

REPORT FOR ILRI

Perspectives on Development in Arid and Semi-Arid Areas: Results of a Ranking Exercise

John McPeak, Syracuse University and PARIMA
Getachew Gebru, PARIMA
Reuben Lemunyete, PARIMA
Patti Kristjanson, ILRI

ILRI and PARIMA Working Paper

This research was supported by the World Bank and by the Pastoral Risk Management Project of the Global Livestock Collaborative Research Support Program which is funded by the Office of Agriculture and Food Security, Global Bureau, USAID, under grants DAN-1328-G-00-0046-00 and PCE-G-98-00036-00. The opinions expressed do not necessarily reflect the views of the World Bank or the U.S. Agency for International Development.

Abstract:

Decentralization and community participation are major themes in current development policy. This study investigates perspectives on development held by individuals in arid and semi-arid areas of northern Kenya and southern Ethiopia that are predominantly used for pastoral production. Using a ranking exercise, individuals were asked to identify the most helpful types of development interventions in their opinion in the past, and also indicate their priorities for future development interventions. Results suggest there is relative consensus around a few key development interventions. Interestingly, the highest ranked interventions for both the past and the future are not explicitly related to pastoral production. Across country differences are not very large, though across site differences are pronounced. In a similar fashion, individual characteristics seem to matter less than household level characteristics within sites

1. Introduction

What kinds of interventions have been experienced by people in arid and semi-arid areas? How do they evaluate the impact of these interventions? What types of development projects are most highly desired by people living in these areas? To what extent are these desires shared within communities? These are questions that motivated the study presented here.

The study was conducted in northern Kenya and southern Ethiopia in eleven communities where we have been working for a number of years. The sites are described in the following section, and the survey methods and a summary of the data are presented in section three.

This work contributes to a larger literature that investigates the implications of the move in development practice to place greater control for the definition of projects in the hands of those directly impacted by the projects (to note but a few, Chambers 1997; Dongier et al 2001; Andreassen and Mikkelsen, 2003). The rationale behind this approach is that development projects thus defined will better meet the needs of intended beneficiaries and, potentially, place them in more direct control of how the projects will go about meeting these needs. However, a number of questions are raised by this approach that we will shed light on in this work.

First, when community members are asked to evaluate the potential impact of future work, it is reasonable to assume they will base their evaluation at least in part on their experience with past development interventions. What types of projects have people seen in the past, and how do they assess these past interventions? If they are to make informed decisions amongst competing alternative future development

interventions, they are likely to be better able to evaluate the kinds of projects they have direct experience with. In addition, knowing what has been helpful in the past is an important piece of information to use when considering what will be helpful in the future. In sections four and five, we present information gathered in a survey that considers respondents' evaluations of past interventions.

Second, if people are asked to identify priorities for the future, what kinds of things are communities likely to ask for if they are given more control over development planning? Section six presents findings on the overall priorities for development interventions in the study area. For the purposes of long range program planning and resource allocation among competing development wants, a first step is to get some idea of the kinds of priorities development agencies are likely to encounter when they go into the field eliciting development priorities. In a related fashion, knowing what people are likely to ask for can be influential in determining which agencies should be active in a given area to meet the needs of local communities. We also present analysis designed to understand the extent to which "the local community" has a homogenous view of development priorities. When there is heterogeneity in the socio-economic status and experiences of households and individuals within the community do these differences lead to differing views on what the priorities are? Do household level differences influence how an individual will prioritize a given development intervention? Do prioritizations change depending on the characteristics of the individual who is asked to prioritize? While the move to participatory methods does allow greater local control over development efforts, there is a long standing concern that unless carefully addressed, the view of "the community" as expressed in a group meeting may in fact be the view of

local elites (Platteau and Gaspart 2003; Platteau and Abraham 2002). If the view of the elites is representative of the larger community's view, then this is not a major problem and they serve as spokespersons of the larger group. If their views are not representative, then the possibility exists that a faction of the community can use their elite position to allocate funds meant to help the whole community to their own objectives.

As the survey was originally conducted in 2001-2002, section seven presents brief findings from a follow up visit to the communities conducted in 2006. There were two main purposes of these visits. The first was to ask whether the priorities revealed in survey results were still the priorities, or if anything had occurred to change them. The second was to ask in specific detail what are the characteristics of the desired assistance for the community in question.

Development programs often form around themes that are of interest to the donor community or government and then these themes guide how programs approach individuals and communities in developing countries. Do the types of interventions funded by the government and / or the donor community match the types of interventions desired by the local community? If yes, then the question is how to match local needs to organizational competencies. If no, then what is driving development policy formation may have more to do with development trends in the donor community than development needs in local communities. Section eight of the paper contrasts the priorities revealed by the survey with priorities revealed by funding allocations by two development agents in this area, the Government of Kenya and the World Bank's Arid Lands Research Management Program. Section nine concludes.

2. Study and Study Area

We first present a description of the study and the study area. As part of a research effort investigating questions of pastoral risk management in northern Kenya and southern Ethiopia, we had been interviewing thirty households in six communities in northern Kenya and five communities in southern Ethiopia since March 2000 at a quarterly interval. Between quarterly survey rounds we fielded this survey, in 2001 in Kenya and 2002 in Ethiopia. We also conducted community interview in each of these communities in 2006 to follow up on the survey findings.

McPeak and Little (2005) provide descriptions of the study sites that are modified for use in the current context. **Dirib Gumbo** is a Boran settlement approximately 10 kilometers from Marsabit town.¹ Most of the residents of this area reside on the upper slopes of Marsabit Mountain, and practice rain fed cultivation combined with livestock raising on the lower slopes of the mountain. The Catholic Church has been active in Dirib Gumbo, most notably in the construction of a boy's secondary school. Other notable development efforts have been implemented by Food for the Hungry International, focusing on agriculture and health, and the Marsabit Development Project funded by GTZ.

Ngambo is an Il Chamus settlement approximately 10 kilometers east of Marigat town (see Little 1992). Marigat town is located 100 kilometers north of Nakuru on an all-weather road. Ngambo is located near the Perkerra irrigation scheme, and a large

¹ Although we describe each settlement by noting the majority ethnic group present in the location, it is important to note that in each site, there are minority populations from other ethnic groups. Given our areal sampling method, members of these minority groups are often represented in our data.

number of households of this location either grow crops in this scheme themselves or work as laborers in these fields. Many also raise livestock that take advantage of the pastures around the shores and in the highlands that surround Lake Baringo. Government support of educational projects has been notable in this area, and donors such as World Vision and Save the Children have offices in Marigat town and work in the location.

Sugata Marmar is a Samburu settlement on the Laikipia – Samburu District border, approximately 50 kilometers south of Maralal on the Maralal – Rumuruti road. Significant populations of impoverished Turkana and Pokot are resident in this location as well. Some rain-fed cultivation is practiced in this area, particularly in the higher elevation areas towards Maralal town, the administrative center of Samburu District, and livestock raising and marketing are also important occupations. The Catholic mission has a large compound in Sugata Marmar with an associated clinic. Maralal based development projects such as the Samburu District Development Project have been active in this town as well.

Logologo is an Ariaal settlement approximately 40 kilometers south of Marsabit town on the main Isiolo – Marsabit road. Ariaal are a group that mixes elements of Samburu and Rendille culture (see Fratkin 1991). Rain-fed agriculture is possible in the higher areas of this location, and a very small amount of small-scale irrigation is practiced in town. Most households in Logologo settled there in the 1970's following a series of poor rainfall years and herd losses. Both the African Inland Church and the Catholic Church have historically been providers of development interventions in this area.

Kargi is a Rendille settlement approximately 75 kilometers to the west of Marsabit town in a flat, arid basin. Kargi residents mostly conduct market activity in Kargi town, although they make occasional use of Marsabit markets. No cultivation is practiced in this area. Kargi has a Kenya Agricultural Research field station in town, which formerly served as a base for the UNESCO funded Integrated Project for Arid Lands. GTZ continued some of the work of IPAL in Kargi, focusing on environmental management and conflict resolution. The Catholic Church has historically been a major supporter of development work in Kargi.

North Horr is a Gabra settlement approximately 200 kilometers west of Marsabit town on the northern edge of the Chabi desert. Similar to Kargi, most market activity takes place in North Horr town, although residents do make occasional marketing trips to Marsabit town. No cultivation is practiced here. North Horr residents have had some experience working with development agencies such as Farm Africa that concentrated on human and animal health and GTZ working on environmental and conflict management. North Horr also has recently been the site of a Financial Savings Association. The Catholic church has a large compound in town, and, along with the government, has served as a major supporter of health and education in this area.

Dida Hara

Dillo

Wachille

Qorati

Finchawa

3. Survey Methods and Summary of Data

The survey households were randomly chosen from a list of all the residents of the Kenyan administrative unit of a location or an Ethiopian administrative unit of a *kabele*. Thirty households were selected in each location / *kabele*. For households with multiple members, the self identified head of the household, the wife of this head (a randomly selected wife if there were multiple wives in the household) if the head was a married male, and if relevant another adult living within the household (randomly selected if there were multiple non-head, non-wife residents) were interviewed separately. Multiple individuals were interviewed per household to allow for the possibility that there was heterogeneity within households.

The questionnaire used in this survey module was designed by first conducting open ended interviews with key informants in the Kenyan communities (usually a grouping of chiefs, elders, women's group presidents, politicians, and schoolteachers) to describe the development interventions that had taken place in the community since Kenyan independence in 1963. These were open ended discussion held in the communities that were facilitated by the local enumerators of the PARIMA project. The specific interventions revealed in these discussions were categorized to be used in the questionnaire fielded at the individual level. The following categories were defined: Livestock Health; Livestock Marketing; Water; Human Health; Education and Literacy; Agriculture; Restocking; Natural Resource Management; Alternative Income Generating Opportunities; Savings and Credit; Improvement of Transport Infrastructure; Improvement of Other Services such as electricity and phones; Wildlife Management; Conflict Resolution and Security; Institutional Development such as cooperative training or civic education; Emergency Food Assistance; and any other type of intervention that

they were asked to describe. For each topic, a few examples were cited to help clarify what was meant if there was any confusion. For Livestock Marketing, examples listed included (auctions, cooperatives, crisis-period purchasing, market infrastructure development,...). Given the nature of the research topic, we tried to be very careful to make sure that people understood this was not the first step in launching a development project. We began the interviews by making a statement about our purposes.² When asking questions about development interventions, we wanted to be clear that we were not promising that such interventions were forthcoming. The survey was designed in Kenya, and then used in Ethiopia.

Table one presents summary statistics on the sample size, gender, age, and educational status of the respondents by site.³

² “As you know, we have been coming to the people of this area to ask many questions over the past two years. Now, we are nearing completion of our research work. A goal of our research work is to make recommendations to people and organizations working in this area. We would like to ask you a few questions today about work that has been done in this area, and what work you would recommend be done in the future. We are asking these questions to make sure our recommendations are as good as they can possibly be. We are trying to learn from what has been done in the past, and also find out your views on different priorities for yourself and your community. We cannot at this time promise that someone will come in the future to act on these recommendations. We hope that will be the case, but we also don’t want you to feel misled.”

