



Investing in rural people

Nepal

Improved Seeds for Farmers Programme

Mid-Term Review Report

Working papers

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Abbreviations and acronyms

WORKING PAPER 1: Support to the Extension of the Formal Seed Sector

1. The performance of this component is rated as Moderately Satisfactory. This component aims at the increased and improved production of Truthful Labelled (TL) seeds of cereals and vegetables within the target area, and its successful marketing. This component has shown significant increase over the past year in activities to achieve targets, and the staff is commended for their dedication and hard work under difficult conditions in the project area. However, despite the fact that the project is at its mid-term, the mission could not see any concrete outcomes yet, since practically, the previous year should be considered the first actual year of implementation due to delays in initiation of activities. On the other hand, the mission noted some issues in the quality of the activities implemented and weaknesses in responding to them.

Sub-Component 1.1 – Ensuring an effective enabling environment Improving Policy and Regulations

2. KUBK-ISFP programme actively participated in national seed summit that was held at Kathmandu in 2015 during which the action plan for the implementation of Seed Vision 2012-25 was endorsed. KUBK is also enhancing its collaboration with **SEAN** (Seed Entrepreneurs' Association of Nepal) , which through its major representation of private seed sector in the country, could further support the programme in bringing policy and regulatory issues to the national level in support of a vibrant seed sector. This issue was further reiterated in the meeting of the mission team in Kathmandu with SEAN senior members and other seed company representatives.

3. *KUBK will be supporting SEAN in capacity building of its members especially in updating their information on old and new seed quality systems and the evolving seed regulation in the country and the opportunities that emerge from them for private sector engagement. SEAN is best placed to engage in a national policy dialogue on the seed sector and lobby with the government for support to its members by ensuring the availability of new crop varieties, timely availability of reliable breeder and foundation seeds as well as seed inspection and quality control systems in the country.*

Improving the seed quality control system

4. KUBK has been supporting the two Regional Seed Laboratories (RSTL) in Bhairahawa and Nepalgunj with equipment and vehicles to enable field inspection and testing of seed samples for quality control. Additional human resources will also be provisioned for the RSTLs. However, based on the initial results of the activities initiated with matching grants, discussions with farmers, and observations in the field, seed sampling process from the field appears to be the weakest point in the quality control system resulting in seeds that are not of marketable quality. While farmer fields seem to be properly inspected by authorized personnel from SQCC and DADO, the collection of seed samples from the farmer lots, has in most cases not been sent to the laboratories for testing by authorized staff but are taken by farmers themselves. Thus neither the actual source of seeds can be verified, nor the sampling method followed is controlled. Accordingly, at one of the seed companies visited by the mission, seeds obtained from SPGs which passed the quality laboratory test, were being cleaned and packaged, but they had estimated impurity levels of 10-15% , some insect infestations and a high proportion of broken seeds. The poor quality observed was most probably the result of improper sampling from the producer groups. RSTL and DADO staff with their field technicians still face a great limitation in human resources are unable to collect field samples themselves for testing.

5. *This issue was discussed by the MTR mission with SQCC, which is presently in the process of finalizing the government guidelines related to seed quality control systems. The guidelines include accreditation of private seed inspectors provided for in the Seed Regulation of 2013. The guidelines are expected to be approved within June 2016. Individuals interested in becoming accredited private inspectors should have a degree in agricultural sciences (at least B.Sc Ag) and should pass the national exam before being accredited to a specific district. Any time they want to work in another new district, they should apply for a new accreditation.. KUBK will support and encourage interested*

individuals who pass the national exam to apply as private seed inspectors for the project districts by employing them as inspectors within the programme and by providing them with additional capacity building that will increase their professional skills (FFS facilitator's training, facilitation skills, social mobilization to cooperatives, marketing skills, etc.) such that they could be further employed by government and non-government agencies and programmes.

Sub-component 1.2: Improved Seed Production

6. This sub-component has a direct impact on the achievement on two of the KUBK performance indicators within the KUBK appraisal document, namely 1) at least 15,000 farmers are organised in seed producer groups (SPG)s and are linked to the formal seed sector and 2) at least 5 major national seed producing companies have established cereal and vegetable seed businesses in the programme area.

7. *As per the MTR assessment, KUBK is unlikely to reach out to 15,000 farmers organized in seed producer groups and the Performance Indicator has been revised to: At least 9,000 farmers participate in at least 360 seed producer groups. The revised indicator is expected to be achieved. All supported seed producer groups and cooperatives, will be linked to the matching grant system, receive social mobilization support to enhance their coherence and governance, receive season-long technical training through FFS, receive the needed support in irrigation processing and storage infrastructure and equipment, the needed quality and quantity of foundation seeds and they will be linked to the private companies and agrovets for marketing their produce (see details below).*

8. *The MTR mission confirms the likelihood of KUBK to reach the second performance indicator of the KUBK appraisal document, namely: At least 5 seed companies establish cereal and/or vegetable seed purchasing operations in the target area. This is based on the fact that companies and agrovets in the districts have already started applying for the KUBK grants scheme and discussing with the farmer groups about their needs or even buying from them.*

Breeder and Foundation Seed

9. As per the MoU between MoAD and NARC, the latter is expected to provide the foundation seeds needed by KUBK for the production of TL seeds in the target districts. Support has been provided by KUBK to the NARC farms/stations and the Agriculture Farm in Palpa and Rukum under DoA farm stations in terms of production and postharvest (processing, cleaning, threshing, storage, etc) infrastructure and equipment for the production of the needed cereal and vegetable foundation seed. While some of the needed quantities of foundation seeds were produced in 2014/15 (192.87 MT, with 191.1 MT of cereals and 1.77 MT of vegetable seeds) either through NARC stations directly and DAO research stations (for vegetable seeds) and through contracted farmer groups (for cereal seeds), KUBK supported farmers were not able to receive the needed quantity of foundation seeds as planned and often the quality was poor. The meeting of the MTR mission with NARC confirmed the need to concentrate more on the production of breeder seeds, and only when possible produce some of the foundation seeds required by KUBK for 2015/16. The private companies met also indicated the need to improve the quality of breeder seeds from NARC, especially given their genetic impurity and the fact that they are not true-to-type.

10. *Accordingly, and based on discussions with KUBK staff, NARC and several of SEAN private sector seed companies, the MTR is recommending the following:*

- *Amend the MOU between MoAD and NARC to ensure that NARC is producing quality breeder seeds and some of the foundation seed requested for KUBK.*
- *Funds from KUBK would be allocated for NARC for that purpose (mainly breeder seed production and some foundation seeds)*
- *For the present planting season of 2016/17, NARC will inform KUBK seed coordinator before the middle of April 2016 about the amount that it can produce out of the needed foundation seeds for 2016/17. The remaining needs of foundation seeds will need to be*

supplied through purchase of available foundation seeds from the market, and when not available, source seeds including certified seeds would be used for planting of TLS by KUBK beneficiary groups

- *For the coming years, KUBK will rely on the foundation seeds produced through the SQCC-certified private sector companies contracting farmers or through farmer groups and cooperatives already certified by SQCC to produce foundation seeds. This will require proper planning and a bidding process for the interested private companies will be needed which should be done as soon as possible (within April / May 2016) to allow for the production of Foundation seeds for the 2017/18 season*
- *As per discussion with SEAN members including SSSC company, a mapping exercise will be conducted by KUBK and SEAN to assess which company could produce which amount of seeds for KUBK in the following years. Funds have been accordingly allocated within the budget of KUBK. The quality of all produced foundation seeds will be controlled by SQCC.*
- *Since the cost of foundation seeds by the private sector is much higher than that of NARC, and since the KUBK subsidizes the cost of the seeds to the farmers, it is crucial that KUBK PMO establish a mechanism for the pricing and delivery of foundation seeds by NARC and the private sector. The mechanism should take into consideration the fact that 1) farmers pay the same price for the foundation seeds regardless of the source to avoid confusion, 2) the actual market price of the seeds is not distorted through the subsidies from KUBK (refer to the recommendations on subsidies in the following section), 3) the private sector – and definitely the farmer cooperatives- would probably require some advance payment for the production of foundation seeds, 4) once foundation seeds are produced they need to be either immediately sold or stored under proper conditions until they are sold.*
- *In case of farmer cooperatives producing foundation seeds, it is even more critical that provision is made to pay farmers directly at least some of the cost of the seeds as they cannot afford to wait for months before they get their money. Otherwise, there is a risk that the seeds are either sold as grain or consumed directly by the farmers. This provision could be made by linking them to larger companies that purchase from them, properly dry and store the seeds for future sales.*

Strengthening seed producer groups and cooperatives

11. The use of the matching grant mechanism is the key output of the KUBK programme and through it, an estimated 6,233 direct beneficiary households have already participated in the TL seed production activities. However, based on the mission discussions in the field with farmer groups and through a quick analysis of the 46 sub-projects granted and implemented in FY 2014/15, the following main constraints were identified to be addressed immediately.

- The actual planted area for seed production is often less than 50% of what was planned in the grant proposal which is the result mainly of the lack of availability of foundation seeds and to a lesser extent the drought conditions reported during the planting period
- The yields obtained were much lower than the expected level as estimated in the business plan of the grant proposal, which is the result of a) lack of technical knowledge and capacity of the farmers, b) drought during the critical crop growth periods including grain filling; c) excessive rain during grain maturation and harvesting time resulting in logging of plants and rotting of seeds.
- The marketing of the seed produced was also much lower than expected, due to poor quality of the seeds produced, lack of available buyers, selling of farmers to neighbours.

12. Based on a preliminary assessment of all the on-going matching grants as well as those in the pipeline and expected to be financed under KUBK (360 sub-projects), the expected production of seeds in all 6 districts as per the business plan of these sub-projects, is expected to be 662 MT for rice, 986 MT for maize, 076 MT wheat and 265 MT for vegetables. The KUBK targets in the appraisal

report on the other hand, are 760 MT, 830 MT, 1,660 MT and 500 MT for rice, maize, wheat and vegetables, respectively. While as indicated above, the amount of seeds that will actually be produced is expected to be much lower than what is indicated in the business plan, this data indicates that KUBK will most probably be able to reach its targets on seed produced on maize and rice, but more efforts are needed at this stage to increase the production of wheat and vegetable seed production.

13. To address the issues and constraints indicated above, the MTR mission recommends the following:

- *Proper planning and budgeting for obtaining of foundation seeds. (Refer to the section above on getting the foundation seeds from certified private sector entities and relying less on NARC). However, the quality of foundation seeds should never be compromised.*
- *The Matching grants scheme had previously used 50% cost-sharing of farmer groups for the foundation seeds. It has been proposed to increase the subsidies provided by KUBK to foundation seeds to 75% in the grants. Subsidies should only be temporary and the farmers should eventually be able to pay for seeds at the market price. Accordingly, the MTR mission is recommending that the subsidy for foundation seeds within the matching grants be gradually reduced in each of the following 3 years of project implementation (75%, 50% and 25%) such that the farmers upon the KUBK closure are able to pay the actual unsubsidized market price of foundation seeds, especially since it is expected that they will be making profit on sales of their seeds and they recognize the importance and value of good quality foundation seeds for their business and income.*
- *Ensure that most of the sub-project grants starting 2016/17 onwards focus on the production of vegetables and wheat and less so for maize and rice to enable KUBK to reach its targets*
- *The farmer groups linked to grants have been provided only 2-3 days of orientation / training on quality seed production (QSP) and there has been no systematic provision of season-long intensive training through QSP FFS for the grantee groups, despite the fact that some 325 QSP FFS have been already conducted during the past years. Since this is critical for the quality of seeds produced and hence the market, all farmer groups being supported through matching grants for seed production should be provided by QSP FFS training.*
- *The curriculum prepared and being implemented for the QSP FFS has been reviewed by the MTR, and was found to be of very good quality, but specific suggestions for improvements are indicated in Annex 1 of this report. PMO will accordingly have to plan for an additional 300-360 FFS on QSP to be completed by the end of the project to cover all seed producer groups who have been granted sub-projects with priorities given to the first groups who received grants.*
- *With the increasing need for the implementation of FFS in KUBK (see also subcomponent 1.3), there is a need to use selected farmer as trained facilitators to run FFS in support to DADO facilitators and their junior technicians. Accordingly, it is critical to develop a management and quality assurance system for the FFS trainings provided for seed producer groups and cooperatives (as well as grain/vegetable producers). This quality control system should include annual refresher courses provided to all facilitators (including farmer facilitators), training for all new farmer facilitators, selection criteria for farmer facilitators and the supervision plans from DADO experienced facilitators for farmer-led FFS and the further enhancement of the FFS curriculum enhancement to include missing or emerging topics from the field (see details in Annex 1)*
- *The inclusion of support to irrigation, especially the rehabilitation of canals, in many of the grants sub-projects is commended since this should make water available at critical stages of crop growth, especially planting and grain filling hence reduce the drought risks and enhance the quantity and quality of seeds produced. However, KUBK is urged to properly evaluate the feasibility of structures that are supported such as water tanks of 40,000 liters (where*

available water will never fill this capacity) or building large storage facilities for groups who have very limited potential production capacities.

- *The sustainability of all groups formed will depend on their coherence and governance and their ability to establish long-term market relationships with the private sector. The MTR notes that with the present situation very few groups would be able to be sustainable after the closure of KUBK. There is accordingly a need for strengthening the groups, governance systems, accountability and transparency in their operations which should also help in the establishment of a trust relationship and confidence with the potential buyers. Accordingly, MTR is recommending to provide support to all producer groups in improving their coherence, conflict resolution mechanisms and governance structures through the help of specialized agencies or NGOs skilled in social mobilization. It is recommended that Heifer International should be used for this purpose since they are expected to be already recruited by KUBK to assist the livestock component, using clear performance benchmarks.*

Engaging Formal Sector Seed Companies

14. Through active awareness raising with the private seed companies on the KUBK activities and the competitive grants scheme, 7 Project concept notes had been received from national and regional level seed companies and 2 from Agrovets, which are presently being assessed. One proposal from the Lumbini Seed Company has already sanctioned and completed the process of negotiation and agreement. AEC through the FNCCI has been active in the districts in the promotion of seed marketing through the enhancement of interactions between buyers and producers, agri-fairs, as well as the multi-stakeholder workshop organized in Gulmi, to establish linkages and facilitate buyback agreements between producer and traders, agrovets and the seed companies. The multi-stakeholder workshop was organized based on the successful experience of the IFAD High-Value Agriculture Project in Hill and Mountain Areas (HVAP) in Nepal and would be expanded to other KUBK districts.

