

CASH FOR WORK APPROACH TO REHABILITATE FARMERS' MANAGED IRRIGATION SYSTEMS IN CONFLICT AFFECTED AREAS OF NEPAL HELPS IMPROVING FOOD SECURITY OF SMALL HOLDERS

APPROCHE « L'ARGENT POUR TRAVAIL » POUR LA REHABILITATION DES SYSTEMES D'IRRIGATION GERES PAR LES FERMIERS DES REGIONS DU NEPAL AFFECTEES PAR LE CONFLIT POUR AMELIORER LA SECURITE ALIMENTAIRE DES PETITS PROPRIETAIRES

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ABSTRACT

Despite ending of armed conflict in 2006, Nepalese agriculture sector received less attention. Agriculture is the mainstay of more than 80% of Nepali people. Development of agriculture is crucial for meeting the food requirement of 13 million poor and food-insecure people. "Helping to Enhance Local Productivity for Food Security (HELP)" Project has been implemented in remotest areas of three food-insecure districts viz. Dailekh, Doti and Kalikot since January 2010. The major objective of the project is to secure year round daily food requirements of 10,000 food-insecure families through increasing farm productivity.

Cash for work approach was used to implement irrigation component of the project. Contrary to other approaches, labourers were paid money (wage) for their work on rehabilitating canals through Construction Committee (CC). The earlier approach of free labour contribution has systematically excluded poorest farmers as they couldn't contribute free labour due to their poverty. On the one hand, there is usually a possibility of excluding non-contributing families from the benefits of irrigation canals while on the other hand they can't take ownership. The adaptive procedure used in the project selected only those irrigation systems that have at least two-third of its total users as poor and food-insecure, formed CC consisting exclusively of poor and food-insecure households (HHs: the target beneficiaries of the project) and paid money for their work. Focus group discussion and semi-structured key informant interview

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were done with randomly selected users of irrigation canals to know results and early impacts of the infrastructure component of the project and its approaches. The approach contributed immediate food security of target HHs through providing cash to meet their household requirement and mid-term and long-term food security through the accumulation and access of target HH's to productive agriculture assets.

Key words: *Cash for work, food security, small holders, construction committee, Nepal.*

RESUME

Malgré la fin du conflit armé en 2006, le secteur agricole népalais reçoit moins d'attention. L'agriculture est le métier principal de plus de 80% du peuple népalais. Le développement agricole est crucial pour satisfaire les besoins alimentaires de 13 millions de personnes pauvres. Depuis janvier 2010, le Projet « Aide pour Augmenter la Productivité Locale de la Sécurité alimentaire (l'AIDE) » a été mis en oeuvre dans les régions les plus éloignées de trois quartiers affrontés par l'insécurité alimentaire notamment Dailekh, Doti et Kalikot. Le projet vise à garantir toute l'année les besoins alimentaires quotidiens de 10 000 familles en augmentant la productivité agricole.

L'approche « Argent pour travail » a été utilisée pour mettre en oeuvre les composantes d'irrigation du projet. Contrairement à d'autres approches, les main-d'œuvres étaient payés le salaire par le Comité de Construction (CC) pour leur travail sur la réhabilitation des canaux. L'approche précédente de contribution gratuite de travail a systématiquement exclu les fermiers les plus pauvres car ils ne pouvaient pas contribuer au travail en raison de leur pauvreté. D'une part, il y a une possibilité d'exclusion des familles des avantages des canaux d'irrigation qui ne contribuent pas au travail, d'autre part ils n'auront pas le droit de propriété.

La procédure adaptative utilisée dans le projet retient seulement les systèmes d'irrigation dont deux tiers des usagers sont pauvres et affectés par l'insécurité alimentaire. La discussion du groupe et l'entretien clé semi-structuré ont été engagés avec les usagers des canaux d'irrigation pour s'informer des résultats et des premiers impacts des composantes d'infrastructure du projet et ses approches. L'approche a contribué à la sécurité alimentaire des bénéficiaires du projet en leur fournissant l'argent pour satisfaire leurs besoins de ménage.