³ In the Ethiopian sites and the Ng’ambo site in Kenya, enumerators misunderstood the survey methodology and only interviewed the household head, thus explaining the smaller sample size in this site. In these sites, only household heads were interviewed, which is why the percent female is lower in these sites.

Table 1: Individual Characteristics by Site

	N	% Female	Average Age	Average Years Education
Dida Hara	30	23%	55	0.1
Dillo	30	43%	47	0.1
Finchawa	30	33%	52	0.2
Qorati	29	4%	45	0.2
Wachille	28	29%	45	0.6
Dirib Gumbo	49	57%	45	0.3
Kargi	42	64%	45	0.4
Logologo	42	69%	44	1.0
Ng'ambo	29	34%	45	0.8
North Horr	46	48%	39	0.2
Sugata Marmar	41	44%	44	1.2

As there was information from other survey efforts concerning these same households, we were also able to define variables reflecting household level characteristics. The variables used in this study are household herd size as recorded in tropical livestock units (TLU), the two-week expenditure level in Kenya shillings (converted from Birr if values are from Ethiopia) on a defined set of commodities, the share of household three-month income obtained from salary labor and the share from livestock sales, whether the household had a bank account, whether the household was female headed, and whether or not there was anyone in the household who had received formal education. The first four variables are calculated averages for the repeat survey rounds held in June 2000, September 2000, December 2000, March 2001, June 2001 and September 2001, the other three are from a baseline survey fielded in March 2000.

Table 2: Household Characteristics by Site

	TLUs	2 Week Expenditure in Kenyan Shillings	Salary Share	Livestock sale share	Any member Formal education	Bank account	Household size	Female Headed
Dida Hara	17.6	796	0%	53%	23%	3%	5.7	23%
Dillo	12.2	419	2%	49%	48%	0%	13.1	43%
Finchawa	14.7	1760	0%	64%	47%	3%	10.5	33%
Qorati	14.1	336	0%	49%	28%	0%	6.9	4%
Wachille	10.9	1055	0%	52%	57%	0%	6.7	29%
Dirib Gumbo	5.0	559	9%	25%	86%	0%	6.4	16%
Kargi	35.1	398	6%	38%	43%	5%	5	24%
Logologo	12.9	1274	35%	19%	60%	12%	6.5	33%
Ng'ambo	3.6	1464	21%	19%	93%	12%	6.5	33%
North Horr	20.7	523	6%	38%	45%	14%	5.6	14%
Sugata Marmar	19.8	1236	10%	25%	55%	3%	6.6	28%

4. Past Experience with Development Projects

We asked each individual to describe in detail any activity that had personally impacted them for each of the broad categories of development projects listed above, when it happened, what type of organization implemented the activity, and a brief description of how it effected them as an individual. For each category of intervention, the respondent was able to provide details on up to three separate interventions. Tables three and four list the kinds of interventions respondents had experience with from highest frequency to lowest frequency. In addition, the table reports findings on the type of agency providing these services: Government, Mission, NGO, or Other. Other was described as cooperatives, parastatals, community action, and individual action.

Table 3: Past Experience with Development Interventions in Kenya

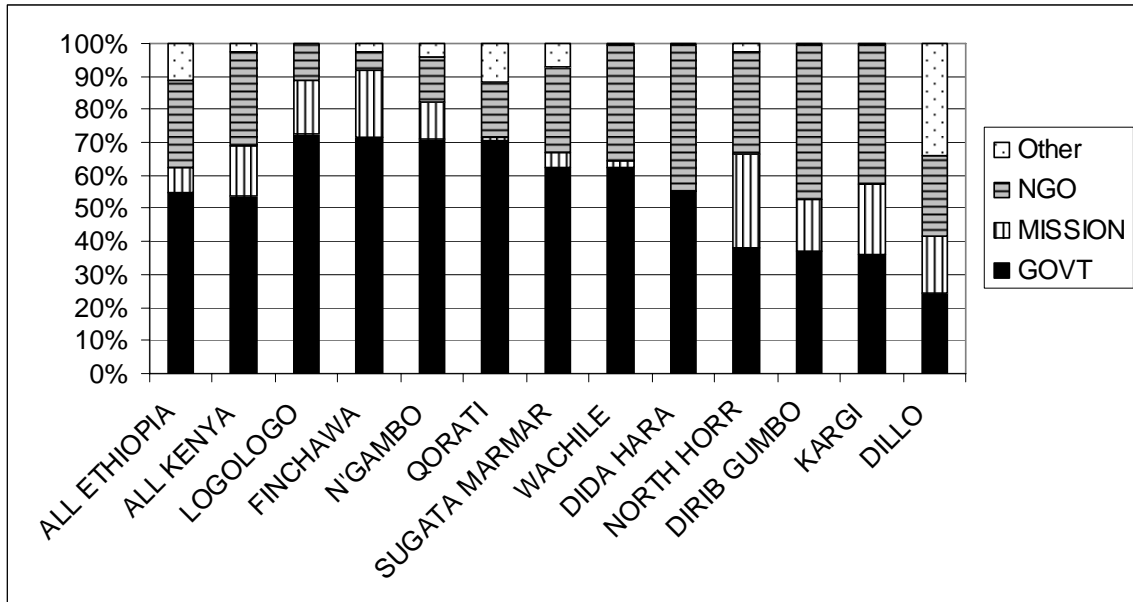
KENYA	% of interviewees with experience	of these, % source was Government	of these, % source was Missions	of these, % source was NGOs	of these, other source
Food Aid	97%	48%	5%	47%	0%
Human Health	88%	43%	39%	17%	1%
Livestock Health	76%	74%	0%	23%	3%
Water	74%	60%	11%	26%	2%
Education and Literacy	62%	38%	46%	14%	2%
Conflict Resolution & Security	62%	52%	5%	39%	4%
Transport Improvement	56%	87%	0%	11%	2%
Livestock Marketing	36%	63%	2%	29%	7%
Natural Resource Management	31%	23%	0%	64%	12%
Cultivation	28%	35%	4%	62%	0%
Wildlife Management	26%	99%	0%	1%	0%
Other Services (phone, electric)	18%	55%	38%	0%	7%
Restocking	13%	0%	26%	74%	0%
Savings and Credit	4%	14%	0%	29%	57%
Alternative Income	2%	0%	60%	0%	40%
Institutional Development	1%	0%	0%	100%	0%

Table 4: Past Experience with Development Interventions in Ethiopia

ETHIOPIA	% of interviewees with experience	of these, % source was Government	of these, % source was Missions	of these, % source was NGOs	of these, other source
Human Health	99%	82%	4%	0%	14%
Food aid	96%	12%	64%	24%	0%
Livestock Health	94%	93%	3%	0%	3%
Water	81%	45%	34%	0%	21%
Education and Literacy	80%	64%	21%	0%	16%
Transport Improvement	67%	82%	18%	0%	0%
Conflict Resolution & Security	53%	70%	0%	0%	30%
Natural Resource Management	29%	15%	35%	0%	50%
Cultivation	27%	74%	26%	0%	0%
Restocking	27%	0%	84%	16%	0%
Livestock Marketing	20%	100%	0%	0%	0%
Institutional Development	3%	80%	20%	0%	0%
Savings and Credit	1%	0%	3%	88%	9%
Wildlife Management	1%	100%	0%	0%	0%
Alternative Income	0%				
Other services (phone, electric)	0%				

Figure one presents the overall pattern of the sources of development aid by site, and for all the sites in each of the two countries. Overall, just over half of all interventions provided were by the government in both Kenya and Ethiopia. There is notable variation in this by site, however, as illustrated by figure one. Government involvement appears highest in Logologo, Finchawa, Ng'ambo, Qorati, and Sugata Marmar and much lower in North Horr, Dirib Gumbo, Kargi, and Dillo. One potential explanation for this pattern is that the sites that are better served by government are on or next to major transport routes while those less well served are not on major transport routes.

Figure 1: Sources of development interventions by site



A related question investigates the degree to which different sources of development aid do different types of projects. To analyze this, all projects of a given type of intervention for all sites in each of the two countries are allocated across the different sources in figures two and three.

Figure 2: Sources of development aid by type of intervention – Kenya

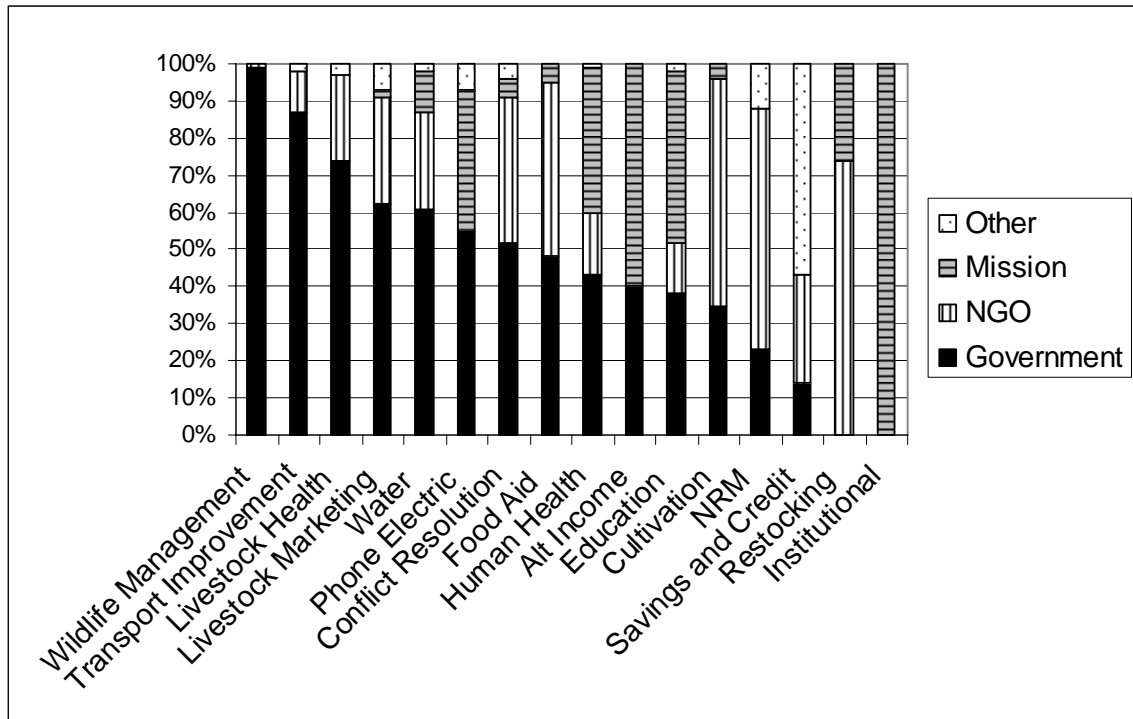
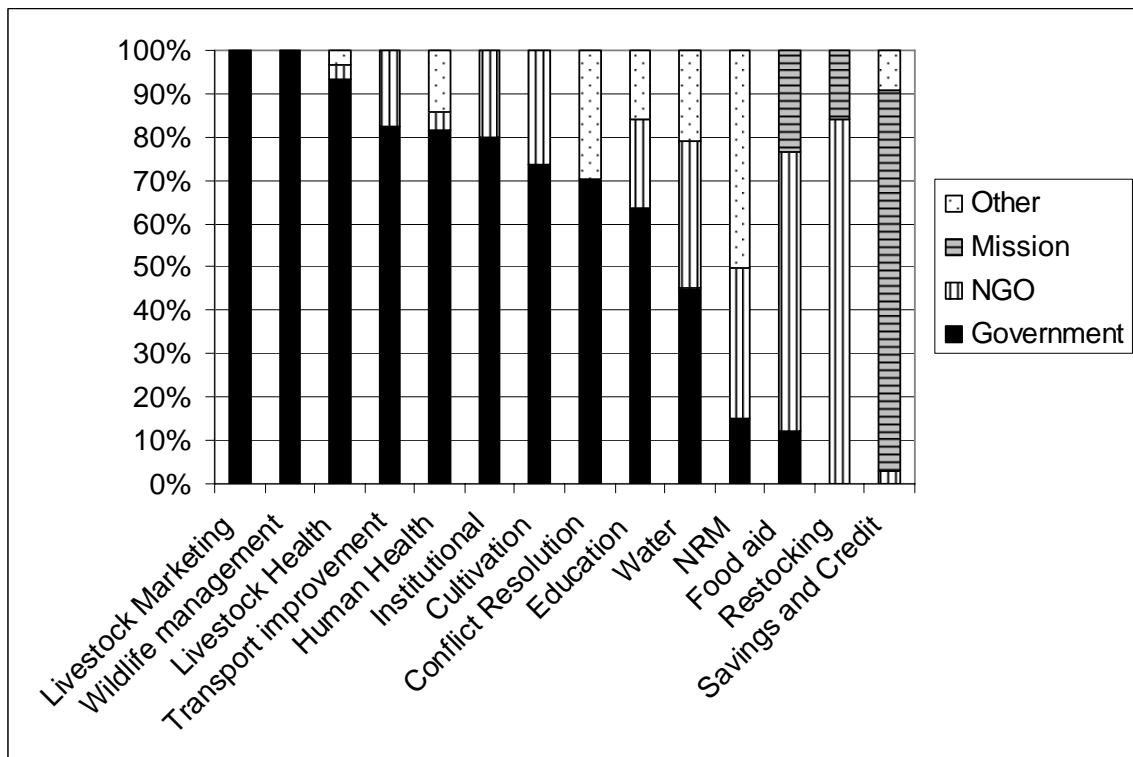