15. *The MTR mission noted however, that the outcome or impact of most of these marketing activities have not been recorded nor included within the KUBK M&E system to assess how they are contributing to the overall Programme objective. It is recommended that issues such as amount of seeds of each crop marketed, the value of the market information systems for the producer groups, support to national seed policies (mainly through the private sector and SEAN), etc. are planned through milestones and the outcome included within the KUBK M&E system.*

16. The MTR is also recommending that AEC together with DADO and PMO should undertake an annual assessment of the views (constraints and improvements needed) of the private seed companies and agrovets who were buyers of seeds from the KUBK farmer groups to improve the buy-back process through enhanced production and marketing arrangement and trust relationships. It is recommended that the results would be discussed in the presence of the farmer groups for enhanced transparency and trust.

17. *On the other hand, since Agrovets have a better outreach to the remote KUBK projects, their role in the marketing of seeds with the private seed companies should be enhanced. Little has been done by KUBK in that respect and MTR is accordingly, recommending that AEC together with DADO should systematically assess the needs and bottleneck for the business collaboration of the private companies with the agrovets and identify adapted modalities to each case where KUBK can support including through training, or material and infrastructure using the matching grant or competitive grants system.*

18. *A proposal by the National Seed Company was also submitted which was under evaluation by the PMO and was discussed with the MTR mission. This proposal was deemed not to be relevant for KUBK target group. The NSC should submit another proposal for the production of foundation seed relevant for the hill districts which could be financed from the matching grant with a 80% financing from the grant and 20% by NSC.*

Sub-component 1.3: Promoting Farmer Demand for TL Seed

19. Activities within this sub-component have a direct impact on the achievement of two of the KUBK performance indicators within the programme appraisal document, namely 1) at least 204,000 ha sown with TL seed for cereals and vegetables, and 2) cereal crop productivity in target area increases by at least 15 percent. Based on KUBK activities and achievements till present, the MTR mission believes that the likelihood of the programme achieving the first indicators is low, especially, that KUBK has practically done very little till present in this component to increase demand of farmers that are grain and vegetable producers beyond the support to seed producer groups. While the second performance indicator on cereal productivity may be achieved, the first indicator has been revised by the MTR mission as follows; “ At least a total of 100,000 Ha in the programme districts are sown with TL seed (cereals and vegetables).

20. *In order to achieve these indicators, the mission urges KUBK to intensify its activities related to increasing the demand for TL seed through enhanced crop productivity practices, creating awareness with farmers on new varieties and getting them in the hands of farmers.* The increase in the demand of TLS as foreseen in the appraisal KUBK document was to be achieved through FFS related demonstrations to compare TL improved seed with farmer-saved seeds, participatory varietal trials (PVS) and other awareness raising activities.

21. Till present, a cumulative total of 325 FFS were completed (27% of target) but these were almost all exclusive to Quality Seed production (QSP) FFS rather than FFS that enhance productivity including through the use of TL seeds. Based on the assessment of the available capacities of DADO staff, DADO field technicians and available farmers facilitator trained by KUBK and other programmes under DOA, it has been estimated that an additional 300 FFS on crop productivity enhancement could be further implemented till the end of KUBK. These FFS will cover good agricultural practices including the use of quality seeds, proper planting time, density and spacing, integrated pest management, integrated soil fertility and water management. Through the FFS, farmers are expected to understand the value of quality seeds in productivity enhancement and will be more ready to buy them. The FFS are expected to cover at least 7,500 farmers producers of grain (wheat, maize and rice) and fresh vegetables. These FFS will include demonstrations that compare the different cultural practices and use of TLS with the farmer’s commonly used practices including self-saved seeds using the same farmer preferred variety in both cases. The management and quality control of the running of FFS and the training of the facilitators are similar to that in the section on component 1.2 that is described in Annex 1.

22. *To achieve the proper running of the production FFS, the PMO will first have to ensure that a new FFS curriculum for enhanced crop productivity will be prepared. This could be practically based on the QSP curriculum but with a different emphasis in its modules and with slight modifications . The improvements in the QSP curriculum suggested a in Annex 1 apply to the productivity curriculum too.*

23. Providing farmers with new adapted varieties through demonstrations and varietal trials is also a highly effective for the enhancement of demand for TLS or other quality seeds. During the past year, KUBK has conducted through NARC 57 Participatory Varietal Selection trials (PVS) against its target of 270 (21%) planned for the programme. These were managed by extension agents and farmers within farmers’ fields, and which aimed at assisting farmers and researchers in identifying the varieties they prefer most which should help in the selection of varieties to be used for foundation and then TL seeds. However, it was noted that several of the varieties selected by NARC for PVS trials were varieties in the pipeline for release, which will hinder their use for foundation seed production and accordingly TLS until they go through the national varietal release system, requiring a couple of years. Besides, KUBK did not receive the results of the evaluation of the varieties by the farmers nor the number and name of the farmers who benefited through participation in the PVS trials.

24. *The MTR is recommending the implementation of 10 PVS trials in each district each year (total of 180 PVS trials till the end of the programme with 60 PVS trials per year per district for the coming 3 years). All varieties tested would be released varieties and all field evaluations will enter the KUBK*

M&E system. The planning, running and evaluation of the PVS trials will be jointly done by NARC, DADO, the district seed coordinators the relevant seed technicians. Details on the running of PVS trials are found in Annex 2.

Annex 1

Farmers Field Schools

1. **Curriculum enhancement:** The following are issues suggested to enhance the curriculum of both FFS themes on the Quality Seed Production (QSP) (subcomponent 1.2) and the Crop Productivity enhancement (subcomponent 1.3)
 - The curriculum should include **Evaluation forms** for the facilitators to complete with the farmer members of the FFS at the beginning and at the end of the FFS. These forms should be incorporated into the KUBK M&E system. The evaluation form show the level of knowledge of participants before and after the FFS. It would provide an important indicator on the impact of the FFS, a comparative analysis on the quality of the facilitators as well as the quality of the curriculum (hence where to intervene for enhancement). While the KUBK curriculum seem to have a ballot box for evaluation, it is not clear what kind of questions are suggested and whether the curriculum contains also a post-FFS evaluation ballot box system. The evaluation forms should have around 10 questions that relate directly to local field problems. The pre- and post-evaluation questions should be of equal difficulty and set in the local language.
 - The curriculum should include the cost-benefit analysis for the production of seeds vs production of grain/vegetables as well as a cost-benefit analysis for farmer's conventional practices vs improved FFS practices.
 - The curriculum should provide space for special topics during the season of interest to the group such as climate change, family planning, nutrition, gender-sensitive mechanization, etc.
 - Though already indicated, additional ideas as exercises for the facilitators should be provided within the curricula. These could be eg: 1) moist chambers to test and proof the presence of fungi on diseased plants even though symptoms are still not clear, which would confirm the importance of suggested planting distance and hence aeration in the field to reduce disease- for onion diseases encountered 2) seed germination test in humidity boxes to show the difference in the germination level between improved seeds and locally saved seeds. 3) same exercise with moist chamber to show the presence of diseases from fungi and bacteria vs clean TLS seeds ; 4) timing of flowering and maturity of fruits/seeds under conventional and improved practices as part of AESA.
 - In the curriculum and trainings provided, crop rotation as well as other cultural practices such as planting time, planting density and use of clean seeds should be included as important practices for the prevention or reduction of pests and diseases, before recommendations to use pesticides are provided.
 - The curriculum should make sure that recommendations that include fungicide or insecticide application are in general avoided, especially for the curriculum on productivity enhancement. However, where they are needed, farmers should be aware of the importance of the risk of pesticide use on health and the environment as well as the risk of pests and pathogens developing pesticide resistance if the pesticides are not regularly alternated or changed.
 - Attention should be given when testing the efficacy of fungicide in the FFS demonstrations by facilitators and seed technicians (as observed in the field in onion seed FFS). Drawing conclusions out of simple pesticide experimental layouts is not as straightforward as it seems and would require the support of a plant protection specialist since the tests include comparison of incidence and severity, the timing of application, the duration of effectiveness (systemic vs contact), etc.

- The curriculum of FFS should ensure that production technologies promoted are as organic and natural as possible, with the implementation of crop rotation, use of livestock manure or composting for soil fertility, application of IPM principles with priority given to the application of bio-pesticides and natural products available in the field where possible.

2. Selection process of farmer facilitators

- At the end of each FFS, the facilitator should select 2-3 farmers from each FFS group who have the following characteristics: good technical understanding and enthusiasm for learning, have natural facilitation skills, have natural leadership skills, trusted by their colleagues, are ready to help others and are farmers or seed producers themselves.
- Together with the PMO-seed coordinator, DADO, and the seed technicians, the names of farmers selected by the facilitator will be further reviewed for selection as facilitators. The total number of selected facilitators will depend on the a) need for FFS to be conducted per district and b) the availability of other DADO or farmer facilitators already trained in the area c) whether the suggested farmers to become new facilitators are members of a larger cooperative (see below). However, at least one facilitator will be selected per FFS.
- All selected farmers and who will be ready to facilitate new FFS in their own village or nearby villages would then be provided with an intensive training for 2 weeks to cover FFS principles, facilitation skills, the curriculum, and technical refreshing information on the QSP or enhanced crop productivity. Records of trained farmer facilitators will be kept for each district.

3. **Cooperatives:** When a FFS is run with some 25 members who belong to a cooperative with a much larger number of members, at least 2-3 farmer facilitators will be selected to be future facilitators for the rest of the cooperative members. These farmers once graduated from the FFS, will be provided the above mentioned training to become farmer facilitators and they will be assigned to organize several FFS each year to the fellow members of the cooperative. They will be supported and supervised as for other farmer facilitators by DADO. This will be an important service that the cooperative provides to its members.

4. **Refresher courses for farmer facilitators:** All facilitators who ran or will be running FFS in one districts should be provided a refresher course once per year, where PMO and district seed coordinators, seed field technicians and relevant DADO staff are present. The workshop will include

- Discussion around the problems, constraints and innovations arising from the experience of facilitators in the field. These cover issues around the implementation of the curriculum, issues related to working with farmers and groups (conflicts, lack of interest, improper timing of the FFS for the women, location of the school, etc), missing elements in the curriculum based on issues raised by farmers or encountered in the field (diseases or climatic constraints, markets, labour), new ideas emerging or requested by farmers, logistical problems faced, etc.
- Identification of solutions to all issues raised should be considered whether logistical, social or technical, and where appropriate, the curriculum will be accordingly revised.
- Enhancement of the curriculum will be done accordingly (adding new modules or exercises as needed) and provide the revised information to all facilitators and train them on the new issues before they leave the workshop (they need to be able to understand and implement the changes in the next season).

- Similarly a short refresher training will be provided on a regular basis to DADO staff and the junior facilitators to cover again all elements of the revised curriculum with technical and facilitation skills is provided again.

5. Training of facilitators on FFS evaluation: it is extremely important that the training provided to all facilitators (older ones or new) would include sessions on the record keeping and evaluation of FFS. This is a critical element of FFS that would help in the assessment of the quality of facilitators and the curriculum, in the number and characteristics of the beneficiaries of KUBK programme, adoption rates and the impact of the programme. However, since evaluation form filling may be time-consuming it would be important that all trainees realize its importance and have a common understanding of what, how, and when to provide the evaluation. Accordingly, training would be provided on harmonized evaluation form and methodology, frequency of evaluation and reporting time and format, and responsibility of each party (facilitator, seed technician, district and PMO seed coordinators, M&E officer).

6. Management of facilitators and quality control system for FFS

- The management of hundreds of FFS running in 6 districts is a very difficult task, especially if quality is to be maintained. Accordingly, the PMO has to develop a clear management and quality control plan for its FFS activities. This includes mainly the elements of coordination, training of new facilitators, running FFS in the districts, refresher courses for all facilitators, curriculum enhancement, Monitoring and evaluation. Keeping records of all FFS run in each location with the trained facilitators running it is very important.
- Stock-taking: An assessment of available facilitators (DADO master-, junior staff-, and farmer facilitators) in each district is needed. In addition, information on farmer facilitators should include their village of residence (since their vicinity to the farmers is critical), what kind of farmers are they (seed or grain or vegetable producer), since years of experience as facilitator and how many FFS he/she has run.
- An FFS coordinator should be identified for each district (preferably from DADO for better buy-in and sustainability, but that could also be the district seed coordinator). The coordinator would be responsible to ensure the proper selection of facilitators based on the need for their allocation to specific areas and groups (with other partners as indicated above), coordinate the needs for training and refresher courses, coordinate the supervision of DADO staff for farmer-run FFS, ensure the timely provision of M&E reports to PIU and PMO.
- In a cascade-like organization, each DADO facilitator as well as junior staff facilitator of DADO will implement only 1-2 FFS/year and dedicate more time to support and supervise 3-4 farmer-led FFS, to ensure quality. Supervision will include visiting each FFS at least 2 times/season observing the running of the school and discussing with farmers and the facilitators, and identifying issues for improvement, especially through discussion with the FFS group at the end of the season. This will reduce the burden of DADO staff to run too many FFS but provide more time to support the newly trained farmer facilitators.
- All DADO staff and junior staff facilitators will have a refresher course at an annual basis. Similarly all farmer facilitators will also receive a refresher course annually to ensure that their technical and facilitation capacities are re-enforced and that issues coming from the field are resolved and incorporated in the curriculum where needed.
- The tables below (obtained from the KUBK PMO), present an inventory of FFS in the various districts, the respective planned training (table 1) and the number of FFS implemented in each

district (table 2). It is important to note that the planned training should reflect the needs of the various districts for FFS based on the future plan to cover: 1) the season-long training planned to all groups who received or expected to receive matching grants as well as 2) to cover the 300 FFS required for subcomponent 1.3 (increasing demand for TLS) over the next 3 years.

