interviews were conducted with other past and present team members to understand the implicit and explicit elements of the guiding set of beliefs on which field practices were based.

[7] The team of local professionals comprised Raimundo Montaño (horticulturalist), Patricia Ruíz (veterinarian) and María Isabel Cano (support person).

In addition the files of reports of work carried out during R7584 were reviewed for further evidence of how community demands were identified. Work under Activity 2.3 was also linked to this Activity.

2.2 *Through interaction with LPs in the project team, to identify indicators for detecting adaptations of the CLM with second generation communities*.

The work of the LPs was guided by the systematisation of the CLM developed in Working Paper 04/01 which went beyond the work carried out in R7584 to try to develop better ways of monitoring the work at a community level, including by the identification of household socio-economic strata in each community. This enabled the identification of the participation of households from different strata, and thereby the degree of involvement of the poorer households in project actions. The progress of work in each community through the stages identified in the formalised CLM was recorded in regular written reports by LPs.

At project end LPs were asked to consider what they had learned from the work using the CLM and to identify the advantages of the new mechanism and also other aspects of the work with communities that had emerged as important. This enabled the reflections of the field staff to be discussed between them and other project staff and the process of institutional learning recorded.

In addition, as part of Activity 1.2, the views of 2G community members interviewed were obtained concerning the conduct of the work with LPs during R8362.

2.3 *To appraise the views of each of the R7584 target communities on their CLM experiences (participatory SWOT), using individual and participatory group interviews*.

As part of the research with HEDECOM communities, information was collected about what they remembered about their interaction with LPs. This provided valuable data about aspects of interpersonal communication that people found noteworthy as well as the technical characteristics of their professional work.

After the conclusion of field work with R7584 communities a meeting of people from two of the communities (Juntas and Tojo) was held to listen to their collective views, in an open forum, on the work of HEDECOM.

3.1 *To identify the communication stakeholders through review of the past communication activities of R7584*

A communication strategy was designed early in the project. The communication specialist appointed had good knowledge of Bolivia's rural development and policy context, specifically in the technology transfer area. She also had good relations with actors at different levels, as well as field experience and contacts at the municipal level, farmer organisations, NGOs and other political organisations. She was therefore well qualified to identify and analyse the optimal present and future role that they might play in communicating the benefits of using the CLM.

3.2 *To design the project's communication plan using the findings of Activity 3.1 and the NRSP guidelines for development of communication plans*.

A detailed communications plan was developed in June 2004.

6 Environmental assessment

6.1 What significant environmental impacts resulted from the research activities (both positive and negative)?

No obvious and marked environmental impacts were observed that resulted from research activities. At a local level the reduction in disease organisms that affect livestock, as well as some fruit trees, grape vines and cultivated plants are likely. Impact on the vegetation is no different than before. If actions initiated under R8362 are sustained in the future, some long-term positive impacts, as a result of disease control are anticipated.

6.2 What will be the potentially significant environmental impacts (both positive and negative) of widespread dissemination and application of research findings?

This is impossible to assess since actions will be tailored to the needs of each community or association of communities.

6.3 Has there been evidence during the project's life of what is described in Section 6.2 and how were these impacts detected and monitored?

None

6.4 What follow up action, if any, is recommended?

n/a

7 Contribution of Outputs

1. Contribution of outputs to NRSP purpose and to relevant output of Hillsides

   'deliver knowledge that enables the poor to improve livelihoods'

   The benefits of articulating demand accrue to households of the poorer strata in communities by their active participation in actions from which they can and do derive benefit. The methods used in developing a community-led mechanism for demand communication ensure that people from households from all socio-economic levels take part in indicating and prioritising their demands, both relating to natural resources and other strands of livelihood strategies. Knowledge about specific interventions is acquired that may improve livelihood security and is transmitted in ways that both the intrinsic value of the knowledge (for human capital formation) and its application to improve the use of natural resources can benefit households. It is recognised, however, that poor households benefit least through the application of such knowledge, largely on account of the scarcity of their capital assets. Social capital formation, which is widely recognised as being of particular value to the poor (see Grootaert and Narayan, 2004 and Sandoval et al. 1998), is achieved through working in small locality groups where the benefits of collective action can readily be recognised as can the leadership qualities of individuals from marginalised categories (the poor, women and the young).

   'new approaches enabling LPs and communities to adapt and apply relevant NRM knowledge to their circumstances'

   The development and use of the CLM has demonstrated the need for LPs to adopt a bottom-up rather than top-down approach to identifying and testing NRM.