Figure 3: Sources of development aid by type of intervention – Ethiopia



In both Kenya and Ethiopia, it is clear that different types of funding sources do different types of interventions.

We also asked people if there had been any development efforts that hurt the community or them personally in any way.⁴ 12% of respondents in Ethiopia noted something that harmed the community and 8% identified personal harm due to a project. The most common types of things identified were: fertilizer dosages were too high and burned plants; people were given the wrong medicine in health centers; and restocked animals brought diseases. In Kenya, 23% identified something that harmed the community and 8% identified personal harm. The most common types of things identified there were: a borehole in Kargi where water poisoned and killed animals; the spread of *prosipus* plants; and the loss of grazing land to natural resource management projects and wildlife.

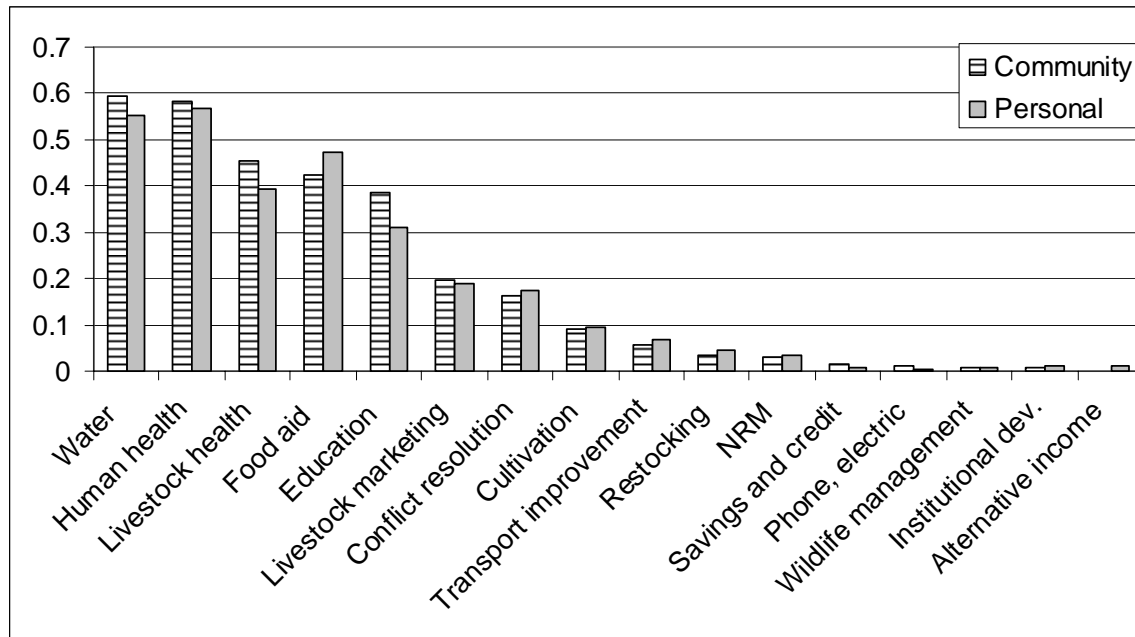
5. Development Rankings – The Past

Respondents were asked to rank the five most helpful past interventions. They were asked to do this both for themselves and for the community, and if they ranked it for themselves personally, it had to correspond to a description of their personal experience as described above. Ranks were normalized on a scale of [0,1], with zero meaning not

⁴ Some respondents identified a lack of development efforts, or flaws in development efforts in their answer to this question. These responses were recorded in the data set, but are treated differently so that only those that describe an effort that harmed the community or person in some way are reported here.

ranked and one meaning highest ranked.⁵ For the 398 observations from the combined data set, the past benefit ranking for the community and the individual overall were positively correlated ($\rho = 0.76$) and are significantly different using a paired t-test ($t = 2.5$). Paired t-tests of the rankings by type of intervention indicate that the community ranking was significantly higher than the personal ranking for education ($t=3.1$) and livestock health ($t=2.5$) and that the personal ranking was significantly higher than the community ranking for food aid ($t=1.9$) and alternative income generation opportunities ($t=2.5$). For all other types of interventions the community and personal rankings are not significantly different. Figure four presents the rankings for past interventions from highest ranked to lowest ranked.

Figure 4: Ranking of Past Development Interventions



⁵ Normalization is conducted using the formula: $rank_n = \left(1 - \left(\frac{rank - 1}{max\ rank} \right) \right)$, where rank is the rank order on the survey, and max rank is the rank order of the highest item ranked by a respondent.

Figure four reinforces the message that the ordering of the rankings for the community benefit and the personal benefit are for the most part similar. Another notable point illustrated by the figure is that human health, water, education, livestock health, and food aid rank highly in what can be thought of as the first tier; livestock marketing, conflict resolution, and cultivation are in the second tier; and the other eight interventions rank in the lowest tier. In terms of past rankings, there is a relatively clear pattern of evaluation that groups interventions into categories of how helpful they were perceived to be.

Of course, given the nature of the question, the overall rank mixes elements of individuals having no exposure to the intervention (for which a rank of zero is assigned) and low rankings for the perceived benefits (they have experience but give it a ranking that is normalized to a number near zero). Figure five attempts to control for these different impacts, contrasting the percent of respondents being impacted by an intervention as reported in table one, the personal benefit ranking and the community benefit ranking of those who did experience the intervention on a (0,1] scale.

Figure 5: Ranking of those who had experience with intervention.

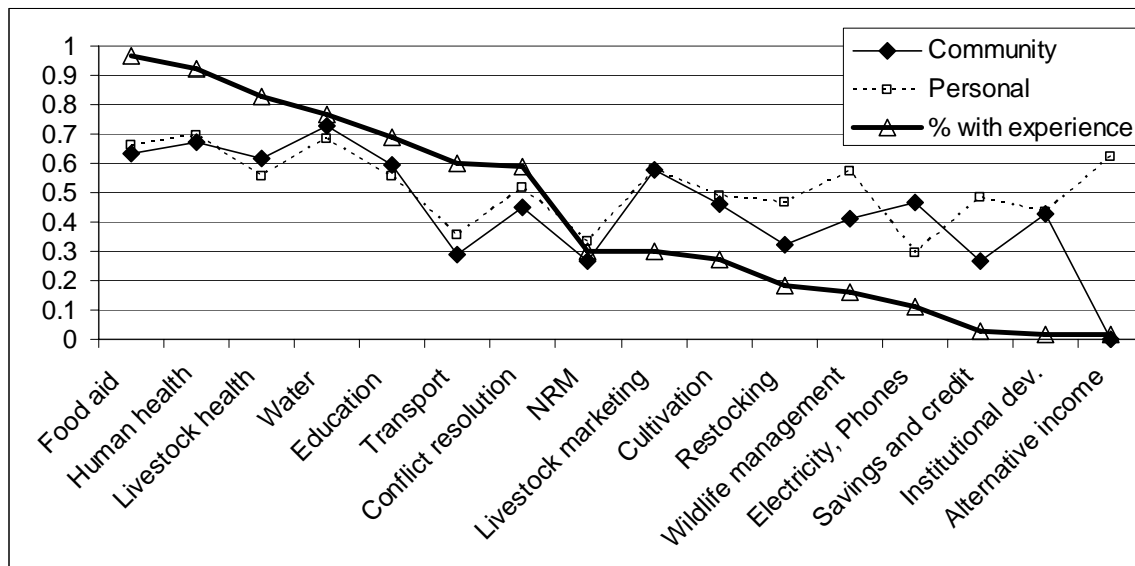


Figure 5 illustrates that some types of interventions that are not all that commonly experienced in the area are ranked relatively highly by the few who do experience them. In particular, livestock marketing, wildlife management, and alternative income generation are accorded personal benefit rankings in the same range as water and education by the relatively small group who has experienced these interventions. In contrast, transport improvement, natural resource management, and services such as electricity and phones are accorded low scores for personal benefit. In terms of ranking for impact on the community, livestock marketing is given a rank that compares well with the top categories ranked, and transport improvement, natural resource management, and alternative income generation are assigned relatively low scores. A few interventions on the right side of the figure exhibit an interesting pattern of the personal ranking diverging from the community ranking. Infrastructural efforts such as installing electricity and phones ranked as conferring relatively small personal benefits compared to the community benefits, while interventions such as restocking, wildlife management, savings and credit, and alternative income generation are seen as conferring more personal benefits than community benefits. Not surprisingly, with the exception of wildlife management, these interventions that are more likely to be targeted at specific households are rated as having greater personal benefits than community benefits.