- Accordingly, a certain part of the training that will be provided to technicians and farmer facilitators should be geared to the new curriculum on increased productivity (subcomponent 1.3).

Table 1: Inventory of FFS Facilitator In KUBK-ISFP Districts as per PMO database

| SN | District | Type of facilitator on QSP available at present till February 2016 | | | | FFS on QSP Training planned in April 2016 for Farmer Facilitator | Training plan for coming years for Farmer Facilitator* |
|----|-------------|--|------------------|--------------|-------|--|--|
| | | Officer level | Technician level | Farmer Level | Total | | |
| 1 | Rukum | 1 | 1 | 13 | 15 | 8 | 34 |
| 2 | Rolpa | 0 | 1 | 12 | 13 | 9 | 35 |
| 3 | Salyan | 2 | 1 | 17 | 20 | 8 | 32 |
| 4 | Pyuthan | 3 | 4 | 13 | 20 | 8 | 32 |
| 5 | Gulmi | 3 | 4 | 10 | 17 | 8 | 32 |
| 6 | Arghakhachi | 0 | 1 | 12 | 13 | 9 | 35 |
| | Total | 9 | 12 | 77 | 98 | 50 | 200 |

Table 2: Details of FFS Implemented in different Year by Technician and Farmer Facilitators

| District | FY 2013/014 | | FY 2014/015 | | FY 2015/016 | | Total |
|-------------|-------------|--------------------|-------------|--------------------|-------------|--------------------|-------|
| | Technician | Farmer Facilitator | Technician | Farmer Facilitator | Technician | Farmer Facilitator | |
| Gulmi | 15 | - | 10 | 15 | 6 | 14 | 60 |
| Arghkhanchi | 15 | - | 10 | 0 | 4 | 12 | 41 |
| Rolpa | 15 | - | 10 | 15 | 4 | 12 | 56 |
| Pyuthan | 15 | - | 10 | 15 | 6 | 10 | 56 |
| Salyan | 15 | - | 10 | 15 | 4 | 12 | 56 |
| Rukum | 15 | - | 10 | 15 | 4 | 12 | 56 |
| Total | 90 | | 60 | 75 | 28 | 72 | 325 |

Annex 2

Participatory Varietal Selection – Demonstrations and assessment by farmers of new released varieties

Planning and evaluation conditions

- An expected 10 PVS trials in each district each year are planned.
- The planning, running and evaluation of the PVS trials will be jointly done by NARC, DADO, the district seed coordinators the relevant seed technicians.
- The sites for the PVS should be located in the area of the specific production hub, preferably where farmer groups and cooperatives exist.
- The selection of the varieties in the trials should be based on the information provided by NARC on their adaptability to the specific agro-ecologies of the KUBK areas.
- The number of varieties demonstrated per trial should be 3-5 varieties with an additional control which is the locally used variety. For the local variety, it is recommended that 2 plots would be included covering with and without the use of quality seed. Good agricultural practices will be used for all varieties since the objective of the trials is to compare the productivity and characteristics of the varieties.
- Around 20-25 selected farmers from the village around the trial site will be identified and selected to evaluate on a regular basis the performance of the varieties. These farmers will not be the same farmers benefiting from production FFS sessions.
- Around 5 evaluation sessions at critical periods of the crop growth will be undertaken. The number of sessions will depend on the crop type and the sessions should cover at least planting and harvesting dates and covers other critical stages of crop growth such as tillering, flowering, grain filling, etc.
- Special evaluation forms for each field session will be prepared and farmers will be supported by the field seed technicians to fill the form. Results of the evaluation will be discussed in each session with the farmers.
- The final evaluation at time of harvest should cover comparison of grain/fruit harvested, biological yields, and cost benefit analysis. Further evaluations are recommended after harvest if possible, to assess other determining qualities for farmers such as cooking, taste, processing, storage, etc. This will be done differently for each crop.
- All planning activities including planning for the selection of the site, the varieties, the hosting farmer, the evaluating farmers, the evaluating form at each stage and the responsibility for the follow-up and data management will be done jointly between NARC, DADO, the seed district coordinators the relevant seed technicians and will be undertaken before the implementation of the PVS.
- Once the planning is completed, all parties involved would be trained by NARC and DADO on the establishment of the PVS trials and their evaluation. Evaluation forms should be prepared before the training with the consultation of the M&E officer of KUBK.
- Results of PVS trials would then enter the needs of the foundation seeds.
- All results and evaluation forms of the PVS trials would be included in the M&E system of KUBK.

WORKING PAPER 2: Smallholder Livestock Development

Background

1. Livestock is an integral part of the Nepalese farming system. According to the data from the Central Bureau of Statistics (CBS) 2011, livestock covers approximately about 32 percent of agricultural Gross Domestic Product (GDP) and about 11.5 percent of total country GDP. The sector has been designated as strategic by the Government of Nepal (GoN) in the Agriculture Development Strategy (ADS) 2015 to 2035. Goats and buffalo are the most important components of the livestock sector, with the marginal increase of local cattle population from 7.1 to 7.2 million heads. Buffalo contributed about 70% of national milk production (1.496 million MT) and 65% of total national meat production of 250,000 MT in 2010. Goats contributed more than 20% of national meat supply. However, estimates reveal a projected yearly demand gap of around 1.5 million goats. The dairy sector suffers from the scattered nature of milk production and inadequate communication infrastructures; large dairies often either operate at half their operational capacity, or rely on imports of fluid milk or skim milk powder. Despite a large gap in supply of milk and goat meat, sector growth has remained at an average of no more than 3.35%, mainly due to inadequate nutrition, poor genetic quality and inadequate advisory services.

2. The “Smallholder livestock development” component under KUBK aims at increasing productivity in specific key livestock production areas (‘pockets’) through improved genetic potential, feed supplies, health care and herd management, and linking participating production groups more closely to private sector buyers. This component comprises three sub-components: (i) Improving Dairy Productivity; (ii) Improving Goat Productivity, and (iii) Strengthening of District Livestock Service Offices (DLSOs). Under KUBK provision is made to address issues related to cattle and goat nutrition and management, veterinary services development, breed and shed improvement, farmer training and market linkages along with upgrading of infrastructure at the main Nepal Agriculture Research Council (NARC) experimental stations, and for implementation management. Heifer International (HI) is a KUBK implementing partner which has also co-financed activities for improving goat productivity in the districts of Gulmi and Arghakhanchi. The Programme has financed two value chain analysis studies in the dairy and goat sectors to determine the price and value added structure, market and contractual relationships between stakeholders, as well as possible scope for improvements. Both studies have been undertaken and completed by the consulting company Mount Digit Technology.

Overall Assessment

3. Overall, the MTR mission has rated the component as **Moderately Satisfactory**. The component has suffered from a suspension of activities at the outset by IFAD. This was a result of the lack of agreement on the role of Heifer International. However, a Memorandum of Understanding (MoU) was finally signed on 16th April 2014 enabling Heifer International to initiate its goat development activities in the districts of Gulmi and Arghakhanchi utilizing its own funding resources of USD 2.5 m. Shortly thereafter, the PMO initiated activities under this component in the other districts as well. A Livestock Component Coordinator and a Deputy Coordinator have been recruited at PMO as well as other staff for the component at district levels, and since nine months, programme activities in the field have been steadily growing. Programme reports maintain that a total of 10,966 households have directly benefitted from activities under this component and include 48% women, 10.7% Dalit and 28.1% Janajati.

4. The MTR has appreciated the progress made by both Heifer International and KUBK in programme implementation. However, while Heifer International - by building on a long consolidated “goat development model” and a field-tested extension approach (see annex I) - is progressing quite steadily, in line with targets and with a good spending rate, KUBK/PMO staff are still suffering from (i) the lack of a clear work plan with well-identified targets for the component (partially inherited from design); (ii) pending finalization of Farmer Field School guidelines (iii) the inadequate number of Livestock Specialists, Community Dairy and Goat Assistants at district level and (iv) limited mobility and transport capacity. These factors are undermining the delivery capacity and quality of KUBK/PMO team - in spite of their technical capacity and commitment. In districts not covered by Heifer International there is lack of regular and deep engagement with the smallholder farmers and lack of strong social mobilization so critical for effective programme implementation, achieving results and long-term sustainability. The newly created Ministry of Livestock Development feel that a lack of a representative from their side at the PMO also leads to poor coordination.

5. Taking into consideration that the completion date of the programme is 31st December 2019 and in order to ensure the successful implementation of the subcomponent, the MTR mission strongly recommend the following: (i) the engagement with Heifer International (HI) for the implementation in all six districts of a customized model for livestock productivity enhancement; (ii) the development of a joint work plan of activities covering the six targeted districts, in close coordination with the PMO, DLSOs, AEC and the Livestock Service Centres (LSCs) which is characterized by clear benchmarks and targets; (iii) adequate staffing at district and LSCs level further supported by increased mobility, equipment and training and (iv) representation of a class 2 Officer from the MOLD at the PMO in Butwal. In order to facilitate the engagement of HI in all programme districts, the MTR is recommending to IFAD to finance HI from KUBK's grant funds to facilitate the Government in its decision. The MTR believes that without the strong social mobilization support which HI can bring to the livestock and other seed production activities, it will be difficult for KUBK, in the remaining timeframe, to achieve its target in terms of outreach and sustainable productivity enhancements in the sector.

Sub-component 1: Dairy Productivity Improvement

6. The dairy value chain study funded by KUBK reports that “the dairy production systems of Nepal can be categorized as semi-subsistence to market oriented production systems. However, large volume of the milk produced in the hills of the Nepal is not traded and more than 90% of the production is used at household level. In these systems, livestock are fed low quality feeds such as crop residues and other byproducts to produce high quality nutritious food (milk and meat) for human consumption, draught power and manure for crop production and hides and skins for local manufacturing industries and for export. Most of the farmers are keeping low productive dairy animals. However, crossbreeding with Jersey and Holstein Friesian cattle and Murrah buffaloes are main breeds of dairy animals respectively of cattle and buffalo encouraged to grow through breed improvement activities in the country. In the fiscal year 2013/2014 a total of 1,700,073 million liter of milk was produced in the country, of which almost 69% of the total milk production was contributed by buffalo milk. Average annual growth rate of the milk production is only 3.26% in the period between 2004/05-2013/14, whilst the annual growth of internal consumption of milk is about 8%. Nepal imports milk and its various products to meet its demand from Asia, Europe, North America, and Australia. According to Agro Enterprise Center/ Federation of Nepalese Chambers of Commerce and Industry, the demand for milk is expected to double in the next 15 to 20 years.

7. The MTR mission assessed that in spite of challenging conditions for milk production (e.g. steep hills and mountains; erratic rainfall and rather dry climatic conditions; scarcity of land, pastures and water, and difficult transport and communication), smallholder dairy farming is growing in the programme area offering opportunities for income generation and job creation, especially of youth. KUBK strategy has been to select dairy “pocket” areas with potential for growth and support capacity building interventions (trainings, workshops and interaction meetings) in collaboration with the DLSOs on improving forage production and cattle nutrition, veterinary services and breeding management with smallholder producers. In addition, KUBK/PMO supported interventions to develop market linkages for milk and milk products in the programme districts.

8. The MTR recognizes the progress made by KUBK under this subcomponent and during field visits, the potential for developing “short” value chains (especially in Palpa and Gulmi District) by upgrading informal and semi-formal processors' capacity was noted. Forage production and nutrition have been strengthened with the establishment of 6 fodder resource centres, forage nurseries at village level, training of farmers and distribution of equipment (30 chaff cutter machines). Animal health interventions have included: training of 22 paravets and 32 Village Animal Health Workers (VAHWs); organization of 15 veterinary camps, vaccinating a total of 11,800 dairy animals (cattle and buffaloes) against Foot and Mouth Disease (FMD), Haemorrhagic Septicaemia (HS) and Black Quarter (BQ) and drenching 1500 animals against internal parasites. Breeding improvement has been supported by importing 10 Murrah buffalo bulls for distribution at district level and 7,000 doses of Jersey cattle semen (American origin) of which 600 doses have been sent to DLSOs for Artificial Insemination (AI). In total, 710 dairy cattle have been already inseminated in dairy pocket areas. A number of training and workshops have been organized for field staff, livestock farmers and dairy entrepreneurs on milk production and marketing. Grants have been provided for dairy entrepreneurs for supporting the establishment of chilling vat (with 500 litres capacity) and production of dairy products. In spite of these encouraging achievements, the MTR mission has identified three priority areas which the Programme needs to urgently address: (i) DLSO/KUBK PMO planning and

programme management; (ii) Programme staffing and increased mobility and (iii) training and capacity building.

9. For the following phase, in terms of its geographic focus and building on the findings of the value chain study (annex 2), MTR recommends focusing KUBK interventions in seventeen (17) dairy production clusters mainly located in three (3) districts of Gulmi, Arghakhanchi and Pyuthan with selected interventions in the three remaining districts. The DLSO would remain the main agency responsible for the implementation of the subcomponent notably in the areas of (i) service provision to dairy farmers (veterinary services and vaccination programmes, artificial insemination, bull distribution, fodder development, shed improvement and technical training), (ii) monitoring and supervision and (iii) evaluation of programme activities. In order to increase DLSO's effectiveness and KUBK impact with smallholder dairy producers, the MTR recommends (i) developing of a three-years' work plan for the subcomponent with clearly identified benchmarks and targets ; (ii) facilitating DLSO's access to appropriate transport capacity; (iii) recruiting 2 additional Livestock Specialists (total 8 LSs) and 12 additional Community Dairy Assistants (total 22 CDAs) and providing them with adequate transportation (motorcycles) and equipment; (iv) facilitating the importation of additional 75 Murrah buffalo bulls for breed improvement at village level and 5 Murrah bulls and 25 Murrah buffalo cows for upgrading the breeding stock of the National Buffalo Resources Centre in Pokhara; (v) facilitating the import of 20,000 additional doses of semen of Jersey breed; (vi) recruiting Heifer International as service provider to support DLSO and Livestock Service Centres (LSCs) staff in field activities and build their capacity, skills and knowledge concerning social mobilization, extension and technology transfer, gender and targeting, food security and nutrition, through an "on-the-job" training approach; (vii) upgrading of the facilities of the National Buffalo Resources Centre in Pokhara and (viii) complete the construction and equipment of Livestock Service Centres at district level.