Mots clés: *L'Argent pour travail , sécurité alimentaire, petits propriétaires, comité de construction, Népal.*

1. FOOD SECURITY IN NEPAL

The concept of food security has evolved through time and has received recent attention after the unprecedented soaring of food prices in 2007 and 2008. Until the end of 1970s food security meant more generally the ability of a nation to meet the aggregate food needs in a constant manner. At one end of the spectrum- food security implies the availability of adequate supplies of food at global and national levels; at the other end, the concern is with adequate nutrition and well-being (FAO, 2003). Literatures show that definition of food security has a strong temporal dimension, being defined with the shift of its focus by time. A major shift in definition of food security took place in 1983, when FAO (FAO, 1983) expanded

the concept by including an element of “secured access by vulnerable people” to available supplies, implying that attention should be balanced between the demand and supply side of the food security equation. World Bank (1986) in its report “Poverty and Hunger” broadened the definition to incorporate food safety and also nutritional balance, reflecting concerns about food composition and minor nutrient requirements for an active and healthy life. The 1996 World Food Summit defined food security is achieved when all people, at all times, at the individual, household, national, regional and global levels, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life” (FAO, 1996). This definition is widely used as it covers cultural preference of individuals and identifies different levels of food security. Food insecurity exists when people do not have adequate physical, social or economic access to food as defined above.

Nepal is classified as a least-developed country and ranks 138 out of 169 in UNDP’s Human Development Report 2010 (UNDP, 2010). Even though the national figure has shown that poverty in Nepal has been reduced from 42% in 1996 to 25.9% in 2009, disparity between rural and urban areas is still a persistent problem. Urban poverty was 10% in 2004, while rural poverty was 35%; now it is 8% and 22% respectively. From a regional perspective, the Mid-Western Development Region with the poverty of 37.4% is the poorest, with a notable gap from the better-off regions such as the Central Development Region (22.3% poverty) and urban centres such as the Kathmandu Valley with 1.9% poverty (GON, 2010). Poverty and food insecurity are closely related in Nepal and are largely a rural phenomenon as around two-third of Nepal’s population lives in rural areas. Currently, about six million people of Nepal’s population are undernourished. Half of all children under the age of five suffer from malnutrition and stunting. The hunger in the mountains and hills are more severe than that of plains (Terai physiographic region of Nepal). Similarly, hunger remains high among the indigenous hill tribal groups, some agricultural labourers and share croppers living in Terai and hills. Poverty is worsening in mountainous areas and 13 out of 16 mountain districts and 21 out of 39 hill districts are food-deficient.

Agricultural land is the most important productive resources as well as the determinant of access to other resources and benefits including public goods and services, and power in rural economy of Nepal (RRN, 2009). However, the land ownership is highly skewed. In 2003/04 nearly 73 % farm households owned less than 1 hectare of land to cultivate (almost 45% having less than 0.5 ha only) accounting nearly 37% of the total agricultural land. While 1% of rich households with more than 5 hectares of land held nearly 10% of the country’s total agricultural land (CBS, 2004). More than 60% of the farms are entirely dependent on the timing of rainfall for irrigation. It is important to note that food production depends on several factors. Moreover, the extent of peoples’ needs is determined by the vagaries of climate as well. Food production is rarely sufficient to meet household need of smallholders, and food is frequently the major spending item for smallholder households (Rao, 2010). Natural disasters particularly the heavy monsoon and long drought in summer severely damage crop production. The vulnerability assessment and monitoring report of WFP in (2007) indicated that Nepal faced 132,000 tones food grains shortage for 2006-2007 compared to a deficit of just 23,000 in the previous year (WFP, 2007). Moreover, fluctuation in production often creates difficulties in improving the food production. For example, across several parts of Nepal the plantation of the major 2009 summer crops (paddy, millet and/or maize) were delayed due to the late arrival of monsoon rains. Of almost 476 households surveyed by WFP during this cycle, only

25% planted their primary crop on time and nearly 65% reported poor seed germination (WFP, 2009). Besides such production related problems in agriculture, several constraints have been encountered that directly curtails efforts to produce enough food. For example, Nepal's inadequate road system is recognized as a significant constraint to development.

The average annual agricultural yield in Nepal is poor, particularly compared to neighbouring countries. In addition, sluggish growth in crop production has not kept pace with growth in population and increasing demand. If current agriculture production growth rates remain constant, and requirement continues to increase, then it is likely that within the next 3-5 years Nepal will become stably food deficit at a national level, even during years of 'normal harvest'. This likely scenario is of critical concern, particularly given that the increasing effects of climate change (drought, flooding and other severe weather conditions) on production means that a significant increase in agricultural investment will be required to merely maintain current rates of production. Several constraints impede growth in agriculture, this includes poor usage of improved seeds and fertilizer, and heavy reliance on water intensive crop agriculture, but with limited supporting inputs or infrastructure (nearly two fifths of agricultural land is irrigated but only 20 percent of irrigable land has access to year round water supply). These factors make Nepal particularly vulnerable to drought and other severe weather conditions.