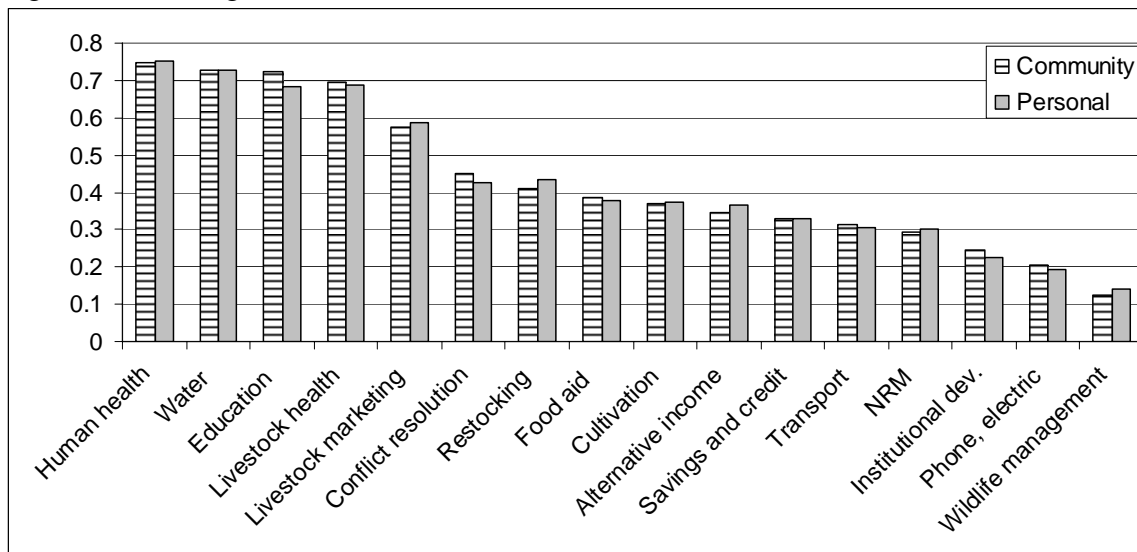
6. Development Rankings – The Future

We asked respondents to look ahead to the future with the ranking exercise. We asked them to rank all the categories of interventions previously discussed in terms of which offered the greatest potential to improve the individual's life and the lives of people in the community. In this exercise, they were asked to rank all interventions. If

they felt a given intervention had no potential to offer benefits, the item is given a zero. Ranks are again normalized by the total number of categories ranked and placed on a [0,1] scale.

The future rankings for benefits to the community and the individual are positively correlated ($\rho=0.78$) and not statistically different using a paired t-test ($t=0.7$).⁶ On the intervention specific rankings, future benefits to the community are ranked significantly higher than the future benefits to the individual only for education ($t=2.1$).

Figure 6: Rankings for Future Interventions

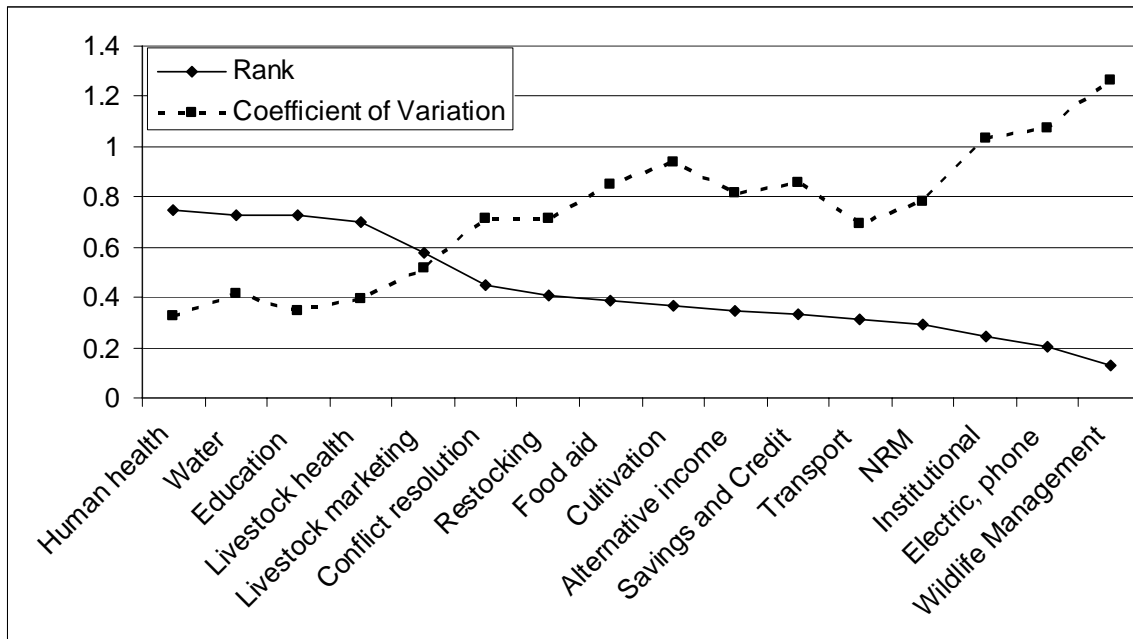


Project types that are given a higher ranking tend to have less variation about them.

Figure 6 contrasts the coefficient of variation (the standard deviation divided by the mean) and the mean ranking for the different priorities. With a few exceptions, there is an inverse relationship between the mean ranking and the relative dispersion around this mean as captured by the coefficient of variation.

⁶ The overall correlation between the personal past and personal future ranking is 0.40, and community past and community future is 0.44.

Figure 7: Mean rank and Relative Variation Around this Mean



To compare the results of the past and present rankings, table five presents the order an individual development intervention was ranked according to the different ranking exercises. We present the order for the degree to which the intervention was experienced, and the rankings for the community, and order the table by the future rankings.

Table 5: Contrasting Rankings

	Past Experience	Past rank Community	Future Rank Community
Human Health	2	2	1
Water	4	1	2
Education	5	5	3
Livestock Health	3	3	4
Livestock Marketing	9	6	5
Conflict resolution	7	7	6
Restocking	11	10	7
Food Aid	1	4	8
Cultivation	10	8	9
Alternative income	16	16	10
Savings and credit	14	12	11
Transport improvement	6	9	12
NRM	8	11	13
Institutional dev.	15	15	14
Phone, electric	13	13	15
Wildlife management	12	14	16

Human health and water interventions are the top two ranked items in both the past and future rankings. The fact that they are also viewed as the main areas for benefits in the future indicates there is still an unmet need in these areas. Education is seen as the next highest priority for the future and is the fifth most commonly experienced and fifth most helpful in the past. One message that comes out of these rankings is that development in pastoral areas is not fundamentally different from development in other areas: meeting basic needs like access to water, health care, and education are the foremost priorities of residents and the areas where they say they received the most benefits in the past.

A second group of largely livestock related topics follows these basic needs interventions. Efforts to improve livestock marketing and restocking are accorded a higher ranking in the future than they were given in the past and livestock health is in the top four in both rankings. Once basic needs are met, overall there is a desire for support

to be given to the livestock economy. To the extent that conflict resolution is also critical to pastoral production, this also is identified in this group, although conflict resolution and security are critical in a broader sense as well.

Non-livestock related income generation activities are identified as falling in the lower half of the table. Cultivation falls some when past and future rankings are compared, while alternative income generation increases for the same comparison. While there is a role for non-livestock based activities, it would appear that people place lower priority on these types of interventions than those discussed above.

Another notable area where decline is observed is in the area of food aid. The general explanation for this result given by respondents in follow up questions was that if the other priority needs are met, there will be less need for food aid in the future. People anticipate that it will have a future benefit to the community as it remains in the middle rankings even for the future, but moves out of the top five.

The types of intervention in the bottom part of the table are relatively consistent across ranking exercises. These also tend to be areas where people have very little experience as noted in figure one, so it could be that they are not giving them high ranks since they do not have a good sense of the potential benefits. If this is the case, then development agencies attempting these types of activity will have to plan on an initial period of extension to explain why the proposed program is beneficial. However, it may also be the case that people have enough experience with such efforts to have doubts about their relative benefits. For example, it would be hard to argue that people have little experience with natural resource management or wildlife management interventions as over a quarter of respondents have had some experience with these efforts. The

evaluation, then, is that these have been relatively less helpful than other types of interventions and offer lower prospects for future benefits.

The discussion so far has concerned the overall results for all 398 individuals who were interviewed. It should be noted, however, that there is variation across the sites in the results of the ranking exercises. Table 6 lists the order in which different types of interventions are ranked by site. The table presents the ordering by site of the rank given to different interventions in terms of the future benefits to the community.

Table 6: Top Five Ranked Future Benefits to Community by Site

	First ranked	Second Ranked	Third Ranked	Fourth Ranked	Fifth Ranked
Dida Hara	Water	Conflict Resolution	Education	Livestock Health	Human Health
Dillo	Education	Water	Restocking	Alt. Income Generation	Livestock Marketing
Finchawa	Education	Livestock Health	Human Health	Water	Savings and Credit
Qorati	Education	Institutional Development	Human Health	Livestock Marketing	Food Aid
Wachille	Water	Livestock Health	Human Health	Savings and Credit	Livestock Marketing
Dirib Gumbo	Water	Human Health	Education	Livestock Health	Cultivation
Kargi	Human Health	Water	Conflict Resolution	Livestock Health	Food Aid
Logologo	Water	Human Health	Food Aid	Conflict Resolution	Livestock Health
Ngambo	Livestock Health	Water	Education	Cultivation	Human Health
North Horr	Livestock Marketing	Livestock Health	Human Health	Education	Food Aid
Sugata Marmar	Education	Human Health	Livestock Health	Water	Livestock Marketing

Why is there variation in rankings across sites? One issue has to do with geography. The sites are in different places with contrasting environments and opportunities, thus leading to differences in what people assess as having the highest benefit. Another issue is that the characteristics of people living in the sites are different as revealed in tables 1 and 2. Perhaps the difference in rankings is driven by differences

in the individuals and households across sites rather than geography. To investigate this issue, we can apply regression analysis to the development rankings. Information on individual specific, household specific, and community specific variables is used. Given the nature of the data, estimation is conducted using a two-limit tobit. The following tables present results for tobit regression of the top five items ranked for potential future benefits to the community.