Sub-component 2: Goat Productivity Improvement

10. Goats are a key asset for resource-poor farmer households, particularly among women, Dalits and indigenous populations. The goat value chain study funded by KUBK reports that *"Nepal has a goat population of 9.51 million with an annual growth of just above 2%. About 50% of households (2.79 million of the 5.4 million) keep goats, with average holdings of 3.3/household. The contribution of livestock to total agricultural GDP (AGDP) remains at about 27.66 %. Goat contributes 20% to national meat production and has a share of about 12% in total Livestock GDP. The current total supply of goat meat is 61,372 MT from domestic production and import, with the domestic production contributing 53,956 MT (88%) and import 7,416 MT. Compilation of goat import data available at Animal Health quarantine offices revealed that about 412,000 live goats were imported from India in the 2011/12. A crude estimate based on income elasticity reveals that in FY13/14 total demand gap for goat meat in the country will be about 1,800,000 additional goats annually (up from 789,000 in 2011/12). The estimated off-take rate of goat is about 36.3 per cent, which indicates that nearly 3.43 million of the national flock of 9.51 million goats are slaughtered annually for meat purposes. About 75% of the total off-take is consumed at the villages and the remaining 25% is supplied to formal market places. There is no organized live goat marketing system in the country, except scheduled weekly live animal markets in the Narayani-east sector. The inflow of goats into the various Haatbazars does not meet the economic scale; therefore, the domestic goat meat value chain is ineffective in supplying goats to major end markets. Heifer Nepal's goat value chain study revealed that in the year 2010/11 969,789 goats were traded from these markets, including both imports and domestic production. Out of this total, 567,049 were from domestic production and 402,740 from import."*

11. During the field visits, the MTR mission noted the extensive demand from farmers' groups, cooperatives and entrepreneurs across the six targeted districts for technical and economic support for improving goat productivity. The Programme approach has focused on developing goat activities mainly in Gulmi and Arghakhanchi district, and - as explained above – two parallel initiatives led respectively by KUBK/PMO and by Heifer International are presently on-going, both implemented under the supervision of the DLSO. Under KUBK/PMO initiative, emphasis has been given to breed improvement and two Boer Goat Breeder Herds and a number of Goat Multiplier Herds have been established in both districts. A total of 10 farmer groups (about 200 households) have been involved in managing goat breeding herds (ranging from 5 to 10 females) and have benefited from several project interventions on forage development, training on improved goat nutrition and breeding management, shed improvement and veterinary services (animal health training, PPR vaccination and drenching against internal parasites during 8 vet camps). However, the decision of importing Boer

goat breeding stock and semen has been delayed by IFAD in order to wait for the on-going MTR mission recommendations. A total of 42 persons were trained as Farmers Field School (FFS) facilitators to support FFS activities in Programme districts where goats herds are established. Four FFS (two each in Gulmi and Arghakhanchi) on goat production were established with success. Compared to traditional goat rearing systems, a significant increase in body live weight (an average +20% increase) can be achieved at village level if improved practices are adopted by producers.

12. As discussed above, Heifer International have implemented goat development activities based on a well-established Value Based Holistic Community Development (VBHCD) model to achieve two main results: (i) Improved goat production and productivity in 12 Village Development Committees (VDCs) of Gulmi and Arghakhanchi and (ii) Strengthened technical capacity of KUBK team. Heifer International is implementing the programme through 14 local NGOs and has successfully established Self-Help Groups (SHGs) involving 6,885 producers, almost entirely women. Through the “Pass on the gift” (POG) approach, 3,295 female goats have been distributed to poor households, while 168 improved bucks issued from crossing local breeds (Jamnapari and Khari breed) were also distributed for breeding services. In addition, 57 forage and fodder trees nurseries have been established; 1,567 goat sheds have been improved and 240 weighing scale have been distributed. The project provided drenching services and vaccination against PPR for 41,000 and 23,125 goats respectively. About 18 AHWs have been trained and equipped with veterinary kits. Finally 13,293 farmers, particularly women, have been trained on different subjects including cornerstone trainings, fodder and forage development, SHG management, improved animal health training, kitchen gardening, nutrition and gender justice and health issues. The MTR mission had the opportunity to visit few SHGs and has appreciated the effectiveness of Heifer International’s approach in empowering women and significantly increasing goat herds productivity at household level (-50% reduction in pre-weaning mortality).

13. The MTR Mission strongly recommends to pursue ways to ensure a full integration and harmonization of initiatives aimed at improving goat productivity promoted respectively by KUBK/PMO and Heifer International under the Programme. This would allow the Programme to achieve significant impact during the remaining 3 years of KUBK implementation. The MTR recommends that Heifer International be made responsible to deliver “customized” service provision to a total of 36 VDCs (estimated 36,000 households) under the overall implementation responsibility and supervision of the MOLD and the DLSOs at the district level.. The MTR mission recommends developing of a three-year work plan for the goat development subcomponent with clearly identified benchmarks and targets. The mission recommends hiring of an additional 7 Community Goat Assistants (total 22 GDAs) and providing them with adequate transportation (motorcycles) and equipment to operate at field level.

14. The MTR recommends to downscale the original KUBK plan for Boer goat breeding in order to mitigate the potential risk of mortality or underperformance associated with imported (highly expensive) breeding stock once they are distributed to resource-poor smallholder farmers. The MTR recommends the importation of 50 Boer bucks and 10,000 doses of quality semen which can lead to the development of a viable breeding plan. For breed improvement, the Programme can distribute improved local breeding stock, the selection of such animals and final decision about their distribution and location will be under the responsibility of the PMO’s Livestock Component Coordinator, MOLD staff at the PMO. The choice of breed will be based on farmer choice and experience and capacity to manage different breeds. Farmer Field Schools (FFSs) activities will be maintained as an indispensable tool for extension and technology transfer, however the total number will be reduced to 80 FFS. Finally, in order to ensure that communication and information on Programme activities are widely accessible among all stakeholders, it is recommended to include a representative of Heifer International in the Steering Committee and in the Project Implementing Unit (PIU) located in Butwal.

15. The MTR mission recommends the organisation of an Inception Workshop under the new proposed implementation approach for the component 2 to clarify roles and responsibilities of all partners and develop an agreed implementation plan for the component.

Sub-component 3: Strengthening of District Livestock Services Offices (DLSOs)

16. The PMO has supported DLSOs under the programme districts with the provision of office equipment (furniture set, laptops; printers etc.) and motorcycles (one per district) to enhance programme monitoring. Two Livestock Service Centres (LSCs) buildings have been constructed. Training sessions have been organized and an Artificial Insemination training was organized in India for 12 technicians. The MTR mission underlines that the implementation of component 2 requires the

need for further increasing DLSOs' capacity in terms of training, mobility and equipment, especially at LSCs level. The MTR has also recommended that all external training activities of the Programme be supported through grant financing.

Annex I: Heifer International approach

Program long-term goal

1. The proposed program will complement government goal of poverty reduction by strengthening smallholders into goat meat and dairy value chains. The program takes comprehensive and integrated measures along the meat and dairy value chains to result in improved value chain performance with strengthened linkages among the actors. The program aims to address the issues of production and marketing.
2. By 2023, through a primary focus on the goat value chain and secondary focus on the dairy value chain, Heifer Nepal will work to bring 500,000 families from a state of poverty and vulnerability to sustainability and resilience through their engagement in **competitive, sustainable, and inclusive goat and dairy value chain enterprises for bringing economic growth, improved livelihoods and food and nutrition security.**

The specific objectives of this program include:

- 500,000 families, represented by women, empowered and organized in institutions for their progression from a state of vulnerability to sustainability.
- 45 % of the target families will increase their income to NPR 400,000/annum and another 35% of the target families will increase their income to NPR 250,000/annum by the end of projects implemented under this program and attain improved food and nutrition security.
- The program will supply an additional 900,000 meat goats/annum and 100,000 liters of milk per day to markets contributing to 50% and 25 % reduction in goat and dairy import respectively.

When these goals are met, it will result in an estimated return in incremental income of the participants of \$38.7 for every dollar spent during the program period (See Appendix 2).

Theory of Change

3. In order to achieve the long term goal described above, changes at multiple levels are required. The theory of change shows the logical connections between activities and outcomes and the pathways of the proposed change.

4. To bring families from a state of poverty and vulnerability to sustainability and resilience the program will focus on major two pathways

1. Empowerment and institutional strengthening
2. Sustainable production and marketing system

5. The program aims to bring the smallholders who are currently in a state of poverty and vulnerability into the economic dynamics from which they were previously either excluded or exploited. In order to do so this, the impact group requires a push force which will give them the drive and capacity to interact independently with market forces. The TOC shows the pathway of **empowerment and institutional strengthening** and how this contributes to the goal. The Values based holistic community development (VBHCD) approach is employed for empowerment of individuals, grooming women's leadership, strengthening social harmony, building grassroots institutions and enabling them to emerge as strong players in the value chain.

6. The second pathway of the TOC is a **sustainable production and marketing system**. The interventions are targeted towards creating improved value chain performance (meat goat and dairy) with strengthened linkages among the actors. Improved value chain performance is achieved when there is (i) quality products at a fair price to consumers and (ii) a fair share of profit to the value chain actors. This becomes the pull force to bring the smallholders and their institutions as competent actors into the mainstream economy.

7. These two pathways converge and create mutually beneficial linkages and business relationships which involve smallholders in an equitable and fair manner. This is termed as a **Pro-**

poor wealth creating value chain. When the pro-poor wealth creating value chain is in action the program goal of ‘vulnerability to sustainability’ is achieved.

8. Appropriate food and nutrition practices and environmentally friendly practices will be promoted throughout the program interventions. As demonstrated in the diagram, women’s empowerment and social capital will produce a multiplier effect which will be measured through impacts in all five domains of program TOC.

Description of Program Components

1. Empowerment and Institutional Strengthening

9. This component will focus on women’s empowerment and social capital. The program will employ the Values based Holistic Community Development Model (VBHCD) to empower vulnerable and marginalized smallholders, with an emphasis on women members and facilitate them into Self Help Groups and higher structures. Cognitive element will be emphasized across all these community structures.

Empower individuals and foster harmony

10. When working with the most marginalized and vulnerable groups, the success in realizing sustainable socio economic development goals lies in the ability to unleash the potential within the individuals and the community. In a society with deep rooted gender discrimination and a hierarchical cast system that discriminates against those at the bottom, the first step will be to attempt to overcome these root causes and bring everyone on board to collaborate and strive towards the development goal. The program will use the proven VBHCD approach for empowering individuals and fostering harmony. Heifer’s experience in Nepal has shown that through the VBHCD approach, social harmony and cohesiveness begins to develop within the community as discrimination is decreased and social ills are battled.

Passing on the Gifts

11. Passing on the Gift (POG) is a critical, unique practice of Heifer for ensuring sustainability. This creates a ripple effect, transforming whole communities while building solidarity. When a whole community is together, much can be achieved. By passing on the gifts to others in need, the ones who are giving attain a great sense of dignity and the receiving families in turn feel a deep sense of gratitude. The process of POG benefits an increasing number of families making it possible for resources, knowledge and skills to be multiplied and spread within and among communities. The program promotes Passing on the Gifts at all levels.

Organize, create and strengthen women led community organizations

12. The program fully acknowledges the fact that community structures are needed to fully reap the benefit of community collaboration. The program facilitates the families to organize into Self Help Groups (SHG). Women members represent the family in the program with 20-25 women forming one SHG; the SHGs are federated into primary cooperatives and all primary cooperatives in one district are federated into district unions and finally into a national federation. Various capacity building activities are performed continuously for strengthening of these community organizations at all levels.

2. Sustainable production and marketing system

13. This component will prepare the community to seek and adopt new technology for goat and dairy productivity improvement; strengthen production support services; enhance market systems and create an enabling environment. Farmers will be trained and mobilized to develop a business plan consistent with the enterprises of their choice with emphasis on the goat and dairy value chain. An example of a business plan for goat rearing at the enterprise scale can be found in Appendix 3.

Strengthen production support services

14. The current government extension network and system is not accessible to all rural farmers. Lack of quality services and production inputs is one of the major constraints. Therefore, the program has a strategy to build **agro-vet input and service hubs** at the community level. The locals will be trained as animal health workers with skills in agriculture extension. These trained individuals will be provided with agro-vet business startup funds, business management training and linked with

government veterinary and agriculture centers/sub centers. The program will create awareness among the farmers and link to the agro-vet hubs. The economic incentive at both ends-- the service/input provider and farmers-- will ensure continuous availability of quality production inputs. The program will also take appropriate measures for strengthening a supply chain of quality vaccines and other pharmaceuticals.

15. Easy access to **credit** is another constraint; the program will facilitate linkages of farmer groups and organizations with financial institutions, including commercial banks, to enhance the access to credit. In the same way, the program will also build the capacity (business plan preparation, management and financial management trainings will be provided) of the farmer groups and organizations to access and execute the available credit efficiently and establish themselves as viable customers in the credit market.

Strengthen production functions to enhance productivity

16. Decreased genetic merit of the animals is one of the major causes of low productivity; thus, genetic improvement is a critically important activity to enhance productivity. Appropriate 'selection' methods for genetic improvement will be promoted. Goat Resource villages will be established to produce goats of predictable productivity for further multiplication. Possibilities of importing exotic breeds will also be explored.