2. THE PROJECT AND ITS APPROACH

Practical Action Nepal has been implementing a 22-months project entitled "Helping to Enhance Local Productivity for Food Security (HELP)" in remotest areas of three persistently food-insecure districts of mid and far western regions of Nepal, namely Dailekh, Doti and Kalikot under the co-funding of European Union's Food Facility Programme since January 2010. The main objective of the project is to secure year round daily food requirements of 10,000 food-insecure families through increasing farm productivity by at least 50%. The target groups of the project are families having less than six months of food availability from their permanent sources, single women, *dalits* (the so-called untouchable caste group) and agricultural labourers. The project has three broad components: training and capacity building of target groups, agriculture input support and agriculture infrastructure development. The infrastructure development component of the project consists of rehabilitating farmers' managed irrigation systems, constructing water harvesting ponds and building collection centres.

"Cash for Work" approach was used to rehabilitate irrigation systems. Contrary to the earlier approach of free labour contribution by the users and widely used food for work approach, individuals who worked as skilled or unskilled labour were paid cash under this approach. In order to assure quality of systems, the project however purchased and transported non-local materials such as cements, HDP pipes and fittings to the nearest road head of the respective construction sites with the involvement of CC so that there is linkage and coordination of farmers and vendor for future services. Design and estimate was done by Project Engineers using local government's norms and standard. The cost for estimates of skilled and unskilled labour, transportation from road head and on-site storage was transferred to CC's back account in instalment basis: first instalment of 30% at the time of signing the agreement and remaining after the completion of works. The back account is operated by at least three office bearers of the CC-usually by Chairperson, Secretary and Treasurer. On-the spot technical

backstopping, supervision and social mobilisation were done by project's sub-engineers and mobilisers. After the completion of scheme, a formal handing over of the scheme was done to the users, which is followed by public audit.

The targeted farmers were also provided seeds of improved varieties of rice, maize and wheat (the staples) and vegetables. They were provided training on improved method of crop cultivation by project and were linked with market and other service providing agencies.

3. METHODS AND MATERIALS

The study reviewed internal and external reports of the project available in Practical Action Nepal's office to obtain first hand data. Participatory methods of data collection namely focus group discussion, semi-structured questionnaire and key informant interviews were used. A total of 107 respondents participated in FGD. The FGD conducted in September, 2011 however actual field work and observation were started from April 2011 onward.

4. RESULTS AND FINDINGS

4.1 FORMATION OF INCLUSIVE CONSTRUCTION COMMITTEE

The CC was formed exclusively of target beneficiaries taking confidence of non-target beneficiaries of the project. This was mainly done through facilitating, consultation and convincing users. Obviously, not all users of the schemes were project's beneficiaries. The CC has seven members; of which three should be women and two should be *dalits*. The remaining should be from other caste groups. In the past, poor people from these groups were excluded from CC or users' committee (UC) on the ground that they are poor, marginal and possess small acreage of land. The adaptive procedure of formation of inclusive CC has secured meaningful and active participation of poor and excluded groups and imparted a sense of ownership on them. After the completion of schemes, the CC formally handed over the schemes to the newly formed UC. The newly formed UC consists of users from both target and non-target groups.

4.2 CASH FLOW IN THE COMMUNITY

In 2010, the project helped the users to rehabilitate 42 irrigation schemes, which directly provided year round irrigation facility to 635 hectares of land of 5,447 HHs. A total of NRs 26.4 million was mobilised to the community through CC as wages of skilled labour, unskilled labour, local material collection and transportation of non local materials from road head to construction sites (Practical Action, 2010). Upon field verification, it was found that an individual works an average of 15 days in the scheme and received an average of NRs 10,500 as wage. However the wage income ranged from NRs 5,000 to NRs 15,000, with a small portion of beneficiaries earning the highest amount in the range.

4.3 USE OF CASH INCOME FROM WAGE

During FGD, it was revealed that the target beneficiaries have spent most of their wage in purchasing rice and lentil (56%), followed by purchasing small animals such as goats (15%),

paying school fees and uniform of their children (9%) and paying debt (Table 1). Around 11% respondents said that they changed their thatched roof with that of CGI sheets, purchased seeds of rice and wheat and spent for medical treatment. A small number of beneficiaries started retails shop (grocery) in their village from the wage income.

Table 1: Use of wage income by beneficiaries

SN	Uses	Number (Percentage)
1	Purchasing of rice and lentil	60 (56.07)
2	Purchasing of small animals	16 (14.95)
3	Paying school fee and uniform	10 (9.35)
4	Paying debt	8 (7.48)
5	Grocery	1 (0.93)
6	Others	12 (11.21)
	Total	107 (100)

Source: Field Survey, 2010

Unlike other approaches, the cash for work approach has provided alternatives for beneficiaries. Although the major choice of beneficiaries is purchasing rice and lentil-the staples, they were also found paying back debts and purchasing small goats. Due to scorching interest rates in remote hilly villages, poor farmers once entrapped into the vicious cycle of interest, they can't come out of it easily. The FGD revealed that around 85% of the respondent had one or another form of debt of varied amount. Hence one of the uses of wage income was paying back the debt. In an evaluation of Food Crisis Cash Transfer Project (Expansion Stage June 2009 to June 2010), it is reported that the cash for work approach has impacted both at individual and community level, adding that more than 80% target households purchased food for at least three months from the cash for Work program during the critical period of time when the people normally had no access to wage employment in the villages, particularly for women (Sedhain, 2009). The present study substantiated the findings that the cash obtained from cash for work approach benefited poor, woman and vulnerable households as they purchased food sufficient for three to four months.