Table 7: Ranking for Future Interventions for the Community, 2 limit tobit

	Human Health	Water	Education	Livestock Health	Livestock Marketing
Dida Hara	0.8378 *** (0.1585)	0.3807 ** (0.1638)	0.2485 (0.1611)	0.3442 ** (0.1386)	0.5798 *** (0.1877)
Dillo	0.9871 *** (0.1592)	0.4668 *** (0.1628)	-1.6300 (14.2600)	0.6871 *** (0.1379)	0.5474 *** (0.1847)
Finchawa	1.2204 *** (0.1655)	0.7490 *** (0.1679)	0.4393 *** (0.1656)	0.4301 *** (0.1420)	0.3156 * (0.3156)
Qorati	0.9619 *** (0.1640)	0.3825 ** (0.1685)	-0.4030 ** (0.1769)	0.2297 (0.1431)	-0.3203 (0.1948)
Wachille	0.7276 *** (0.1612)	0.7533 *** (0.1674)	0.3150 * (0.1645)	0.7691 *** (0.1411)	0.8825 *** (0.1938)
Dirib Gombo	0.8701 *** (0.1546)	0.8841 *** (0.1624)	0.6495 *** (0.1579)	0.7005 *** (0.1358)	0.2489 (0.1819)
Kargi	1.0781 *** (0.1575)	0.6211 *** (0.1623)	0.2917 * (0.1588)	0.6312 *** (0.1369)	0.1480 (0.1839)
Logologo	0.9119 *** (0.1553)	0.9590 *** (0.1634)	0.5834 *** (0.1578)	0.6513 *** (0.1360)	0.3040 * (0.1824)
Ng'ambo	0.6268 *** (0.1625)	0.6952 *** (0.1702)	0.5379 *** (0.1653)	0.7144 *** (0.1426)	0.0744 (0.1916)
North Horr	0.9673 *** (0.1517)	0.4173 *** (0.1566)	0.6980 *** (0.1530)	0.8627 *** (0.1323)	0.6612 *** (0.1782)
Sugata Marmar	0.8503 *** (0.1509)	0.5559 *** (0.1571)	0.6501 *** (0.1535)	0.6712 *** (0.1326)	0.3192 * (0.1775)
Herd TLU	0.0053 (0.0060)	0.0188 (0.0063)	-0.0078 (0.0059)	0.0030 (0.0052)	0.0065 (0.0070)
Expenditure	-0.0512 ** (0.0200)	-0.0339 (0.0209)	0.0315 (0.0196)	-0.0195 (0.0176)	0.0283 (0.0243)
Salary share income	-0.0166 (0.0684)	-0.0852 (0.0730)	-0.1977 *** (0.0655)	0.0945 (0.0605)	0.0319 (0.0797)
Livestock share income	-0.0536 (0.0485)	-0.0560 (0.0499)	0.0624 (0.0538)	0.0203 (0.0427)	0.0922 (0.0588)
Bank	0.1732 ** (0.0774)	-0.1216 (0.0747)	0.1479 ** (0.0717)	-0.0721 (0.0637)	-0.1491 * (0.0836)
HH size	0.0039 (0.0048)	0.0024 (0.0050)	0.0001 (0.0051)	-0.0054 (0.0043)	-0.0007 (0.0060)
Some / No formal ed any HH member	-0.0126 (0.0331)	0.0333 (0.0340)	-0.0244 (0.0320)	0.0180 (0.0288)	-0.0161 (0.0384)
Female headed	-0.0225 (0.0436)	-0.0146 (0.0469)	0.0355 (0.0428)	-0.0774 ** (0.0388)	-0.0845 * (0.0513)
Female individual	-0.0221 (0.0392)	-0.0427 (0.0421)	-0.0082 (0.0379)	0.0158 (0.0349)	0.0580 (0.0460)
AGE/100	-0.1226 (0.6062)	0.6033 (0.6269)	0.4689 (0.6162)	0.3749 (0.5299)	0.9967 (0.7169)
AGE2/10000	0.1047 (0.6054)	-0.5270 (0.6271)	-0.4067 (0.6145)	-0.4332 (0.5289)	-0.8730 (0.7196)
Education individual	0.0035 (0.0079)	-0.0129 (0.0082)	-0.0058 (0.0076)	0.0022 (0.0069)	0.0010 (0.0092)
Sigma	0.2519 *** (0.0112)	0.2672 *** (0.0114)	0.2470 *** (0.0105)	0.2311 *** (0.0090)	0.3004 *** (0.0133)
Pseudo R ² (Decomp.)	0.53	0.54	0.35	0.48	0.54

*** is significant at the 1% level, ** is significant at the 5% level, * is significant at the 10% level

Table 8: Ranking for Future Interventions for the Individual, 2 limit tobit

	Human Health	Water	Education	Livestock Health	Livestock Marketing
Dida Hara	0.7412 *** (0.1947)	0.6841 *** (0.1652)	0.2459 (0.1753)	0.4046 *** (0.1438)	0.5710 *** (0.1925)
Dillo	0.9954 *** (0.1952)	0.6830 *** (0.1640)	-1.8462 (15.4351)	0.7317 *** (0.1431)	0.4101 ** (0.1892)
Finchawa	1.1364 *** (0.2007)	1.0395 *** (0.1704)	0.3999 ** (0.1800)	0.5767 *** (0.1475)	0.2875 (0.1946)
Qorati	0.9030 *** (0.2020)	0.6144 *** (0.1712)	-0.5236 *** (0.1934)	0.1870 *** (0.1487)	-0.2007 (0.1980)
Wachille	0.8184 *** (0.1977)	1.0433 *** (0.1685)	0.2400 (0.1788)	0.8299 *** (0.1467)	0.7013 *** (0.1967)
Dirib Gombo	0.9730 *** (0.1906)	0.9631 *** (0.1629)	0.6034 *** (0.1714)	0.6766 *** (0.1411)	0.2474 (0.1862)
Kargi	1.1109 *** (0.1934)	0.8209 *** (0.1638)	0.1406 (0.1729)	0.6217 *** (0.1420)	0.0779 (0.1884)
Logologo	0.8390 *** (0.1900)	1.0854 *** (0.1641)	0.4849 *** (0.1716)	0.7387 *** (0.1414)	0.2994 (0.1868)
Ng'ambo	0.6830 *** (0.1993)	1.0014 *** (0.1711)	0.4059 ** (0.1798)	0.6843 *** (0.1482)	0.1084 (0.1966)
North Horr	1.0469 *** (0.1872)	0.6238 *** (0.1577)	0.5723 *** (0.1671)	0.7529 *** (0.1372)	0.5456 *** (0.1812)
Sugata Marmar	0.7991 *** (0.1852)	0.7975 *** (0.1580)	0.4718 *** (0.1668)	0.6356 *** (0.1376)	0.3043 * (0.1818)
Herd TLU	-0.0049 (0.0072)	0.0195 *** (0.0065)	-0.0037 (0.0065)	0.0144 *** (0.0054)	0.0169 ** (0.0071)
Expenditure	-0.0133 (0.0244)	-0.0334 (0.0214)	0.0414 * (0.0213)	-0.0210 (0.0185)	-0.0159 (0.0241)
Salary share income	-0.0104 (0.0862)	0.0248 (0.0731)	-0.1955 *** (0.0712)	0.0089 (0.0626)	0.0733 (0.0817)
Livestock share income	-0.0869 (0.0598)	0.0735 (0.0504)	0.0516 (0.0587)	0.0012 (0.0443)	0.1442 ** (0.0595)
Bank	0.3110 *** (0.1050)	-0.0974 (0.0746)	0.1226 (0.0774)	-0.0602 (0.0665)	-0.2916 *** (0.0866)
HH size	-0.0038 (0.0059)	-0.0065 (0.0050)	0.0076 (0.0055)	-0.0114 ** (0.0044)	0.0061 (0.0060)
Some / No formal ed any HH member	0.0723 * (0.0406)	0.0660 * (0.0345)	0.0498 (0.0346)	-0.0054 (0.0298)	-0.0313 (0.0393)
Female headed	0.0020 (0.0547)	-0.0663 (0.0461)	0.0086 (0.0466)	-0.0433 (0.0402)	-0.0248 (0.0526)
Female individual	0.0329 (0.0489)	0.0064 (0.0415)	-0.0321 (0.0414)	-0.0146 (0.0360)	-0.0171 (0.0471)
AGE/100	-0.2823 (0.7420)	-0.4453 (0.6349)	0.6247 (0.6707)	0.5270 (0.5498)	1.1965 (0.7317)
AGE2/10000	0.2531 (0.7387)	0.4800 (0.6360)	-0.6290 (0.6684)	-0.5261 (0.5489)	-1.1454 (0.7327)
Education individual	-0.0137 (0.0097)	-0.0149 * (0.0082)	-0.0070 (0.0082)	0.0059 (0.0072)	-0.0120 (0.0094)
Sigma	0.3108 *** (0.0142)	0.2697 *** (0.0115)	0.2673 *** (0.0117)	0.2398 *** (0.0094)	0.3086 *** (0.0135)
Pseudo R ² (Decomp.)	0.51	0.51	0.34	0.46	0.52

*** is significant at the 1% level, ** is significant at the 5% level, * is significant at the 10% level

With a few exceptions, the results suggest that the individual's characteristics are not all that influential in determining development rankings. The gender, age, and education variables for the individual are not significant at the 5% level in any of the results presented, and are only significant at the 10% level in two cases. Once site and household characteristics are taken into account, it would appear that the individual's characteristics are not particularly influential in determining development rankings.

Household characteristics have an impact on certain development rankings. In terms of various types of assets, households with larger herds do not differ statistically in rankings for the community, but do identify they anticipate higher personal benefits from water, livestock health, and livestock marketing interventions. The relatively small proportion of households with bank accounts rank human health for both community and personal benefits higher, they rank community benefits for education higher, and they rank personal and community benefits for livestock marketing lower. Households who have greater human capital in the sense that at least one member has some formal schooling rank personal benefits from water and human health higher. In terms of expenditures and income profiles, wealthier households as captured by higher expenditure levels are less likely to rank human health higher for the community and are more likely to rank education higher for personal benefits. With regard to sources of income, those more reliant on salary are more likely to rank education lower for both community and personal benefits than those less reliant on salary and those more reliant on livestock rank the personal benefits from marketing higher. Finally, household size only influences the personal benefits for livestock health personally, and female headed

households rank livestock health and livestock marketing benefits for the community significantly lower.

One of the most important findings of tables 6 and 7, however, is that the community specific dummy variables indicate there is a great deal of geographic variation in how the different interventions are viewed. In no estimation is it the case that the results indicate there are no significant differences across the sites in how an item is ranked. Clearly there are spatial patterns in how different development priorities are viewed. Overall, these results would suggest that community level definition of development priorities which pays some attention to differences across households within the community could arrive at a reasonable approximation of community members' priorities.

7. Follow up on rankings in 2006

We decided to follow up on the results of the ranking exercise in the communities in 2006. We first wanted to update on any new development efforts that may have been implemented since the survey was conducted. We also wanted to identify any potential changes to the community development rankings. Finally, as the categories were somewhat broad (“water” for example), we wanted to follow up to get some further detail (“water” for whom). Appendix B presents the detailed information from these community meetings.

In general, the development rankings are not seen as changing significantly over this period of time. There are some changes noted (loss of livestock in North Horr, insecurity in Samburu district due to the Pokot-Samburu clashes, new water points in

N'gambo), but for the most part it would appear that the development rankings reported in this paper continue to reflect the development priorities of residents of this area.

8. Evidence on Development Priorities by Development Agencies

The setting of this study is the arid and semi-arid areas of northern Kenya and southern Ethiopia. From the Kenya side, we can investigate spending patterns by two development agents to evaluate development priorities of these agents. One of the agents is Government of Kenya as stated in their draft National Policy for the Sustainable Development of Arid and Semi-Arid areas of Kenya (2004). This document is notable in explicitly recognizing that past efforts have been inadequate and calling for a renewed commitment to development in arid and semi arid parts of Kenya. The government is also stating a commitment of 217 billion Kenyan shillings, which is 10% of government's annual revenue, on arid and semi arid land's development over the next ten years.