17. Artificial **insemination** (AI) will be promoted for genetic up-gradation of dairy cattle and buffalo. The program will also explore need/opportunities for importing high quality semen. The program will work in close coordination with the national AI program and focus on complementing the national initiatives.

18. **Management and health care** is another critical element for productivity improvement. The farmers will be trained in basic management practices. Farmer field schools, a proven tool for wider technology adoption will be used. Continuous action research will be conducted for discovering the most appropriate housing, feeding and other management practices in the most efficient production system for different levels of farmers and different ecological belts. Vaccination of major diseases and appropriate measures for parasite control will be emphasized.

19. **Fodder and forage production** is a key element for efficient and sustainable livestock production and will be highly emphasized. Previous Heifer project areas will be developed as resource villages for fodder/forage seed and saplings. Farmers will be trained in seed extraction, nursery development and cultivation. Research will be done to discover nutrient contents of different varieties, technology for farmers with limited land and appropriate varieties for different climatic conditions. Land can often be a limiting factor in small holder agriculture. However, the fodder and forage practices of this program allow smallholders with little landholdings to use the marginal areas of their limited holdings, such as along terrace/field boundaries or along roadways to develop fodder to be cut and carried in a stall feeding system. Also, collective fodder development allows community members to make use of idle community land for forage/fodder development.

The traditional practice of using goats as living banks (keeping them for long periods of time for emergency purposes, festivals and celebrations) will be challenged. With improved production practices the desired weight gain will be attained in a shorter period, and learning about economics of feed conversion will encourage farmers to determine the optimum age and target for the most optimum off take rate.

20. Though certification of good agricultural practices (GAP) is not yet performed in the country, appropriate practices will be promoted to ensure **quality and hygiene of meat and milk** produced, such as to prevent chemical and medical residue from entering food chain, minimize use of antibiotics and hormones and maintain hygiene throughout production and marketing. A range of tools (posters, mass media, door to door coaching, PSRP, etc.) will be used to continuously reinforce new knowledge and technology and enhance adoption.

Establish/Strengthen Marketing System

21. The program will put effort on connecting primary producers with the end **market** while targeting efficiency throughout the value chain to ensure a fair price to the consumer. It will also consider developing systems for collection, transportation, distribution of goats and milk, and management of value-chain actors for complementarities in the chain targeting an equitable share of profit to all actors. Scale is one of the important elements of an efficient market system. To overcome

the limited production scale among smallholders, the program looks into collection of products en masse. Specifically, in marketing of goats, the grassroots institution promoted by the program will take up appropriate new roles in the market system.

22. With several private dairies in play, a number of initiatives in milk marketing already exist in the field. Therefore, the program will also look into the possibilities of strengthening these actors such as local milk cooperatives and collection centers. The program will focus on building relationships between grassroots institutions and dairy companies for a win-win situation.

Promotion of Processing and Product Diversification

23. The program will examine opportunities in **processing and product diversification**. A large portion of the current market for the goat meat is underdeveloped and current practices of goat slaughtering and marketing cause damage to the environment, negatively affecting sanitation and subsequently consumer health. Hygienic slaughter facilities closer to production sites, packaging of cuts of meat and transport facilities for frozen meat are some opportunities that the program will explore. Similarly vast opportunities for product diversification in dairy also exist.

Supplementary activities for improving livelihoods

24. In addition to engaging in the primary (goat) or secondary (dairy) value chains, the program will enable all families to take up supplementary activities which will increase sustainability of the families' income and add diversity to household food consumption. Homestead food/vegetable/backyard poultry production will improve family nutrition and resource utilization (limited land, backyard and farmyard manure) and will add supplementary income through surplus sale and decreased expense (e.g. reduced purchase of vegetables) at the household level.

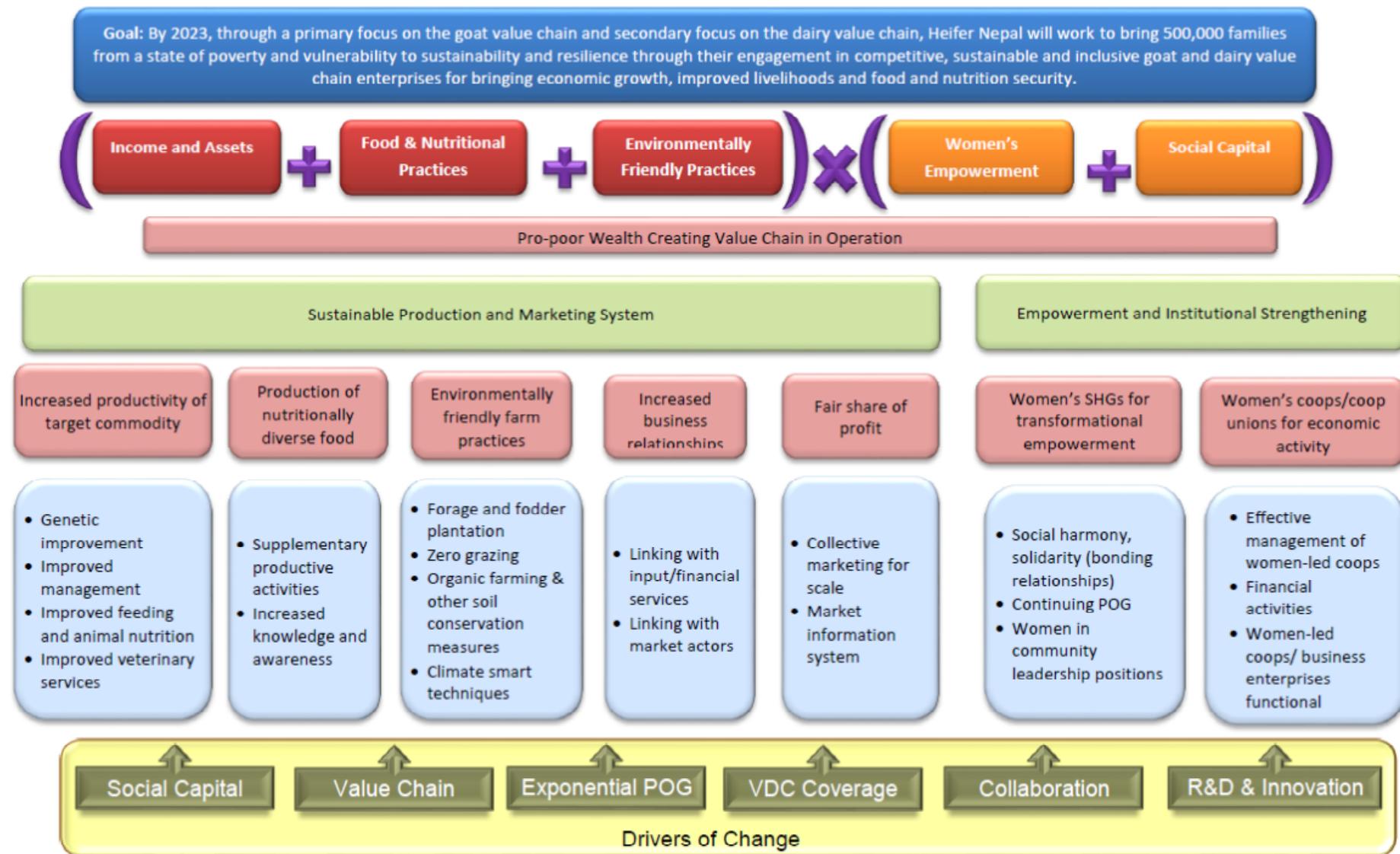
Transforming Families from A to B to C

25. This program will undertake strategies to transition highly vulnerable families out of poverty and beyond to a point of sustainability and resilience.

| Domains | Transition from Highly Vulnerable (A) to Less Vulnerable (B) | Transition from Less Vulnerable (B) to Resiliency (C) |
|--|---|--|
| - INCOME & ASSETS | <ul style="list-style-type: none"> - Training on production enhancing technologies - Access to productive assets such as livestock, equipment, seeds - Linking to local markets - Mobilization of group saving in income generating activities - Linking to micro-finances | <ul style="list-style-type: none"> - Entrepreneurial skill development - Household level Business plans - Access to credit through formal banking system - Vertical and horizontal market coordination to meet safety, quality and quantity standards - Training on production and productivity enhancing technologies - Strengthening production support system |
| - FOOD SECURITY & NUTRITION | <ul style="list-style-type: none"> - Homestead gardens (vegetables, poultry) - Social network as social safety net during scarcity - Adoption of productivity enhancing technology - Nutrition training | <ul style="list-style-type: none"> - Homestead gardens (vegetables, poultry) - Social network as social safety net during scarcity - Adoption of productivity enhancing technology - Nutrition training - Post-harvest technology - Smallholder -focused nutrition enhancing technologies |

| | | |
|---|---|---|
| <ul style="list-style-type: none"> - ENVIRONMENT | <ul style="list-style-type: none"> - Fodder and forage plantation - Promotion of sustainable production technologies - Awareness on sustainable use of community resources | <ul style="list-style-type: none"> - Smallholder -focused climate smart technology dissemination - Community Managed Disaster Risk Reduction plan reinforced - Awareness about natural resource conservation need and methods. |
| <ul style="list-style-type: none"> - WOMEN'S EMPOWERMENT & GENDER | <ul style="list-style-type: none"> - Formation of women SHGs - Gender training to male and female household members - Representation of women in PMCs | <ul style="list-style-type: none"> - Formation of Women led coops, cooperative unions, Federation - Representation of women in program coordinating bodies - Training women on organizational strengthening, entrepreneurial skills |
| <ul style="list-style-type: none"> - SOCIAL CAPITAL | <ul style="list-style-type: none"> - Formation of SHGs - Fostering bonding relationship among SHG members through reinforcement of cornerstones - Create bridging relationship between SHGs through exchange visits, sharing - PMCs | <ul style="list-style-type: none"> - Form cooperatives, cooperative union and Federation - Strengthen linkage with external agencies - Maintain and foster bonding and bridging relationship - Develop business relationships among actors of value chain |

Nepal Program Theory of Change



Annex II: Challenges, risks and problems in dairy sub-sector and market based solutions and intervention strategies at each actor's level

| Market Chain Actors | Challenges, Risk and Problems | Intervention strategies for market based solutions |
|--|--|--|
| <p>Input suppliers (<i>Agro-vets, Cooperatives, Banks, Transport Association, Insurance Agents, Leader Farmers, Resource Centers</i>)</p> | <p>Limited inputs and inputs are not available on time.</p> <p>Lack/poor inputs quality monitoring mechanism</p> <p>Poor access to animal health service in remote areas</p> | <ul style="list-style-type: none"> - Capacity development for local feed formulation and utilization of locally available fodder and forages. - Quality monitoring mechanism with establishing feed quality centres among lead producers, agro-vets, fertilizers dealers would be developed with direct supervision of DDC, DADO and CCI. - Facilitate experienced and leader farmers (ELFs) to establish Bare Foot Agro-Vets in remote areas. |
| | <p>Cross breeding without performance record</p> | <ul style="list-style-type: none"> - Improve breed promotion at farm level (e.g. Jersey) for crossbreeding. - Coordinated research activities with line agencies (NARC, DLS) and Universities (AFU, IAAS/TU) for improved and locally adopted breed promotion at local level. - Improve farmer's knowledge about breed selection and record keeping so as to identify the strategies for future interventions. |
| | <p>Poor financial services</p> | <ul style="list-style-type: none"> - Access to financial services to the dairy producers though promoting cooperative financial services (local cooperatives). - Link and coordinate with SFDB25 and RBBB26 for providing loans. - Coordinate farmers and women/dalits/nationalities in groups. - Provide and develop the subsidized services to the poor producers. - Also promote revolving fund at the initial stage to the poor producers and women/dalits/nationalities in groups. |
| <p>Dairy Producers</p> <p><i>Road Corridors of: Gulmi, Argakhachi and Rolpa-Pyuthan</i></p> | <p>Lower quality fodders/forages and traditional feeding systems</p> | <ul style="list-style-type: none"> - Plantation of fodder trees/shrubs/herbs. - Fodder preservation during winter and early summer. - Intervention of low cost feeding e.g. urea molasses mineral block for dry animals, fodder chopping, wilting etc. |

| | | |
|--|--|--|
| <i>Salyan-Rukum)</i> | | <ul style="list-style-type: none"> - Fodder nursery needs to have established in village level and promote fodders planting in farm agro-forest system. - Motivate farmers for utilization of barren and abandoned lands with fodder plantation. - Incorporate legume fodders to ensure quality diet. |
| | Low volume of production in scattered form (settlements) Fragmentation of production supply | <ul style="list-style-type: none"> - Plan for support to individual producers and also in groups approach production scheme would be developed - Technical support to start of large scale production (e.g. housing, fodder seed, AI etc.) |
| | High production risk (due to diseases and pest) | <ul style="list-style-type: none"> - Farmer friendly insurance scheme to be established and promoted in collaboration with insurance agents - Coordinate with DLSO/LSC, NARC, and Universities to promote technical services. - Effective mobilization of Village Animal Health Workers (VAHWs) and local service providers. - Facilitating agro-vets for import of quality inputs |
| | Less capacity of producers for commercial dairying | <ul style="list-style-type: none"> - Package training on production and management - Establish scientific shed management practices at local level though capacity building of farmers. - Establish model farms for motivating farmers - Establish additional AI centres for distribution of quality semen on time. |
| | Poor coordination and technology transfer among farmers | Establish FLEs as well as FtF network at district level for effective delivery of farmers' skill and knowledge at local level. |
| | Lack of incentives | Provision of incentives frequently may influence farmers for large scale production and entrepreneurs development |
| Processors | Lack of sufficient volume for large scale production | Facilitate the private sector to establish private dairy farm for larger scale supply. |
| Other Market Actors (Collector, Regional Trader, Retailer/Butchers) | Lack of market centers (Collection Centre and | <ul style="list-style-type: none"> - Support farmers for collective marketing - Subsidy on transportation and provision of milk utensils. |
| | Low farm gate price and price fluctuation | |
| | Poor transportation facility outside | |
| | Difficult to compete the Indian milk and products | <ul style="list-style-type: none"> - Data based market information system would be established with coordination of producers, market actors, CCI and DLSO. |
| | Marketing margin high | |

| | | |
|-----------------------------------|---|---|
| | <p>Poor market information among poor producers (Price, volume demanded and place)</p> <p>Inadequate knowledge of pricing and access to markets producers level</p> | <ul style="list-style-type: none"> - Support producers for low cost of production. - Market management committee would be established for farmers groups. - Market management trainings to the dairy producers and groups. - Develop network and coordination among key market actors (via. Workshop, periodic meeting, mass media information as well as mobile service etc. with ensuring participation of farmers). - Conduct business literacy school (BLS) at farm level - Establish new pricing system accordingly with milk protein and sugar irrespective of milk fat and SNF for transparency. |
| <p>Milk sale in contract</p> | <p>Lack of coordination and linkage for business meeting</p> | |
| <p>Policy Institutions</p> | <p>Lack of local policy for commercial dairying and sustainable marketing network</p> | |
| | <p>Poor coordination and linkage for better services and knowledge generation</p> | <ul style="list-style-type: none"> - Facilitate micro-finance linkages with producer groups for input procurements. KUBK should collaborate with financial institutions and develop a mechanism for financing on dairying. - Facilitate to establish Dairy Producers Association at district level in coordination with LSC, DLSO and District CCI. - Facilitate government level dialogue for the implementation of a trade friendly policy. |