Furthermore, listening to and learning from community members enables LPs themselves to learn as well as to sympathetically impart technical knowledge and thus develop a greater sensitivity to community stocks of knowledge. From the communities' point of view the value of learning, relating to their real priorities has been commented on by community members of all socio-economic levels (see Annexe A Section 1.3 Tables 21-22). This emphasises the quality of the interaction between LPs and community members the achievement of which is a major goal of the CLM. The strength of the community-led mechanism is that it is flexible, can be adapted to different community situations and places emphasis on positive interaction between LPs and community members from all strata.

2. *Critically assess the achievements of the project and benefits engendered, on groups such as men/women, children/old, poor/rich*

   The methods embedded in the CLM offer a means by which communities and people in them can develop their vision of desired changes and convey the consequent demands that relate to this vision to possible service providers. Further ways in which the poorer households may have their particular needs articulated and included in a community-wide development plan are also incorporated. However it is essential that exclusion is recognised as the consequence of processes not overcome without more widespread social change.

   The use of locality groups for work in communities creates a better level of social interaction. People who might hesitate to speak in a large community meeting participate more easily as part of a small group. This strategy enables the incorporation of women and also children into groups and the LPs have emphasised the extent to which they are capable of displaying leadership (Annexe A, Section 2 p.34) particularly in less-intimidating, small locality group activities.

   The CLM as developed in R8362 offered a high-quality learning experience that is independent of household capital assets and supported by quality didactic materials and procedures. It was noteworthy that this was commented on by people in all socio-economic strata. Although it was best shown by work with communities with which LPs were engaged this past year, it was also commented on by some informants from communities with which LPs worked previously (Annexe A, Section 1.3)

   Communication materials developed enable others to apply a generically similar mechanism that elicits priorities for change, including in NRM for isolated and inaccessible communities.

3. *The impact of the outputs and assessing the extent to which OVIs at purpose level were attained; including evidence of uptake by intended beneficiaries*

- *At least six communities in SW Tarija articulate the benefits of CLM at meetings that are institutionally associated with RD and TT planning and service provision (CIM Domain V, Step E)*
- *At least four communities in SW Tarija that were not directly targeted by R7584 use a community-led mechanism to determine and communicate their NR needs to local service providers (CIM Domain V, Step F)*

During work with rural communities, both leaders and other community members present were advised that, in order for future NR-focused actions to occur, communities should consider how best to use the results of these and future participative planning meetings. The sindicato organisation, which has well-

developed vertical linkages, was felt by community leaders and the LPs to be the means by which local priorities and needs could best be articulated. Both those communities associated with previous actions (Juntas, Chorcoya and Tojo) and those with which actions were developed during R8362 (Tacuarita, Pujzara and Pueblo Viejo) reported to LPs relevant discussions at a sub-central level concerning ways of using the CLM to attract further collaboration from LPs associated with NGOs and GOs. During meetings with the Departmental sindicato Federation during the final period of action, culminating in the Workshop held in February 2005, Luis Alfaro, Head of the Departmental Federation expressed the Federation's belief that the CLM could be used as a tool by which grassroots needs could be articulated. Both the Federation and community leaders active in the sub-central formally requested that LPs organise workshops with each of the sub-centrales whose area of action encompassed the communities with which work had previously taken place. As a result a workshop was held with the Tojo sub-central on 7-8 April attended by 85 representatives from 13 communities – seven of which had had no previous contact with project LPs - in the Rio San Juan del Oro valley. The workshop with the Copacabana sub-central on 12-13 April was attended by 56 people from 8 altiplano communities – five of which had had no previous contact with project LPs. The third workshop was held by the Valle sub-central on 30-31 March attended by 38 representatives from 22 valley communities – eighteen of which had not previously had contact with project staff. The origins and outcomes of these workshops are fully documented in internal project reports and accompanying papers. Following these workshops, the Copacabana sub-central requested that the LPs assist them in preparing details of a specific project – incorporating 8 altiplano communities - which represents their high priority needs. The sub-central will use this to seek funding from the municipality or regional government in the near future. This was completed in July 2005 and reported in an internal report. LPs report that these activities are considered by the departmental federation of peasant unions to be a valuable means of attracting funds from regional and national government using the peasant union organisational structure.

- *At least five non-project LPs incorporate elements of a CLM in their working practices (CIM Domain W, Step F)*

Three LPs working in PROMETA, our NGO partner have received advice on the use of the CLM and are applying it in the course of their work. A further five LPs working for organisations associated with Protected Areas (SERNAP), livestock associations (AGC, FEGATAR, SENASAG)[8]. PROMETA has organised and funded training for two of their field staff working in the sub-tropical lowlands east of Tarija (sub-central Chiquiaca) in participative ways of eliciting community priorities for future work over a 6 month period to the end of 2005.