Another development agent is the World Bank financed Arid Lands Resource Management Project (ALRMP). A recent project appraisal document (2003) describes the second phase of the project. It is stated that over the seven years of the second phase. 38.9 million USD will be spent on natural resource and disaster management; 24.2 million USD will be spent on community driven development; and 14.8 million USD will be spent on support to local development. The funds for community driven development are partially spent on two week long participatory integrated community development process in each community to identify development needs and on training of the community development committees that manage these projects. In two Districts where the ALRMP operates and which contain some of the Kenyan study sites (Samburu District and Marsabit District), we obtained reports that describe the types of projects and

level of funding for each project that were defined as a result of this process from 2003-2005/ 2006 (ALRMP-Marsabit, 2005a; ALRMP-Marsabit, 2005b; ALMRP-Samburu 2006). Table 9 contrasts the priorities as revealed by the funding patterns of the Government of Kenya's strategy, the ALRMP funding allocations to different types of projects, and contrasts them to the results of the development ranking exercise.

Table 9: Contrasting Priorities

Priority	Government of Kenya	ALRMP	Development Rankings
1	Public Infrastructure (roads, electricity, solar, telephone): 57%	Education: 53%	Human Health
2	Water: 8%	Restocking: 16%	Water
3	Human Health: 8%	Alternative Income Generation: 11%	Education
4	Livestock and Fisheries development: 8%	Health and Sanitation: 9.6%	Livestock Health
5	Education: 6%	Water: 4%	Livestock Marketing
6	Tourism, Trade and Industry: 4%	Cultivation: 4%	Conflict resolution
7	Human Resource Development: 2%	Housing for the poor: 1%	Restocking
8	Mixed farming: 3%	Natural Resource Management: <1%	Food Aid
9	Conflict and Disaster Management: 3%	Food Aid: <1%	Cultivation
10		Veterinary: <1%	Alternative income Generation

The Government of Kenya’s strategy does not appear to match closely the development rankings in the communities surveyed. The majority of the funds are to be spent on public infrastructure, which was not highly ranked by survey respondents. Once the funds are allocated to public infrastructure, water, human health, and education are given high priority, but due to the budgetary emphasis on public infrastructure, high priority is reflected by a six to eight percent allocation.

The ALRMP rankings are closer to the development rankings most notably in the domain of supporting education, but appear to overemphasize restocking and alternative income generation and underemphasize human health and water development. The community driven development approach from this evidence appears to be relatively effective in identifying high priority interventions. However, it is worth noting the cost of running the participatory integrated community development meetings and the training

of the community development committees formed to manage the projects. The cost of the meetings and trainings is 23% of the total project expenditure on micro-projects and meeting and trainings. Community participation in development has benefits, but these also clearly come at a cost.

9. Conclusion

Respondents are for the most part consistent in their rankings for the community and individually. There also appears to be remarkable convergence among a few key interventions across these communities. The mean ranking and the coefficient of variation about this ranking are for the most part inversely related. It would appear that there is some reason to be confident that there is a rough consensus about the kinds of things that are desired by communities in this area.

Rankings for the past and for the future are also roughly consistent. With the exception of food aid declining in priority, the message from these rankings is that there is a need for more development projects of the kind they have experienced rather than different kinds of development projects.

The pattern of the development rankings for the future can be broadly summarized as follows. First, basic needs such as water, health, and education need to be met. Second, support to pastoral production is desired. Third, alternatives to pastoral production are noted. While these differ by site, as a general statement of pastoral needs, this general pattern should be helpful in defining development programs.

The priorities of the communities as represented in these mean rankings and the allocations of funds by the Government of Kenya are not easy to reconcile. Locating the origin of this divergence is a topic meriting attention, and a question we can not currently

answer. Further research will be needed to understand this. It is possible that the infrastructural emphasis seen in the Government of Kenya rankings is viewed as a precondition for the other types of development projects. But at the least it suggests that if the spending is implemented, it should be spent in ways that support the provision of the development projects identified by the communities.

The World Bank funding that was described above as being allocated to community driven development appears to be more closely linked to the development priorities. Although there is perhaps an overemphasis given to education in comparison to health and water provision that merits further investigation, it appears the results are broadly consistent with the rankings from the survey. Balanced against these benefits are the costs of involving the community. The approach taken by this project allocates almost one quarter of total expenditure to “method” rather than “project”. While this may be justifiable, it is worth investigating if there are lower cost approaches that maintain community input while freeing up funds to allow for more development projects to be undertaken.

References:

- ALRMP- Marsabit. (2005a) Annual Progress Report Community Driven Development September 2003-September 2005. ALRMP-Marsabit. Project Document.
- ALRMP- Marsabit. (2005b) Progress Report Community Driven Development July 2004-June 2005. ALRMP-Marsabit. Project Document.
- ALRMP-Samburu. (2006) Community Driven Development Progress Report September 2003-June 2006. ALRMP-Samburu. Project Document.
- Bardhan, P. (2002). “Decentralization of Governance and Development.” *Journal of Economic Perspectives* 16(4): 185-205.
- Chambers, R. (1997) *Whose Reality Counts?* ITDG Publishing, London (although others by Chambers as well to be sure)
- Conning, J. and M. Kevane. (2002). “Community Based Targeting Mechanisms for Social Safety Nets: A Critical Review.” *World Development* 30(3): 375-394
- Fratkin, E. (1991). *Surviving Drought and Development: Ariaal Pastoralists of Northern Kenya*. Boulder: Westview.
- Government of Kenya. (2004) Draft National Policy for the Sustainable Development of Arid and Semi Arid Lands of Kenya
- Haro, G. G. Doyo and J. McPeak. (2005) “Linkages between Community, Environmental, and Conflict Management: Experiences from Northern Kenya.” *World Development* 33(2): 285-299.
- Kumar, S. and S. Corbridge (2002). “Programmed to Fail? Development Projects and the Politics of Participation.” *Journal of Development Studies* 39(2): 73-?
- Little, P. (1992). *The Elusive Granary*. Cambridge University Press, Cambridge.
- Mansuri, G. and V. Rao. (2003). “Evaluating Community-Based and Community-Driven Development: A Critical Review of the Evidence.” World Bank Development Research Group. World Bank.
- McPeak, J. and P. Little. (2005) “Cursed if you do, Cursed if you don’t.” in *As Pastoralists Settle*. Kluwer, NY.
- Michner, V. (1998). “The Participatory Approach : Contradiction and Co-option in Burkina Faso.” *World Development* 26(12): 2105-2118.

Platteau, J.-P. and A. Abraham (2002). “Participatory Development in the Presence of Endogenous Community Imperfections.” *Journal of Development Studies* 39(2): 104-136.

Platteau, J.P. and F. Gaspart. (2003). “The Risk of Resource Misappropriation in Community-Driven Development” *World Development* 31(10):1687-1703.

Rao, V. and A.M. Ibanez. (2003). “The Social Impact of Social Funds in Jamaica” World Bank Policy Research Paper 2970. World Bank.

World Bank (2003). Kenya - Arid Lands Resource Management Project Phase TwoProject Appraisal Document. Available at web.worldbank.org

Appendix A: The survey form
Development History Module

Name: _____

ID Area: _____ HH _____ # _____

Age: _____ Sex M F

Date: _____

Done by: _____

Introduction: As you know, we have been coming to the people of this area to ask many questions over the past two years. Now, we are nearing completion of our research work. A goal of our research work is to make recommendations to people and organizations working in this area. We would like to ask you a few questions today about work that has been done in this area, and what work you would recommend be done in the future. We are asking these questions to make sure our recommendations are as good as they can possibly be. We are trying to learn from what has been done in the past, and also find out your views on different priorities for yourself and your community. We cannot at this time promise that someone will come in the future to act on these recommendations. We hope that will be the case, but we also don't want you to feel misled.

Have you been personally affected by anyone (mission, NGO, government, other) working in your area since independence (Kenya) / since 1960 (Ethiopia) on the following issues? If yes, please tell me about the work that was done, and how it affected you.

1) **Livestock Health** (vaccination, quarantines, breed improvement, training, input marketing...)

Yes No

Work done 1: _____

By whom 1: Mission NGO Government Other: (describe)

When 1: _____

How did it affect you 1? _____

Work done 2: _____

By whom 2: Mission NGO Government Other: (describe)

When 2: _____

How did it affect you 2? _____

Work done 3: _____

By whom 3: Mission NGO Government Other: (describe)

When 3: _____

How did it affect you 3? _____

2) **Livestock Marketing** (auctions, cooperatives, crisis-period purchasing, market infrastructure development...)

Yes No

Work done 1: _____

By whom 1: Mission NGO Government Other: (describe)

When 1: _____

How did it affect you 1? _____

Work done 2: _____

By whom 2: Mission NGO Government Other: (describe)

When 2: _____

How did it affect you 2? _____

Work done 3: _____

By whom 3: Mission NGO Government Other: (describe)

When 3: _____

How did it affect you 3? _____

3) **Water** (borehole development for human consumption and / or for animal use, protection of wells, building of dams...)

Yes No

Work done 1: _____

By whom 1: Mission NGO Government Other: (describe)

When 1: _____

How did it affect you 1? _____

Work done 2: _____

By whom 2: Mission NGO Government Other: (describe)

When 2: _____

How did it affect you 2? _____

Work done 3: _____

By whom 3: Mission NGO Government Other: (describe)

When 3: _____

How did it affect you 3? _____

3) **Human Health** (health center construction, disease awareness campaigns, vaccinations, growth monitoring, family planning...)

Yes No

Work done 1: _____

By whom 1: Mission NGO Government Other: (describe)

When 1: _____

How did it affect you 1? _____

Work done 2: _____

By whom 2: Mission NGO Government Other: (describe)

When 2: _____

How did it affect you 2? _____

Work done 3: _____
By whom 3: Mission NGO Government Other: (describe) _____
When 3: _____
How did it affect you 3? _____

4) **Education and Literacy** (school construction, school fee assistance programs, adult literacy and or numeracy...)

Yes No

Work done 1: _____
By whom 1: Mission NGO Government Other: (describe) _____
When 1: _____
How did it affect you 1? _____

Work done 2: _____
By whom 2: Mission NGO Government Other: (describe) _____
When 2: _____
How did it affect you 2? _____

Work done 3: _____
By whom 3: Mission NGO Government Other: (describe) _____
When 3: _____
How did it affect you 3? _____

5) **Agriculture** (input provision, training, pest management, irrigation construction and management...) Yes No

Work done 1: _____

By whom 1: Mission NGO Government Other: (describe) _____

When 1: _____

How did it affect you 1? _____

Work done 2: _____

By whom 2: Mission NGO Government Other: (describe) _____

When 2: _____

How did it affect you 2? _____

Work done 3: _____

By whom 3: Mission NGO Government Other: (describe) _____

When 3: _____

How did it affect you 3? _____

6) **Restocking** Yes No

Work done 1: _____

By whom 1: Mission NGO Government Other: (describe) _____

When 1: _____

How did it affect you 1? _____

Work done 2: _____

By whom 2: Mission NGO Government Other: (describe) _____

When 2: _____

How did it affect you 2? _____

Work done 3: _____

By whom 3: Mission NGO Government Other: (describe) _____

When 3: _____

How did it affect you 3? _____

7) **Natural resource management** (management committees, bush clearing, pasture seeding, improved stoves...) Yes No

Work done 1: _____

By whom 1: Mission NGO Government Other: (describe) _____

When 1: _____

How did it affect you 1? _____

Work done 2: _____

By whom 2: Mission NGO Government Other: (describe) _____

When 2: _____

How did it affect you 2? _____

Work done 3: _____

By whom 3: Mission NGO Government Other: (describe)

When 3: _____

How did it affect you 3? _____

8) **Alternative income generating opportunities** (craft training, polytechnic training...)