WORKING PAPER 3: Monitoring and Evaluation

1. Overall performance and immediate next steps

1. **Monitoring and Evaluation (M&E).** KUBK performance with respect to monitoring and evaluation is considered Moderately Satisfactory. Since the last Supervision Mission (March 2015), the PMO and KUBK implementing partners have established basic M&E functions including the collection of data on performance and progress of the interventions despite the vacancy of the Monitoring and Evaluation Specialist position¹. The M&E system provides information on activities and outputs, including RIMS data, detailing progress for each interventions, by district and implementing partner. The data produced allow drawing preliminary analysis on the project outcomes, although the interventions are at a yet too early stage to properly assess changes in behaviour, adoption of improved seed or livestock production practices or marketing among the targeted beneficiaries. The wealth of data collected would also be sufficient to guide management decisions towards targets, but such potential is yet virtually untapped by the PMO, and the analysis of information to correct the implementation of interventions is yet insufficient (to this end, on the job guidance has been provided during the MTR mission).

2. **IFAD-FAO Capacity Development Initiative.** Since March 2015, KUBK has been targeted by the “IFAD-FAO initiative on capacity development for better management of public investments in small-scale agriculture in developing countries” (hereinafter, the Initiative) aimed at strengthening capacities of projects with poorly satisfactory performance. Considering the persistently poor performance of KUBK in its first years of life-cycle, the programme was targeted for sustained support from the Initiative since its third supervision mission (March 2015). A Capacity Development Plan for KUBK focused on planning and M&E was drafted and implemented under the overall supervision of the CPM and in close partnership with the PMO. Specific recommendations for capacity development were summarised in a stand-alone coaching plan, annexed to the Supervision Mission Report 2015. Coaching on remote basis with support from the IFAD country office has progressed on a continuous basis from April 2015, mostly focused on the preparation of M&E tools (data collection sheets), on planning (coaching and revisions of KUBK Annual Work-Plan and Budget). A workshop-training on M&E addressed to PMO and field officer, scheduled for November 2015 during the New Start-Up Workshop, could not materialize also for the cancellation of the Workshop itself. This has represented a missed opportunity, especially in its potential to (a) build a generalized understanding on the basic principles of M&E for all project management and implementation functions, from central / district coordination to social mobilization at village / group level, and (b) start the harmonization of data collection.

3. **The way ahead.** The IFAD-FAO Initiative is scheduled to close in June 2016. Until then, it was agreed with the CPM and the PMO the Initiative will continue its collaboration with KUBK to consolidate and strengthen the sustainability of the interventions. More specifically, based on the progress on M&E carried out so far by KUBK, and the related most immediate needs for support, the initiative will focus on strengthening the PMO capacities to:

- (i) consolidate the M&E system, through continuous remote coaching;
- (ii) prepare a Management Information System (MIS), through external support for supervision and guidance (details in the dedicated section, below), and
- (iii) kick off a learning process for knowledge management and sharing through the mobilization of experienced consultants.

2. Review of the Logframe’s indicators

4. The Mid-Term Review mission has proposed a revised logframe. Rationale for the revision included: (a) the need for KUBK to adopt one reference set of performance indicators (where at appraisal two different set of indicators were left to guide the progress of the programme); (b) the need to streamline the set of indicators (also conformingly to the recently released IFAD guidance on the matter) to make the logframe more manageable; (c) the need to associate to the programme’s expected results (impact, outcomes and outputs) one or more corresponding indicators (specific, measurable, achievable, relevant and with time-bound targets). As a result, the revised logframe includes 20 indicators, and associated revised targets. The

¹ The KUBK M&E Specialist recruited in February 2015 resigned in May. The position was later filled in October 2015.

key elements of the revision are described in the following paragraphs, while the revised results framework and the transition table from the earlier version to the current one are respectively in Annex 1 and Annex 2 of this Working Paper.

5. The structure of results of KUBK include four levels of results:
- a. **Goal:** *Increased competitive, sustainable and inclusive rural growth.* This level includes four indicators, two of which are the mandatory Third Level RIMS indicators (child malnutrition and household assets), one represents the total number of beneficiaries of the programme and one reflects the agricultural productivity (cereals, vegetables and livestock) in the districts.
 - **Revision:** No changes have been brought to this level's indicators, with the exception of the target of the number of beneficiaries (see also box "potential beneficiaries outreach", below). As indicated in the project document, the total number of direct and indirect beneficiaries is 150,000 households, while the direct beneficiaries outreach is limited to half of it. Nevertheless, post-MTR estimates consider that the target can be overcome by some 20%.
 - b. **Development Objective:** *Improve rural household incomes through sustainable, market-driven agricultural productivity improvements.* This level included four indicators, capturing (a) productivity in beneficiaries economic activities; (b) marketing capacities of the groups beneficiaries; and (c) institutional sustainability of the groups beneficiaries, all proxies for the likelihood of the groups to continue the improved agricultural activities beyond programme life cycle.
 - **Revision:** the originally four indicators have been reduced to three. The indicator focusing on production contracts for groups receiving infrastructure support was considered too specific to reflect the development objective, and will be covered by the indicator focusing on marketing activities.
 - c. **Outcome-level:** KUBK has three outcomes, corresponding to its three components (see Annex 1). They represent behavioral changes of the beneficiaries, and are fruit of the utilization of the products and services generated by the programme (outputs).
 - **Revision:** major area of revision was the identification of specific indicators for the three outcomes.
 - o Outcome 1: At least a total of 100,000 Ha in the programme districts are sown with TL seed (cereals and vegetables). Compared to the earlier version, the target has been downsized to better reflect the programme's potential. The earlier figure (240,000 hectares) seemed fruit of a misreporting, as the entire surface of land cropped for wheat, maize, paddy and selected vegetables in the six programme districts is limited to around 204,000 ha. The revised target is estimated by assuming that KUBK will be able to produce the quantities of seeds recommended in the project document (paddy: MT 760; maize: MT 830; wheat: MT 1,660; vegetables (a range): MT 500), and considering the seed requirements per hectare, these quantities are sown in at least 100,000 ha.
 - o Outcome 2: Dairy producing HHs and Goat rearing HHs selling products to markets (60% for dairy, 25% for goat). The new wording of Outcome 2 indicator maintains the meaning of the earlier one but measure the result in a more specific manner.
 - o Outcome 3: Number of SFACLs with satisfactory financial governance: (a) regular savings by 95% of members; (b) cumulative repayment of loans more than 98%; (c) Annual general meetings held as per schedule and regular election process. The indicator captures the satisfactory functioning of SFACLs, and more specifically of their financial governance. In the process of streamlining the logframe, only one type of beneficiaries was selected for the outcome indicator. SFACLs are considered representative for the component, as they are largely rooted in the villages where they operate (the cooperatives on which they are based have at least 500 members, but the actual average is above 600 members), and by form they operate in close partnership with the VDCs, thus contributing to the institutional sustainability.

d. **Output-level:** these are products or services generated as a results of the programme’s interventions.

- **Revisions:** Most of the indicators removed from the Appraisal logframe correspond to this level.
 - o Component 1:
 - The indicator selected at appraisal to measure the enhanced capacities of NARC and SQCC was not sufficiently specific and not easily measurable. It has been substituted by two indicators to measure the capacities on specific functions of two different institutions as fruit of the interventions of KUBK (relevant). In the exercise of streamlining the logframe to make it more manageable, this has represented the only exception of substituting one indicator with two separate ones.
 - For SQCC the actual requirement (and the scope of KUBK support to SQCC) would be sufficient to ensure that SQCC ensures quality control for all seeds (foundation and TL) required by the project, but the target of at least 80% is considered a more reasonable one.
 - The targets for indicator O1.3 have been revised to reflect the actual operations of KUBK (the lower number of sub-projects depends partly on doubling of their financial threshold, and the preference of seed producers groups is for larger number of participants – 25 households on average).
 - o Component 2:
 - No substantial revisions. but three indicators were removed as considered too operational (they will be captured anyway by the M&E system). These are: (i) at least 550 dairy and goat new and existing groups supported by the programme; (ii) at least 15 local livestock collection centres/markets established and functioning; and (iii) at least 25 milk chilling centres established and functioning (all RIMS).
 - o Component 3:
 - Similarly to the revision of component 2 output indicators, four of the six were removed as considered too operational (they will be captured anyway by the M&E system). These are: (i) strengthening of participating Production groups and Cooperatives through training; (ii) strengthening of participating Agrovets through training; (iii) at least 80 % of members of new SFACLs and bank branches access production loans; and (iv) at least 5 multi-stakeholder platforms functioning in the programme area.

Potential beneficiaries outreach

A total of 75,000 households are expected to benefit from improved crop or livestock activities of the Programme. As a result of the investment in the seed and livestock industry, the potential impact on the wider farming community of the hill region is expected to indirectly benefit an additional 75,000 households. However, the estimates by the MTR mission indicate that there could be a significant increase in the number of households benefiting directly from the livestock and rural finance components and the **number of beneficiaries could exceed these targets by at least 20 percent** (details are provided in Table 1 here below, and the break down by components’ results is provided in Annex 3).

Table 1. KUBK potential outreach

| | Outreach | | | |
|--------------------|------------------------|---------------------|--------------------------|-----------------------------|
| | Appraisal Target (HHs) | Actual at MTR (HHs) | Potential post-MTR (HHs) | Potential post-MTR (Benef.) |
| Component 1 | 52,000 | 14,411 | 21,000 | 105,000 |

| | | | | |
|--|---------------|---------------|----------------|----------------|
| Component 2 | 17,000 | 10,666 | 40,875 | 204,375 |
| Component 3 | 6,000 | 9,920 | 45,000 | 225,000 |
| TOTAL KUBK | 75,000 | 34,997 | 106,875 | 534,375 |
| Progress against initial targets (Appraisal): | | | | 47% |
| Progress against potential outreach (MTR) : | | | | 33% |

3. Management Information System (MIS)

6. **Management information system (MIS).** Among the most critical shortcomings of KUBK's M&E system, the insufficient and ineffective systematization of data and harmonization of data collection formats and procedures stands in first place. Significant efficiency of M&E and Knowledge Management processes could be gained by improving the systematization and analysis of information. Such process is ongoing: formats were prepared in the last trimester of 2015, and subsequently validated through district and implementing partners consultation. No constraint are left to their adoption and to the systematization of data in a simple and flexible Management Information System (MIS). In this sense, as also recommended in the previous supervision mission, a MIS assistant should have already been recruited. After a long delays, the recruitment was carried out and the assistant is expected to join the PMO in May 2016. This will help accelerating the design of the MIS. The project has also proceeded for the recruitment of a company to support the development of a web-based MIS (including the use of tablets to enter data). While this presents several advantages, at this early maturity stage of implementation a software based MIS is considered be a too rigid tool. A preferred solution would have been to proceed by step: (a) starting with the preparation of a flexible preliminary excel-based MIS that ensures the PMO to systematize the data as well as to identify and fine tune the queries and analysis according to the needs, and only then (b) recruiting a contractor for the preparation of a high quality georeferenced software-based MIS. Rationale for such phased option is that KUBK is at its first steps for the harmonization of data collection and systematization: without a proper guidance and supervision, the recruited company will not be able to deliver an MIS tailored to KUBK requirements. However, this solution is not feasible due to the commitment of KUBK with respect to the procurement, and the contract with the contractor (Dryice Solution Pvt. Ltd. – hereinafter, Dryice Solutions) has to be completed during the current financial year, by mid-July 2016. Based on these elements, the mission has discussed with the PMO and the following specific recommendations have been agreed:

- In order to ensure a more effective contribution of the KUBK MIS Specialist who would be fully involved in the process since its beginning, the design of the MIS should start not before that the MIS Specialist has joined the PMO (expected by May 2016). Nevertheless, to gain time, the PMO will hold a preliminary presentation meeting and share the programme's documentation with Dryice Solutions beforehand.
- A Senior MIS Consultant (recruited by the IFAD-FAO Initiative) will provide technical supervision of the MIS design, in close coordination with KUBK M&E Specialist. This will allow full guidance to the selected company in the first steps, and if possible throughout the process (depending on timing and availability), until closure of the IFAD-FAO Initiative (June 2016). Coordination also in terms of timing between Dryice Solutions and the Senior MIS Consultant are of utmost importance to ensure a quality result. Lack of it would risk to result in a waste of resources.
- KUBK will ensure also high coordination with the MIS Specialist of the IFAD-funded High-Value Agriculture Project (HVAP), and whose practical experience on design and utilization of MIS can be of use to KUBK.