[8] Alberto Cortéz - PROMETA (Pastures), Henry Videz - PROMETA (Animal health), Marushka Barrios - PROMETA (Terraces), Claudio Colque - Asociación de Ganaderos en Camélidos (Pastures), Yamil Barracat - FEGATAR (Cattle parasite diagnosis), Gabino Colque - Sub central Copacabana (Participative planning), Ury Chávez - ex Técnico SERNAP (Seedbeds and nurseries), Dr. Felix Gallardo - Director SENASAG (Participative planning with livestock)

4. *The impact of the project on thinking of research partners & stakeholders; policy approaches [national planning groups]; techniques that people can use.*

- PROMETA maintains their interest in the working methods and requested a final workshop to inform them of achievements. PROMETA subsequently contracted the three R8362 project staff part-time for six months to train two PROMETA field staff working in a Protected Area in an isolated sub-tropical zone east of Tarija in CLM methods to assist their NR development work with four communities. A further project of PROMETA with outside funding from CARE has been engaged in expanding the rehabilitation of old hillside terraces in the Altiplano, following the example of such work with R7584. The PROMETA staff member directing this work has reported this work with eight communities and maintained consultative contact with LPs and with the Project Leader on his visits to Tarija.

- National-level stakeholders SIBTA/FIT and their associated organizations have generically incorporated the CLM into their formal Operating Procedures to ensure that project requests reflect wider community needs and it offers a way in which a better set of pro-poor initiatives may be identified and initiated. This has been reported in internal project reports supported by emails from FIT La Paz. The national political situation has hindered further actions incorporating new thinking.

- The Mancomunidad HCI is in continuing discussions regarding the incorporation of the CLM into their policy initiatives.

- Peasant unions at sub-central and departmental federation levels formally requested and have received workshops to learn the methods and advantages associated with the CLM and, using the CLM administered by project LPs: one group of communities from one sub-central has developed their priority needs into a project proposal. This has been referred to previously (item 3 above) and is fully documented in project reports.

8 Publications and other communication materials

(See Appendix 4a, pages 6-8, for details on style guidelines)

8.1 Books and book chapters

None

8.2 Journal articles

None

8.2.1 Peer reviewed and published

8.2.2 Pending publication (in press)

8.2.3 Drafted

8.3 Institutional Report Series

None

8.4 Symposium, conference and workshop papers and posters

None

8.5 Newsletter articles

None

8.6 Academic theses

None

8.7 Extension leaflets, brochures, policy briefs and posters

Proyecto VINCOSER, 2005. El Mecanismo Vincoser. Desarrollo desde la Comunidad. Rotafolios. Tarija, Proyecto VINCOSER. 92pp.

de la Fuente, T., Sánchez, J and Donaire, A.. 2005. Nuestra Propuesta, Tarija, Bolivia VINCOSER, Serie Desarrollo desde la Comunidad, Cuaderno No. 1. 20pp.

de la Fuente, T., Sánchez, J and Donaire, A.. 2005. Nuestro Diagnóstico, Tarija, Bolivia VINCOSER, Serie Desarrollo desde la Comunidad, Cuaderno No. 2. 20pp.

de la Fuente, T., Sánchez, J and Donaire, A.. 2005. Nuestra Visión, Tarija, Bolivia VINCOSER, Serie Desarrollo desde la Comunidad, Cuaderno No. 3. 16pp.

de la Fuente, T., Sánchez, J and Donaire, A.. 2005. Nuestro Plan, Tarija, Bolivia VINCOSER, Serie Desarrollo desde la Comunidad, Cuaderno No. 4. 20pp.

de la Fuente, T., Sánchez, J and Donaire, A.. 2005. Nuestra Gestión, Tarija, Bolivia VINCOSER, Serie Desarrollo desde la Comunidad, Cuaderno No. 5. 16pp.

de la Fuente, T., Sánchez, J and Donaire, A.. 2005. Nuestros Proyectos, Tarija, Bolivia VINCOSER, Serie Desarrollo desde la Comunidad, Cuaderno No. 6. 20pp.

de la Fuente, T., Sánchez, J and Donaire, A.. 2005. Nuestra Producción, Tarija, Bolivia VINCOSER, Serie Desarrollo desde la Comunidad, Cuaderno No. 7. 16pp.

de la Fuente, T., Sánchez, J and Donaire, A.. 2005. Nuestros entidades y servicios agropecuarios, Tarija, Bolivia: VINCOSER, Serie Desarrollo desde la Comunidad, Cuaderno No. 8 16pp..

de la Fuente, T., Sánchez, J and Donaire, A.. 2005. Nuestra Comunicación, Tarija, Bolivia VINCOSER, Serie Desarrollo desde la Comunidad, Cuaderno No. 9 16pp.