Yes No

Work done 1: _____

By whom 1: Mission NGO Government Other: (describe)

When 1: _____

How did it affect you 1? _____

Work done 2: _____

By whom 2: Mission NGO Government Other: (describe)

When 2: _____

How did it affect you 2? _____

Work done 3: _____

By whom 3: Mission NGO Government Other: (describe)

When 3: _____

How did it affect you 3? _____

9) **Savings and Credit** (FSA's, banks, mobile banking...)

Yes No

Work done 1: _____

By whom 1: Mission NGO Government Other: (describe)

When 1: _____

How did it affect you 1? _____

Work done 2: _____

By whom 2: Mission NGO Government Other: (describe)

When 2: _____

How did it affect you 2? _____

Work done 3: _____

By whom 3: Mission NGO Government Other: (describe)

When 3: _____

How did it affect you 3? _____

10) **Improvement of transport infrastructure** (Roads, bridges...)

Yes No

Work done 1: _____

By whom 1: Mission NGO Government Other: (describe)

When 1: _____

How did it affect you 1? _____

Work done 2: _____

By whom 2: Mission NGO Government Other: (describe)

When 2: _____

How did it affect you 2? _____

Work done 3: _____

By whom 3: Mission NGO Government Other: (describe)

When 3: _____
How did it affect you 3? _____

11) **Improvement of other services** (phones, electricity...)

Yes No

Work done 1: _____

By whom 1: Mission NGO Government Other: (describe)

When 1: _____

How did it affect you 1? _____

Work done 2: _____

By whom 2: Mission NGO Government Other: (describe)

When 2: _____

How did it affect you 2? _____

Work done 3: _____

By whom 3: Mission NGO Government Other: (describe)

When 3: _____

How did it affect you 3? _____

12) **Wildlife management** (creation of parks, KWS patrols, island fence construction...)

Yes No

Work done 1: _____

By whom 1: Mission NGO Government Other: (describe)

When 1: _____

How did it affect you 1? _____

Work done 2: _____

By whom 2: Mission NGO Government Other: (describe)

When 2: _____

How did it affect you 2? _____

Work done 3: _____

By whom 3: Mission NGO Government Other: (describe)

When 3: _____

How did it affect you 3? _____

13) **Conflict resolution and security**

Yes No

Work done 1: _____

By whom 1: Mission NGO Government Other: (describe)

When 1: _____

How did it affect you 1? _____

Work done 2: _____

By whom 2: Mission NGO Government Other: (describe)

When 2: _____

How did it affect you 2? _____

Work done 3: _____

By whom 3: Mission NGO Government Other: (describe)

When 3: _____
How did it affect you 3? _____

14) **Institutional development** (cooperative management, civic education...)

Yes No

Work done 1: _____

By whom 1: Mission NGO Government Other: (describe)

When 1: _____

How did it affect you 1? _____

Work done 2: _____

By whom 2: Mission NGO Government Other: (describe)

When 2: _____

How did it affect you 2? _____

Work done 3: _____

By whom 3: Mission NGO Government Other: (describe)

When 3: _____

How did it affect you 3? _____

15) **Emergency food assistance** (wet feeding, emergency relief, food for work...)

Yes No

Work done 1: _____

By whom 1: Mission NGO Government Other: (describe)

When 1: _____

How did it affect you 1? _____

Work done 2: _____

By whom 2: Mission NGO Government Other: (describe)

When 2: _____

How did it affect you 2? _____

Work done 3: _____

By whom 3: Mission NGO Government Other: (describe)

When 3: _____

How did it affect you 3? _____

16) **Other (describe)** _____

Yes No

Work done 1: _____

By whom 1: Mission NGO Government Other: (describe)

When 1: _____

How did it affect you 1? _____

Work done 2: _____

By whom 2: Mission NGO Government Other: (describe)

When 2: _____

How did it affect you 2? _____

Work done 3: _____

By whom 3: Mission NGO Government Other: (describe)

When 3: _____

How did it affect you 3? _____

Considering the past, from independence (Kenya) / 1960 (Ethiopia) to present, which of these efforts do you think has provided the most benefits for people in the community? The second most? The third most? The fourth most? The fifth most?

Which has been the most beneficial for you personally? The second most? The third most? The fourth most? The fifth most?

(rank only the top five for each column)

	Rank for the community	Rank for you personally
Livestock Health		
Livestock Marketing		
Water		
Human Health		
Education and Literacy		
Agriculture		
Restocking		
Natural Resource Management		
Alternative Income Generation		
Savings and Credit		
Transport Improvement		
Other (phone, electricity) Services		
Wildlife Management		
Conflict resolution and security		
Institutional development		
Emergency food assistance		
Other (describe)		

Do you think there have been any efforts that have hurt the community in any way?

Yes No

If yes, which ones and how?

Do you think there have been any efforts that have hurt you personally in any way?

Yes No

If yes, which ones and how?

Looking ahead to the future, which of the following do you think provides the greatest opportunity to improve the lives of people in this community?

Looking ahead to the future, which of the following do you think provides the greatest opportunity to improve your life here?

Rank in order all you think will help, and tell us if you think a particular item offers no opportunity to help.

(enumerator: rank the items following the method used in the repeated survey for activities and risks. If a person says a particular item has no opportunity to help, write NONE in the table instead of a number)

	Rank for the community	Rank for you personally
Livestock Health		
Livestock Marketing		
Water		
Human Health		
Education and Literacy		
Agriculture		
Restocking		
Natural Resource Management		
Alternative Income Generation		
Savings and Credit		
Transport Improvement		
Other (phone, electricity) Services		
Wildlife Management		
Conflict resolution and security		
Institutional development		
Emergency food assistance		

Appendix B: 2006 Follow up meetings.

The following is an example of the community meeting guidelines. This format was followed for each site. Question three was only asked if time allowed.

Dirib Gumbo

	All Sites Ethiopia and Kenya	Dirib Gumbo
1	Human Health	Water
2	Water	Human Health
3	Education	Education
4	Livestock Health	Livestock Health
5	Livestock Marketing	Agriculture
6	Conflict Resolution	Livestock Marketing
7	Restocking	Conflict Resolution
8	Agriculture	Restocking
9	Food Aid	Savings and Credit
10	Savings and Credit	Natural Resource Management
11	Alternative Income Generation	Alternative Income Generation
12	Natural Resource Management	Transport Imp
13	Transport Improvement	Wildlife Management
14	Institutional Development	Other Services
15	Other Services (electric, phone,...)	Food Aid
16	Wildlife Management	Institutional Dev

- 1) Five years ago, we asked people to rank the types of development intervention that they felt would be most helpful for this community in the future. The top five on the list from Dirib Gumbo were: Water, Human Health, Education, Livestock Health, and Agriculture. The first question is, has anything been done in the past five years to meet these development priorities in the past five years in this community?
- 2) Have there been any other kinds of development interventions in this community in the past five years that addressed needs other than those on the list mentioned above in question one? If so, what types of activities were they?
- 3) If there were any development interventions noted in 1 or 2, describe their understanding of how this type of project came to be selected for this community.
- 4) Have there been any changes in the past five years that they think would lead people to change the priorities listed above?
- 5) The top five on the list from Dirib Gumbo were: Water, Human Health, Education, Livestock Health, and Agriculture. Describe in some detail the specific needs in each of these categories that they see for this community.

This section presents the notes from the meetings.
COMMUNITY NAME: Dirib Gumbo

Q. 1

Education

One primary school was built at Kubibagasa in 2004. The school was built with contributions from Arid lands project (ALRMP), Catholic mission and the community. The government has provided teachers and other materials under the free primary education programme.

- ❖ Generally the four primary Schools we have in the location were given free education. The higher education institutions e.g. secondary schools and colleges receive bursary to support the education of students from poor families.

Agriculture

Some poor community members were provided with oxen to improve their farming capabilities. The assistance was from FARM AFRICA and CIFA . The use of oxen has increased harvests despite frequent crop failure due to drought.

Q2.Restocking.

- ❖ Restocking was done in the year 2005 and 2006 by Farm Africa, Arid Lands, CIFA to eradicate poverty in the area.
- ❖ Each beneficiary were given 5 goats, an oxen was provided to 72 farmers.

Alternative Income generation:

- ❖ A number of groups are supported by FARM-AFRICA in the location to undertake income generating activities. The groups receive trainings. IGA's include planting of sukuma wiki shamba, posho mill, management of water tank to collect fee from water sells, livestock trading. The groups are supervised by a locational development committee (LDC) that also runs the account at KCB branch.

Q4. No change in community priorities

1. Water
2. Human health
3. Education
4. Livestock health
5. Agriculture
- 6.Livestock marketing

Q5.

Water.

More water points around the location (extra boreholes and dams) to avail water for irrigation. Water is needed in the dispensary.

Human health

Upgrade the dispensary to a health centre since the services currently rendered are inadequate. For instance deliveries and other essential services are offered at the district hospital located 13km away.

❖ Education

One public secondary schoool is needed in the division. A bursary fund needs to be established to reduce the number of students dropping out of secondary schools due to lack of school fees.

❖ Livestock Health

There are no extension services in the whole of Dirib location. We depend on services provided at the district veterinary office. There are many livestock diseases affecting livestock and the farmers are not trained in diagnosis or treating them.

Agriculture

❖ Drought is a common occurrence in the year cycle. Other problems that we think can be looked at are: shortage of seeds for planting, more oxen for the other farmers, training of farmers, extension services, training in soil and water conservation.

COMMUNITY NAME: KARGI

Q1.

❖ Government of Kenya supplied drugs to the local dispensary since the outbreak of diarrhea and Malaria in 2005.

❖ A borehole has been sunk in Kargi in 2005 through the CDF funding. The water is however salty. Piped water is now received at various points in Kargi e.g. Kargi Primary school, Gangeisa new primary under construction and many plots in town. Both for livestock and human use. The community relies on water from wells for drinking.

- ❖ Has reduced conflict with neighbouring communities by holding peace meetings.
- ❖ Food aid is received from the GoK through the Kenya Red Cross Society.
- ❖ TEAR fund provides relief assistance to malnourished children and also medical assistance.
- ❖ Food aid received from Unicef through the catholic church.
- ❖ Fencing of pans dug through food for work by Inter-aid
- ❖ Vaccination of children against measles by GOK in collaboration with Unicef, WHO and the Kenya Red cross Society.
- ❖ Vaccination of livestock i.e. Camels, shoats by GOK in 2005.
- ❖ Training of T.B.A by the Catholic Church – 2005.
- ❖ Workshop held to create awareness of HIV/AIDs by youth groups through GoK funds for HIV/AIDs
- ❖ Improvement of roads by GoK through Public Works – Marsabit.

Q2.

- ❖ A new primary school is under construction (Gangesia Primary)
- ❖ A laboratory has been constructed in the dispensary through CDF funds
- ❖ Three classrooms were constructed in Kargi Primary school to accommodate increase as a result of free primary education.
- ❖ Installation of solar system to five classes at Kargi Primary school by the CDF.