4. Outcome level analysis

7. **Outcome level analysis.** Considering the delay accumulated in the earlier years of project implementation, a fully-fledged assessment of the results at outcome level was not carried out, also as not cost-effective before Mid-Term Revision. Despite the project has involved already 40% of the target beneficiaries, such outreach includes mostly social mobilization, and the activities are at too early stage of implementation. An analysis of the progress towards outcomes (productivity of crop and goat/dairy production, marketing, etc.) requires a critical mass of interventions at a minimum maturity level (i.e., completing at least one production cycle). So far, such level was reached and duly documented for the improvement of goat productivity (sub-component 2.2), partly – but not sufficiently to draw in-depth analysis, for improved seed production (sub-component 1.2), and not sufficiently for improved dairy production (sub-component 2.1), or for

the rest of the project interventions. Nevertheless, the pace of implementation gained by the project since the last Supervision requires the **establishment of a fully-fledged M&E mechanism at outcome level**, to ensure capturing progress and facilitate the analysis on changes in farmers practices, increments in productivity of seed, dairy and livestock production, strengthening of institutional capacities (at various levels), seed replacement ratio, and others. In this sense, two main recommendations were agreed:

- (a) **ensure a regular monitoring of outcome level indicators** (productivity, marketing, profitability, governance of groups/cooperatives) in the regular process of monitoring through annual simple quantitative and qualitative surveys embracing all beneficiaries. This requires also the following:
- ensure recording all relevant ex ante information, for each group (producer groups, FFS, cooperatives...), and as part of the regular process of monitoring;
 - ensure recording the actual beneficiaries contributions (financial or in-kind), both for subprojects and for SFACs (e.g., lending generated through savings)
 - include in the sub-project proposals formats a linkage to KUBK targets (e.g., seed availability, production).
- (b) **carry out a fully-fledged third party outcome survey** (from October to December 2016, in order to ensure capturing at least one year production cycle for livestock and one or two cropping seasons for the seed producers groups). The survey will report on outcome level indicators such as adoption rates of new practices, increase in crop production consequent to improved variety adoption, reduction in losses due to improved storage facilities, increase in animal conception rates, increase in animal productivity, increase in quality seed production for vegetables and seed, increase in seed replacement rates, etc.

8. **RIMS** data collection system suffers the same inefficiencies of the overall M&E system, but data are systematically collected. More specifically, for First Level RIMS indicators, the report is satisfactory. Slight modifications have been proposed and endorsed during the MTR (Annex 4). Second and third level RIMS indicators were selected (also in Annex 4), but not assessed yet. Similarly to the overall project outcome assessment, a specific Second and Third Level RIMS survey was not carried out for insufficient developments against the respective indicators. A critical mass of operations and interventions is expected after the summer season (September) and it is recommended to **carry out a specific RIMS survey in October 2016**. The results of it should be ready by the beginning of 2017, to inform the coming project Supervision.

5. Planning

9. **Planning capacities.** Critical improvements have been done in the quality of planning, including the establishment of a systematic consultation with the District Project Implementation Units and implementing partners, and the implementation is largely conforming to the plan. As a result of it, the coherence between AWPB and implementation is rated Moderately Satisfactory. Nevertheless, several aspects require further attention. This would include at first the need to reduce the delay between the preparation process and its submission to IFAD. The draft AWPB was ready in June 2015 but was submitted to IFAD only in October 2015, more than two months after the beginning of the financial year. This is caused by the national planning process that require submission of the plan to the Government at first place, and is binding in terms of financial allocation due to the national financial contribution to the project interventions. A second aspect requiring serious attention is to ensure a more effective orientation towards outcome results. So far, the best improvement carried out is the structure of the interventions in conformity to the project component and sub-component structure. Simple additional corrective measures include the indication of clear targets towards at output and outcome level (e.g., indicating how many groups should be involved in the production of a certain crop in order to contribute filling the gap in the production of targeted TL seeds).

6. Learning and knowledge generation

10. **Knowledge generation, management and sharing.** The M&E system has the potential to enhance the learning opportunities for the project and its stakeholders. In this sense, two main activities are suggested: (a) **establish a sub-projects awards system**: based on simple criteria of productivity, likelihood of sustainability, governance, and potential scaling up. The system rewards seed and livestock producers groups and individual entrepreneurs (including farmers); (b) **develop knowledge management notes / policy briefs**: simple success stories from member based organization and producers groups (even not necessarily fully attributable to KUBK but good and inspiring examples), as well as policy briefs from the stakeholders

platforms and private/public dialogue. Especially for the latter, the occasion is to ensure that KUBK works as a vehicle to **channel to the national policy arena the challenges faced by the smallholder farmers** in the improvement of the seeds sector – a priority as set in the Seed Vision 2025.

7. Summary of agreed recommendations

| Agreed action | Responsibility | Agreed date |
|---|--|--------------------------------|
| Harmonize M&E system: <i>data collection sheets prepared for all components should be immediately utilized by the implementing partners, further to a workshop in Butwal to launch their use.</i> | M&E Specialist | From April 2016 onwards |
| Carry out outcome survey / RIMS survey: <i>two separate surveys to be carried out to ensure capturing progress towards outcomes and second/third level RIMS indicators. The report needs to be ready by Jan 2017.</i> | M&E Specialist | October 2016 |
| Ensure professional supervision of the MIS preparation: <i>the company selected by the project to prepare the MIS should be guided by a professional expert and properly supervised by the PMO in identifying the key queries and functions of the fully fledged MIS.</i> | M&E Specialist / MIS assistant | May 2016 |
| Establish sub-projects awards system: <i>based on simple criteria of productivity, likelihood of sustainability, governance, and potential scaling up. The system rewards seed and livestock producers groups and individual entrepreneurs (including farmers).</i> | TA Team/ implementing partners | September 2016 |
| Develop KM Notes: <i>prepare simple success stories from member based organization and producers groups (even not necessarily fully attributable to KUBK but good and inspiring examples), as well as policy briefs from the stakeholders platforms and private/public dialogue.</i> | Implementing partners (AEC in particular) / PMO / M&E Specialist | October 2016 |

Annex 1. KUBK revised Logframe indicators

| Indicators | | | | Means of Verifications | | | Assumptions |
|---|--|----------|---|---|--|----------------|---|
| Code | Description | Baseline | Target | Source | Frequency | Responsibility | |
| Goal: Increased competitive, sustainable and inclusive rural growth | | | | | | | |
| G1 | Value of agricultural and livestock production in target area increases by 15% and 10% respectively | | +15% crop, +10% livest. | Mid-term and completion surveys | MT, Completion | PMO | Macro-economic and political conditions do not deteriorate further No major natural disasters affect target area |
| G2 | At least 75,000 families (including among disadvantaged groups) increase household food security [RIMS] | | 75,000 HHs | | | | |
| G3 | At least 20 percent of Programme area HHs show improvement of more than 10% in household assets ownership index [RIMS] | | +10% | | | | |
| G4 | Reduction of at least 20% in prevalence of child malnutrition among participating HHs [RIMS] | | -20% | | | | |
| Development Objective: Improve rural household incomes through sustainable, market-driven agricultural productivity improvements | | | | | | | |
| D1 | Productivity in beneficiary HHs increases by: (a) goat meat : 25%; (b) milk production: 50%; (c) crop yields: 15% [RIMS] | | goat: +25%; milk: +50%; crop: +15% | National and District statistics; Outcome surveys; Periodic outcome surveys; RIMS survey | Mid Term surveys Completion surveys | PMO | Participation in, and support for, programme activities from relevant local-level GON agencies Ability of Programme to collaborate with other projects. |
| D2 | At least 70% of supported production groups (disaggregated by type of group) regularly collecting money for O&M of infrastructures / machinery / equipment | | +70% | | | | |
| D3 | Private purchase contracts established with at least 50 % of supported seed and 35% of dairy production groups [RIMS] | | Crop: 50% Dairy: 35% | | | | |
| Outcome 1: Increased production of Truthful Labelled seeds within the target area and marketed locally and beyond | | | | | | | |
| O1 | At least a total of 100,000 Ha in the programme districts are sown with TL seed (cereals and vegetables) | | 100,000 Ha sown with TL seed | Outcome surveys | Mid Term / Completion | PMO | Target households willing and able to utilize improved seed |
| Outcome 2: Improve rural household incomes through sustainable, market-driven agricultural productivity improvements | | | | | | | |
| O2 | Dairy producing HHs and Goat rearing HHs selling products to markets (60% for dairy, 25% for goat) | | Goat: 25% Dairy: 60% | Outcome surveys | Mid Term / Completion | PMO | Demand for goat meat and dairy products in Nepal continues |
| Outcome 3: Improve rural household incomes through sustainable, market-driven agricultural productivity improvements | | | | | | | |
| O3 | Number of SFACLs with satisfactory financial governance: (a) regular savings by 95% of members; (b) cumulative repayment of loans more than 98%; (c) Annual general meetings held as per schedule and regular election process. | | 60 SFACLs | Outcome surveys | Mid Term / Completion | PMO | Active collaboration between cooperatives (SFACLs) and other institutions (including government and banks) will be possible |
| Output Indicators: | | | | | | | |
| O1.1 | NARC and Private Sector producers supported by KUBK produce the required foundation seed to achieve the programme's seed production targets (<i>i.e., to produce 760 MT of TL paddy; 830 MT of TL maize; 1660 MT of TL wheat; and 500 MT of a range of TL vegetable seeds</i>) | | 171 MT of cereal seeds 5 MT of vegetable seeds | KUBK M&E | Trimester (or seasonal) | NARC, PMO | Private companies involved in seed sector interested and willing to participate in sector growth. Adequate capital base or financing access to permit private sector firms to invest in required assets. |
| O1.2 | SQCC ensures quality control of at least 80% of the foundation and TL seeds required to meet KUBK seed | | 80% | KUBK M&E, DADO | | SQCC, PMO | |

| Indicators | | | | Means of Verifications | | | Assumptions |
|------------|--|----------|------------------|----------------------------------|-------------------------|-------------------|---|
| Code | Description | Baseline | Target | Source | Frequency | Responsibility | |
| | production targets | | | statistics | | | |
| O1.3 | At least 9,000 farmers participate in at least 360 seed producer groups [RIMS] | | 9,000 farmers | | | PMO | |
| O1.4 | At least 5 seed companies establish cereal and/or vegetable seed purchasing operations in the target area | | 5 seed companies | | | PMO, AEC | |
| O2.1 | At least 80 % of the participating HHs have improved animals through breed improvement program | | +80% of HHs | KUBK M&E, DLS statistics | Trimester (or seasonal) | PMO, HI | Sufficient forest areas approved for goat production. |
| O2.2 | At least 60 % of dairy group HHs produce forage | | 60% of HHs | | | PMO, HI | |
| O2.3 | At least 50 % dairy and goat HHs use stall-feeding | | 50% of HHs | | | PMO, HI | |
| O2.4 | At least 80 % of animals in dairy and goat HHs covered by routine vaccination against main zoonotic diseases (dairy: HS, BQ and FMD; goat: PPR) [RIMS] | | 80% of animals | | | PMO, DLS | |
| O3.1 | Share of participating local institutions (VDCs) receiving trainings on good governance: 80 % [RIMS] | | 80% of VDCs | KUBK M&E, DCCI, VDC, DADC, SFACL | Trimester (or seasonal) | PMO, NACCFL, SFDB | Partner agencies have sufficient staff and resources for effective support. |
| O3.2 | At least 50 % of groups formed/strengthened with women in leadership position [RIMS] | | 50% of groups | | | | |

Annex 2. KUBK Logframe: transition table

Dynamics:   : no changes to the indicator ;
  : slight adjustments to the text or to the targets;
  : indicator removed as not relevant.

| Key Performance Indicators (at appraisal) | CODE | Key Performance Indicators (post-MTR) |
|---|---|--|
| Goal: Increased competitive, sustainable and inclusive rural growth | | |
| Value of agricultural & livestock production in target area increases by at least 15% and 10% respectively. |  G1 | Value of agricultural and livestock production in target area increases by 15% and 10% respectively |
| At least 150,000 families (including among disadvantaged groups) increase household food security [RIMS] |  G2² | At least 75,000 families (including among disadvantaged groups) increase household food security [RIMS] |
| At least 20 percent of Programme area HHs show improvement of more than 10% in household assets ownership index [RIMS] |  G3 | At least 20 percent of Programme area HHs show improvement of more than 10% in household assets ownership index [RIMS] |
| Reduction of at least 20% in prevalence of child malnutrition among participating HHs [RIMS] |  G4 | Reduction of at least 20% in prevalence of child malnutrition among participating HHs [RIMS] |
| Development Objective: Improve rural household incomes through sustainable, market-driven agricultural productivity improvements | | |
| Productivity in beneficiary HHs increases by: (a) goat meat : 25%; (b) milk production: 50%; (c) crop yields: 15% [RIMS] |  D1 | Productivity in beneficiary HHs increases by: (a) goat meat : 25%; (b) milk production: 50%; (c) crop yields: 15% [RIMS] |
| At least 70% of supported production groups actively functioning at the end of the implementation period [RIMS] |  D2 | At least 70% of supported production groups (disaggregated by type of group) regularly collecting money for O&M of infrastructures / machinery / equipment |
| Private purchase contracts established with at least 50 % of supported seed and dairy production groups [RIMS] |  D3 | Private purchase contracts established with at least 50 % of supported seed and 35% of dairy production groups [RIMS] |
| 75 % production groups receiving infrastructure support sign production contracts within 2 years [RIMS] |  X | deleted as not fully specific, and covered by indicator D3 |

² The Target of indicator G2 was modified to reflect in a more correct manner the programme operations' potential outreach. As indicated in the project document, the total number of direct and indirect beneficiaries is 150,000 households, while the direct beneficiaries outreach is limited to half of it. Nevertheless, post-MTR estimates consider that the target can be overcome by some 20%.