5. SUMMARY AND CONCLUSIONS

Nepal's agriculture was badly affected due to decade long conflict. It affected every element of Nepali society including agriculture. The compulsion of government to divert development budget to security, displacement of farmers, unavailability of agricultural inputs and markets and diminishing coverage of services of government, non-government and private agencies adversely affected agriculture production in general and food security of poor in particular. Despite the ending of conflict in 2006, agriculture sector received less attention. Agriculture is the mainstay of more than 80% of Nepali people, its development is crucial for meeting the food requirement of 13 million poor and food-insecure people. "Helping to Enhance Local Productivity for Food Security (HELP)" Project has been implemented in remotest areas of three food insecure districts viz. Dailekh, Doti and Kalikot since January 2010. The major objective of the project is to secure year round daily food requirements of 10,000 food insecure families.

Cash for work approach was used to implement irrigation component of the project. Contrary to other approaches, users were paid money for their contribution on skilled and unskilled labour through CC. The earlier approach of free labour contribution has systematically excluded poorest farmers as they couldn't contribute free labour due to their poverty. The poorest have to labour daily to earn food for their family. On the one hand, there is usually a possibility of excluding non-contributing families from the benefits of irrigation canals while on the other hand they can't take ownership. The adaptive procedure used in cash for work approach of the project reformed the CC with the inclusion of poorest farmers in it, selected only those systems which had at least two-third of the users are project beneficiaries (having less than six months of food security) and paid money for their work.

The approach contributed immediate food security of poor, vulnerable and excluded communities through their access to cash to meet their urgent household requirement. With the accumulation of productive assets, not only target beneficiaries but also all the users of irrigation system benefited. It contributed medium term and long-term food security through provision of year round irrigating facilities on marginal lands and involving them in natural resource management. It was found that on an average a family of five members can procure food for four months from the wage obtained from working in irrigation canals. The cash income provided opportunities to accumulate and diversify assets, which can be used during the time of livelihood crisis. However, the approach can effectively work in the areas where there is a well-developed agriculture market.

REFERENCES

- CBS. 2004. Nepal Living Standard Survey 2003/2004. Kathmandu: Central Bureau of Statistics (CBS)
- FAO. 1983. World Food Security: A Reappraisal of the Concepts and Approaches. Director General's Report. Rome: Food and Agriculture Organisation of the United Nations
- FAO. 1996. Rome Declaration on World Food Security and World Food Summit Plan of Action. 1996. Rome: Food and Agriculture Organisation of the United Nations
- FAO, 2003. Trade Reforms and Food Security, Conceptualizing the linkage. Commodity Policy and Projection Service. Rome: Commodity Trade Division, Food and Agriculture Organisation of the United Nations
- GON. 2010. 2010. Nepal Millennium Development Goal Progress Report 2010. Kathmandu: Government of Nepal/National Planning Commission/United Nations Country Team of Nepal.
- Practical Action. 2010. Interim Report January to December, 2010. Submitted to the European Union. Kathmandu: Practical Action Nepal
- Rao, V., 2010. Improving and Expanding Agricultural Lending in Nepal's Hills, Nepal: Mercy Corps
- RRN. 2009. Food Security and Vulnerability in Nepal A Case Study of Selected VDCs of Surkhet and Dailekh Districts. Kathmandu: Rural Reconstruction Nepal
- Sedhain, G.K., 2010. Evaluation Report of Food Crisis Cash Transfer Project (FCCTP), Expansion Stage (June 2009 – June 2010). An Evaluation Report Submitted to the Mercy Corps Nepal
- UNDP.2010. Human Development Report 2010. New York: Palgrave Macmillan
- WFP. 2007. Food Security Bulletin July-October, 2007. Kathmandu: World Food Programme, Nepal
- WFP, 2009. Nepal Food Security Bulletin Issue 25, July- October, 2009, Kathmandu: World Food Programme, Nepal
- WFP. 2009. Cost of Coping. Kathmandu: World Food Programme Nepal
- World Bank. 1986. Poverty and Hunger: Issues and Options for Food Security in Developing Countries. Washington DC.