8.8 Manuals and guidelines

Proyecto VINCOSER 2004 Informe Guía El Mecanismo Vincoser. Proyecto VINCOSER 33pp.

8.9 Media presentations (videos, web sites, TV, radio, interviews etc)

Donaire, A. 2005. El mecanismo VINCOSER. Tarija, Bolivia VINCOSER VHS/DVD 12 mins.

8.10 Reports and data records

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8.10.1 Project technical reports including project internal workshop papers and proceedings

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De la Fuente, T. Sánchez, J. and Donaire, A. 2005, Memoria Diálogo Nacional 'Bolivia Productiva'. Mesas municipales Yunchará, Uriondo, San Lorenzo y El Puente. Tarija, Bolivia: VINCOSER, AMT, IICA, and Mancomunidad de Municipios Héroes de la Independencia. 95pp.

8.10.2 Literature reviews

None

8.10.3 Scoping studies

None

8.10.4 Datasets

None

8.10.5 Project web site, and/or other project related web addresses

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10 Project logframe

Narrative	*OVIs*	*MOVs*	*Risks*
11 Goal			
Potential for poor communities in Bolivia to make more effective demands on RD and TT system strengthened	By Dec 2005: Effective mechanisms for articulation of, and response to demands for poorest sectors adopted by at least 2 national/regional RD and TT organisations (CIM Domain X, A-H Step E) At least one R&D Agency in SW Tarija includes a community-led mechanism in their annual operational plan (CIM Domain W, A-H Step E)	RD and TT organisation records R&D Agency Annual Plans	
Purpose			
Benefits of a community-led mechanism (CLM) for enabling access to and use of new knowledge by poor hillside communities for improving their livelihoods through sustainable management of natural resources demonstrated and communicated	By March 2005: • At least six communities in SW Tarija articulate the benefits of CLM at meetings that are institutionally associated with RD and TT planning and service provision (CIM Domain V, Step E) • At least four communities in SW Tarija that were not directly targeted by R7584 use a community-led mechanism to determine and communicate their NR needs to local service providers (CIM Domain V, Step F) At least five non-project LPs incorporate elements of a CLM in their working practices (CIM Domain W, Step F)	Meeting records Internal work reports of local professionals NRSP commissioned evaluation report Project FTR R&D agency records	Political and economic environment does not become markedly less enabling
Outputs			
(1. VALIDATION – What did the pro-poor service provision achieve?			
1. Effectiveness of the service provision for livelihood improvement of the poor, that was delivered in response to the R7584-CLM for demand assessment, determined	By July 2004, changes in the livelihood capitals of households in the R7584 project target communities assessed By August 2004, based on same household sample, limitations identified in the reach and response to technical actions (i.e., the service provision inputs) By October 2004, trends in change of livelihood capitals of sample households in at least two of the additional target communities involved in R8362-Output 3 identified By December 2004, through analysis of findings for first and second generation households and individuals (including contrasts in household circumstances) impact of R7584's mode of service	Series of project study reports: Fieldwork Phase 1 report (Sep 2004) Fieldwork Phase 2 report (mid-Nov 2004) Output 1 report (Dec 2004)	Local political, socio-economic and climatic conditions do not seriously impair planned field work

	provision on livelihoods determined		
(2. VALIDATION – What is the CLM in practice and is it efficacious for pro-poor outcomes?			
2. Process, and organisational learning of the R7584-CLM documented and evaluated	By April 2004, key elements of elements of the community-led mechanism established By April 2004, local professionals identify performance indicators for the CLM for use with the second generation communities By August 2004, through participatory appraisal of the community-led mechanism, strengths and limitations understood By December 2004, linkages between livelihood changes and community-led mechanism for service support determined	Series of project study reports: April 2004 – the R7584-CLM and ways to determine its significant effects Fieldwork Phase 1 report (Sept 2004) Output 2 report (Jan 2005)	Local political, socio-economic and climatic conditions do not seriously impair planned field work
(3. COMMUNICATION (as the first building block of promotion): Raising awareness on the project's findings with relevant local and national stakeholders and policy actors)			
3. Target institutions made aware of the value of the R7584-CLM for assisting livelihood improvement through pro-poor mediated services that can enable favourable changes in NR management practices	By May 2004, draft Communication Plan developed which includes stakeholder analysis at local, regional and national levels By January 2005, key stakeholders at local and national levels aware of project findings and their developmental implications By February 2005, evidence from at least one local and one national stakeholder of uptake of project messages	Communication Plan (May 2004) Communication materials for various stakeholders, based on research products of Outputs 1 &2 Project quarterly reports (that include communication activities Workshop Proceedings Project FTR	Adequate level of interest of stakeholders and actors with the project

12 Keywords

Bolivia, Andes, poor, crop diseases, livestock diseases, participatory methods