Q5. Human health

- ❖ Construction of a dispensary at Kurkum is needed.
- ❖ Maternity ward constructed by the Catholic church in 2006. This needs to be equipped.
- ❖ The new laboratory constructed with CDF requires to be equipped.
- ❖ There is need to control common diseases such as pneumonia that occur during the rainy season. The young children and the elderly are the most affected.

Water

- ❖ Improved water quality
- ❖ Install hand-pump in the existing wells, boreholes
- ❖ Water quality is poor in dams; water borne diseases are common especially diarrhea.

Conflict Resolution

- ❖ Marking of boundaries to curb encroachment of neighbouring communities
- ❖ Organization of workshops aimed at conflict resolution
- ❖ Establishment of peace committees.

Livestock Health

Sheep pox vaccinations needs to be done by Vet dept

- ❖ Veterinary extension services are required in the area
- ❖ Organization of field days by vet department to create awareness on the quality of drugs available in the market
- ❖ Improvement of livestock management system to endure harsh environmental conditions such as drought.

Food Aid

- ❖ Inclusion of food items in relief allocation for children and the old. Eg milk, rice
- ❖ Increase of targeted beneficiaries due to the prolong drought that has decimated herds.

COMMUNITY NAME: Logologo

We were not able to get a big group to do the meeting. From a visit there the assessment was that nothing has actually changed from the individual interviews. No project is working there and no new development even from the CDF funding.

COMMUNITY NAME: N’GAMBO

Q. 1

- ❖ Borehole sunk in Loropili (hand pump fitted) but has not been piped to shambas and a storage tank is not replaced.
- ❖ No change in livestock health the health management of livestock is still entirely the responsibility of the owner. No any form of extension services.
- ❖ Free primary education- textbooks freely supplied, school feeding programme revived. This has increased enrolment in primary schools; secondary schools benefit from the constituency bursary fund administered through each location. Construction of 2 permanent classrooms at Sintaan with assistance from an NGO- from Denmark.
- ❖ Numbers of farms have increased about 60 farmers; main limiting factor is water for irrigation.
- ❖ Ngambo dispensary is still the only one in the location additional (2) maternity rooms have been built by the GOK. Only one nurse serves in the dispensary

Q.2

- ❖ Road to Kiserian has been improved easing transport to Kiserian and Mukutani
- ❖ Network coverage in most of Ngambo location-safaricom and Celtel mobile companies.
- ❖ No changes in livestock marketing. Number of livestock at the market have increased and so are the buyers. However, the monopoly of one community (buyers) maintains the low prices.

- ❖ Mobile network has increased the speed at which government responds to cattle rustler's attacks.
- ❖ A one time relief supply was provided by Egerton University (march/april, 2006).

Q.3

- ❖ Water project (borehole) was proposed by the location development committee (LDC) to sub-DDC through DDC, However, not sure if linked to the funder of the project i.e.Belgium cooperation based in Marigat.
- ❖ The maternity rooms were identified during a community meeting with the World Vision project. The World Vision provided the funds for construction of the two rooms, the community provided k10,000 cash and local unskilled labour.

Q.4

- ❖ Water quality improved and distance has reduced with the sinking of the loropili borehole. The water borne diseases are now on the decrease.

Q.5

Livestock health.

- ❖ Improvement of livestock breeds for production/better prices.
- ❖ Polythene/Nylon menace (environmental and livestock health concern)
- ❖ Cactus seeds cause blisters/ mouth soars of shoats when fed naturally.
- ❖ Lack of veterinary supplies (drugs)
- ❖ Rehabilitation and construction of dips for cattle and smallstock.

Water

- ❖ Provision of power connection to the borehole and construction of a reservoir tank to distribute water to the households for consumption for domestic use.
- ❖ Excavation of dams and desilting of existing ones.
- ❖ Desilting of Chemeron dam or construction of one big dam to be used for purposes of irrigation.

Education

- ❖ Construction of permanent classrooms in all schools to replace the iron sheets in use now.

- ❖ Boarding facilities to improve performance of children during national exams (primary schools).

Agriculture

- ❖ Provision of water for irrigation
- ❖ Construction of main permanent canal from the main reservoir that runs through the fields.
- ❖ Deviate perkerra (Tikirish) river to its original course so that the old big canal is put into use.
- ❖ Supply of seeds for sowing.

Human Health

- ❖ Malaria control
- ❖ Laboratory services
- ❖ Increase the number of nurses
- ❖ Upgrade the dispensary to a health centre.

Other

- ❖ Conservancies for wildlife, but consider the potential of human wildlife conflict that may result.
- ❖ Community based animal health management is needed.

COMMUNITY NAME:NORTH HERR

Q.1

Livestock Marketing

- ❖ Livestock marketing centre was built in North Horr
- ❖ No new livestock market, i.e. the only major livestock market is in Nairobi.

Livestock health

- ❖ Nothing has been done on livestock health

Human health

- ❖ There were seminars/workshops held by FHI for human health.

Education

- ❖ Two classrooms for N/Horr primary school
- ❖ 1 classroom for Malabot primary school
- ❖ About 5 nursery classes at different water points e.g El- Bau Magado, El- Isacko Mala, El beso, Qoiga, Bura

Food Aid

- ❖ No addition of food aid
- ❖ There was food for work for N/Horr to improve Hurri Gudha spring.

Q.2

- ❖ Hurri Gudha water improvement carried out by FHI/USAID is one major development that needs to be mentioned because water for human and animals has improved. In establishing this project the vegetation around Hurri Gudha spring has greatly improved.

Q.3

- ❖ FHI held seminars/workshops for environmental groups in North Horr and these groups listed Hurri Gudha improvement and protection as a priority because the spring was almost dry. It was the source of water for a large population of livestock and human.

Q.4

- ❖ The last drought nearly finished livestock especially goats/sheep's therefore restocking programme should be listed as a priority because animals are the backbone of our people's economy.

Q.5

Livestock marketing

- ❖ Livestock prices are low and local traders have little capital for trade.
- ❖ Border markets should be encouraged e.g livestock traders from Ethiopia offer better prices but inter-tribal conflicts weaken the link with the local traders or producer pastoralists.
- ❖ Other livestock market to be identified other than Nairobi only.

Livestock health

- ❖ Nomads or herders be trained on animal management instead of town dwellers as was the case before.
- ❖ A large drug selling centre to be established in North-horr through groups and necessary livestock drugs be made available with fair prices.

Human health

- ❖ North-horr health centre be a well established health centre. Currently the centre still operates as a dispensary. More nurses and a clinical officer or Medical doctor be posted.
- ❖ Dispensaries like Gas/Balesa be given trained nurses to prevent patients from walking long distances to North-horr for minor illness.

Education

- ❖ More schools be built to accommodate the increase in numbers of pupils enrolling in schools.
- ❖ Mobile schools be established to meet the need for basic education for children who are left to herd animals.

Food Aid

- ❖ Food aid is not enough at present, therefore need more relief food. The animals have died during the drought and the few that remain have no births hence no milk.
- ❖ In the past the food aid has been maize and beans. There is need for other essentials like, milk, sugar and oil.

COMMUNITY NAME:SUGUTA MARMAR

Q.1

- ❖ Hand pump well was sunk at Nkutoto elodo by CODES (drought Intervention) – 2005 done.

- ❖ Water tank reservoir constructed by world vision at Lchoro lelerai to supply water to the school and Kisima town. 2005 done
- ❖ Bishop Perlo girls Sec. School started 2006 catholic diocese of Maralal, Suguta Marmar
- ❖ Classrooms constructed in 4 schools Angata Ronkai -1, Nkutoto Arus- 2, Kitabor-1, Lorukoti-1, Lolmolog- 1 CDF, 1- Free Education, Nursery School- Nkutoto-WV.
- ❖ Free Education in primary school, secondary school is still expensive, no one is assisting, private primary school (consolata primary school) started by the catholic church, started 2000, currently class 4.

Human Health

- ❖ Mortuary is at the initial stages of construction CDF
- ❖ A laboratory service is now available at Suguta Marmar health centre
- ❖ There has been increase of population from the displaced communities from laikipia this has led to disease out breaks, mainly typhoid, malaria, measles of children chicken pox, diarrhoea.

Livestock health

- ❖ Vaccination FMD, sheep pox done by vet department Maralal in 2005.
- ❖ Field day for veterinary services was done in 2005 at Amaya by the American marines
- ❖ Outbreaks of CCPP and a Chronic debilitating condition affecting herds that moved to Mt Kenya during the 2004/2005 drought.

Livestock Marketing

- ❖ The number of traders has drastically reduced. The community still brings livestock on market days, Thursday bi weekly. Reduction attributed to insecurity from cattle raiders, the most affected group of traders affected are the local ones who are now focused on patrolling on the security prone areas.
- ❖ Women groups/ societies have stopped purchasing livestock during market days.

Q.2

- ❖ Cultivation of land increased (about 204 farmers were assisted by CCF to till lands)
- ❖ Restocking by CCF – Dorper breeding rams were given to 9 zones, 38 each.
- ❖ Ltunkai community conservancy was initiated in 2005. (Suspected to be source of conflict with the neighboring pokot in Baringo East constituency).
- ❖ A major trench has been built above Suguta town to protect the town from eminent floods during rainy season.
- ❖ Monthly food aid provided by WFP through Ramati dev. In. (the lead agency in Samburu) about 71% households targeted.

- ❖ A coverage of Celtel mobile phone in some parts around Suguta and Angata Rongai area.
- ❖ KADET – an organization affiliated to World Vision intends to provide loans through organized SHGs. (men, women, youth groups.)

Q.4

- ❖ Insecurity that is prevailing has affected many issues, some schools have closed, enrolment reduced.
- ❖ Influx of displaced community from Laikipia conflict, has increased the population of people and livestock in the area, this has exerted pressure on all the resources in the area for both human and livestock.
- ❖ Food insecurity due to theft and vandalism in Laikipia homesteads and property left behind.

Q.5

Education

- ❖ School fees in secondary schools
- ❖ Increased number of primary schools to be (more) constructed. Some schools are overcrowded and some children can not go to school during rainy season.
- ❖ Conflict has deterred some children to go school especially in Amaya,

Human health

- ❖ Operationalize the existing dispensaries in Lolmolog and Longewan.
- ❖ Build more dispensaries at far centers to reach people.
- ❖ Increase the number of nurses at the health centre – Suguta: mobile clinic to further villages and provide an ambulance to the centre.
- ❖ Provide veterinary extension services at the villages, more extension staff to be posted to the division office.
- ❖ Rehabilitate or construct a dip for cattle and small stock.
- ❖ Regulate the supply of vet drugs to improve quality of drugs. There are fake drugs in the market or their quality is poor.

Water

- ❖ Increase water sources- hand pump wells, boreholes, mainly for human use.
- ❖ Water quality – poor in dams, rivers where the majority of people get water.

- ❖ Diarrhea- water borne diseases occur in Suguta Marmar, when water pipes are broken from floods.

Livestock marketing

- ❖ Improved road is the major need- not accessible during rains and makes stock more vulnerable to bandits when enroute to terminal markets.
- ❖ Insecurity posed by highway robbers, mostly prey on traders traveling to market and occasionally theft of livestock on their way to major markets.
- ❖ Phone (network) coverage in the whole area.
- ❖ Livestock prices have high fluctuations.