| Key Performance Indicators (at appraisal) | CODE | Key Performance Indicators (post-MTR) |
|---|---|--|
| Component 1 : Extension of formal seed sector | | |
| Outcome 1: Increased production of Truthful Labelled seeds within the target area and marketed locally and beyond | | |
| At least 240,000 ha sown with TL seed for cereals and vegetables |  O1 ³ | At least a total of 100,000 Ha in the programme districts are sown with TL seed (cereals and vegetables) |
| Strengthened NARC and SQCCs able to produce required foundation seed and perform adequate seed quality control functions, respectively | NEW O1.1 ⁴ | NARC and Private Sector producers supported by KUBK produce the required foundation seed to achieve programme's seed production targets (i.e., to produce 760 MT of TL paddy; 830 MT of TL maize; 1,660 MT of TL wheat; and 500 MT of a range of TL vegetable seeds) |
| | NEW O1.2 ⁵ | SQCC ensures quality control of at least 80% of the foundation and TL seeds required to meet KUBK seed production targets |
| At least 7,000 farmers participate in at least 700 seed producer groups [RIMS] |  O1.3 ⁶ | At least 9,000 farmers participate in at least 360 seed producer groups [RIMS] |
| At least 5 seed companies establish cereal and/or vegetable seed purchasing operations in the target area |  O1.4 | At least 5 seed companies establish cereal and/or vegetable seed purchasing operations in the target area |
| Truthfully labelled seed production, formal marketing and distribution system to meet GON recommended SRRs |  | The indicator is no longer relevant, but information on SRR dynamics in KUBK area may be captured as part of KM / policy dialogue. after the revision of the interventions agreed after MTR, the indicator is no longer relevant (information captured in O1.3) |
| At least 25,000 farmers participate in more than 1,000 seed demonstrations for improved seeds [RIMS] |  | |
| Component 2: Smallholder Livestock Development | | |
| Development Objective: Improve rural household incomes through sustainable, market-driven agricultural productivity improvements | | |
| 60 % of dairy groups and 25 % of goats groups are engaged in marketing activities |  O2 ⁷ | Dairy producing HHs and Goat rearing HHs selling products to markets (60% for dairy, 25% for goat) |
| At least 80 % of the participating HHs have improved animals through breed improvement program |  O2.1 | At least 80 % of the participating HHs have improved animals through breed improvement program |

³ The Outcome 1 indicator has been downsized to better reflect the programme's potential. The earlier figure (240,000 hectares) seemed fruit of a misreporting, as the entire surface of land cropped for wheat, maize, paddy and selected vegetables in the six programme districts is limited to around 204,000 ha. The revised target is estimated by assuming that KUBK will be able to produce the quantities of seeds recommended in the project document (paddy: MT 760; maize: MT 830; wheat: MT 1,660; vegetables (a range): MT 500), and considering the seed requirements per hectare, these quantities are sown in at least 100,000 ha.

⁴ The indicator selected at appraisal to measure the enhanced capacities of NARC and SQCC was not sufficiently specific and not easily measurable. It has been substituted by two indicators to measure the capacities on specific functions of two different institutions as fruit of the interventions of KUBK (relevant). In the exercise of streamlining the logframe to make it more manageable, this has represented the only exception of substituting one indicator with two separate ones.

⁵ For SQCC the actual requirement (and the scope of KUBK support to SQCC) would be sufficient to ensure that SQCC ensures quality control for all seeds (foundation and TL) required by the project, but the target of at least 80% is considered a more reasonable one.

⁶ The targets for indicator O1.3 have been revised to reflect the actual operations of KUBK (the lower number of sub-projects depends partly on doubling of their financial threshold, and the preference of seed producers groups is for larger number of participants – 25 households on average).

⁷ The new wording of Outcome 2 indicator maintains the meaning of the earlier one but measure the result in a more specific manner.

| Key Performance Indicators (at appraisal) | CODE | Key Performance Indicators (post-MTR) |
|---|--|---|
| At least 60 % of dairy group HHs produce forage |  O2.2 | At least 60 % of dairy group HHs produce forage |
| At least 50 % dairy and goat HHs use stall-feeding |  O2.3 | At least 50 % dairy and goat HHs use stall-feeding |
| At least 80 % of animals in dairy HHs covered by routine vaccination against HS, BQ and FMD [RIMS] |  O2.4 | At least 80 % of animals in dairy and goat HHs covered by routine vaccination against main zoonotic diseases (dairy: HS, BQ and FMD; goat: PPR) [RIMS] |
| At least 550 dairy and goat new and existing groups supported by the programme [RIMS] |  | deleted as too operational and target outdated after MTR |
| At least 15 local livestock collection centres/markets established and functioning [RIMS] |  | deleted as too operational |
| At least 25 milk chilling centers established and functioning [RIMS] |  | deleted as too operational |
| Component 3: Local Entrepreneurship and Institutional Development | | |
| Development Objective: Improve rural household incomes through sustainable, market-driven agricultural productivity improvements | | |
| | NEW O3 ⁸ | Number of SFACLs with satisfactory financial governance: (a) regular savings by 95% of members; (b) cumulative repayment of loans more than 98%; (c) Annual general meetings held as per schedule and regular election process. |
| Strengthening of participating local institutions through training: (a) participating VDCs - 80 %; [RIMS] |  O3.1 | Share of participating local institutions (VDCs) receiving trainings on good governance: 80 % [RIMS] |
| At least 50 % of groups formed/strengthened with women in leadership position [RIMS] |  O3.2 | At least 50 % of groups formed/strengthened with women in leadership position [RIMS] |
| Strengthening of participating local institutions through training: (b) participating Production groups and Cooperatives – 70% ; [RIMS] |  | deleted as too operational |
| Strengthening of participating local institutions through training: (c) participating Agrovets – 80%. [RIMS] |  | deleted as too operational |
| At least 80 % of members of new SFACLs and bank branches access production loans |  | deleted as overcome by the component 3 outcome indicator |
| At least 5 multi-stakeholder platforms functioning in the programme area. |  | deleted as too operational |

⁸ For Outcome 3 it was selected an indicator on the satisfactory functioning of SFACLs, and more specifically of their financial governance. In the process of streamlining the logframe, only one type of beneficiaries was selected for the outcome indicator. SFACLs are considered representative for the component, as they are largely rooted in the villages where they operate (the cooperatives on which they are based have at least 500 members, but the actual average is above 600 members), and by form they operate in close partnership with the VDCs, thus contributing to the institutional sustainability.

Annex 3. KUBK beneficiaries outreach projections

| Interventions | phased planned outreach | | | | TOT | average | Outreach | |
|--|-------------------------|------------|----------|----------|------------|---------|----------------------|----------------|
| | 2015-16 | 2016-17 | 2017-18 | 2018-19 | | | direct beneficiaries | |
| Component 1 Interventions | | | | | | | | |
| | sub-projects | | | | groups | HHs | HHs | Benef |
| 1.1 Expanding formal seed production | | | | | | | | |
| Sub-projects approved | 120 | - | - | - | 120 | 25 | 3,000 | 15,000 |
| Sub-projects about to be approved in 2015-16 | 30 | - | - | - | 30 | 25 | 750 | 3,750 |
| Potentially additional sub-projects | - | 210 | - | - | 210 | 25 | 5,250 | 26,250 |
| <i>of which: potentially requested by SFACLs^a</i> | | 188 | | | 188 | 25 | 4,688 | 23,438 |
| Sub-total 1.1 | | | | | 240 | | 9,000 | 40,000 |
| 1.3 Promoting farmers demand for improved seeds | | | | | | | | |
| FFS for crop productivity enhancement | | 50 | 150 | 100 | 300 | 25 | 7,500 | 37,500 |
| Participatory Variety Trials | | 60 | 60 | 60 | 180 | 25 | 4,500 | 22,500 |
| Sub-total 1.2 | | | | | 480 | | 12,000 | 55,000 |
| TOTAL Component 1 (1.1+1.3) | 150 | 210 | - | - | 360 | | 21,000 | 105,000 |
| Component 2 Interventions | | | | | | | | |
| | Beneficiaries | | | | | | HHs | Benef |
| 2.1 Dairy Production and Improvement | | - | - | - | - | | 4,000 | 20,000 |
| Sub-projects on dairy production (100% overlapping) | | | | | | | | |
| Sub-total 2.1 | - | - | - | - | - | | 4,000 | 20,000 |
| 2.2 Improving Goat Productivity | | - | - | - | - | | - | - |
| Goat productivity in Agarkhanchi and Gulmi | 7,000 | 5,000 | | | 12,000 | 1 | 12,000 | 60,000 |
| Goat productivity in other 4 districts | | 12,000 | 12,000 | | 24,000 | 1 | 24,000 | 120,000 |
| FFS (75% benef overlapping) | | 60 | | | 60 | 25 | 1,500 | 7,500 |
| Multiplier Herds (67% benef overlapping) | | 500 | 1,000 | | 1,500 | 1 | 1,500 | 7,500 |
| Sub-total 2.2 | | | | | | | 36,875 | 187,500 |
| TOTAL Component 2 (2.1+2.2) | | | | | | | 40,875 | 204,375 |
| Component 3 Interventions | | | | | | | | |
| | SFACLs | | | | | | HHs | Benef |

| Interventions | phased planned outreach | | | | TOT | average | Outreach | |
|--|-------------------------|---------|---------|---------|-----|---------|----------------------|----------------|
| | 2015-16 | 2016-17 | 2017-18 | 2018-19 | | | direct beneficiaries | |
| Strengthening of SFACLs | 30 | 45 | - | - | 75 | 600 | 45,000 | 225,000 |
| Potential interest of SFACLs for sub-projects: 5 to 6 subprojects per SFACL | sub-projects | | | | | | | |
| Expected sub-projects requested by SFACLs ^a | | 375 | | | 375 | 25 | 9,375 | 46,875 |
| <i>Seed sector</i> | | 188 | | | 188 | 25 | 4,688 | 23,438 |
| <i>Goat/Dairy sector</i> | | 188 | | | 188 | 25 | 4,688 | 23,438 |
| TOTAL Component 3 | | | | | | | 45,000 | 225,000 |

a): not additional beneficiaries (already counted as members of SFACLs under component 3).

Annex 4. Estimates of targeted districts' potential production of seeds

1. In absence of the official data of the potential production of seeds for the six KUBK targeted districts, the estimates are built on available statistics (MoAD, Statistical Yearbook, 2014) of the actual production of cereal grains (paddy, wheat, maize) and of selected fresh vegetables. In the Yearbook, no distinction is made between seed and grain production, hence it is assumed that the entire cereal production is for grains (the seed portion of it is considered negligible – and even more the one of vegetable seeds production).

2. In the six district, **the (selected) cereal grains and fresh vegetables production area is estimated to be around Ha 201,739** (Table 1). The figure seems realistic, and very close to the Ha 204,000 estimated during KUBK formulation (Sept 2012), later confirmed by the Seed Component Study (Dec 2015).

Table 1: Summary of cereal grain and vegetable production in six KUBK target districts

| Districts | TOTAL | Paddy | | Maize | | Wheat | | Vegetables (Selected) ^{1a} | |
|--------------|----------------|---------------|----------------|---------------|----------------|---------------|----------------|-------------------------------------|------------|
| | Cropped land | Total | Production | Total | Production | Total | Production | Total | Production |
| | Ha | Ha | MT | Ha | MT | Ha | MT | Ha | MT |
| Rukum | 31,432 | 3,562 | 9,974 | 16,289 | 30,994 | 10,600 | 27,550 | 981 | 138 |
| Rolpa | 25,641 | 4,715 | 11,787 | 11,881 | 26,138 | 8,560 | 21,400 | 485 | 66 |
| Salyan | 39,145 | 6,934 | 24,497 | 16,280 | 33,495 | 15,108 | 30,635 | 823 | 124 |
| Pyuthan | 27,928 | 6,520 | 19,737 | 12,058 | 18,462 | 8,640 | 20,760 | 710 | 100 |
| Gulmi | 43,866 | 10,484 | 25,339 | 24,844 | 52,519 | 8,095 | 14,866 | 443 | 70 |
| Arghakhachi | 33,727 | 8,672 | 26,306 | 16,915 | 49,448 | 7,335 | 12,952 | 805 | 114 |
| TOTAL | 201,739 | 40,887 | 117,640 | 98,267 | 211,056 | 58,338 | 128,163 | 4,247 | 610 |

Footnote^{1a}: The selection includes: Cauliflower, Cabbage, Carrot, Onion, Lettuce, Cress, Radish, Peas, French Beans, Broad beans, Cowpeas

Source: Statistical Yearbook 2014, MOAD

3. Key underlying assumptions for the estimate of the potential seed production include:
- The productions of cereal grain and fresh vegetable can be used for seed production.**
 - Only 20% of the cereal/vegetable area is used for seed production** (the rest remaining used for grain/fresh vegetable production) due to the higher opportunity-costs, marketing risks and other socio-economic factors⁹ associated to seed production.

4. The **box** below summarizes the cereal and vegetable seed yields per Ha.

| BOX: Seed Yield | MT/Ha | Notes: |
|-------------------------------|-------|---|
| Wheat | 2 | |
| Paddy | 2.5 | |
| Maize | 2 | |
| Vegetables <i>Small seeds</i> | 0.5 | Cauliflower, Cabbage, Carrot, Onion, Lettuce, Cress |
| <i>Medium</i> | 1 | Radish |
| <i>Large</i> | 1.2 | Peas, French Beans, Broad beans, Cowpeas |

5. Under these assumptions, around Ha 29,528 are estimated to be available for seed cultivation, whose corresponding production would be for a total of almost **MT 60,000** of cereal seeds, and **MT 610** for vegetables seeds (Results are shown in **Table 2**, below).

6. The projection does not take into account the inter crop conversion: ie, passing from cereal grain production to vegetable seed production (where the KUBK six target districts have a comparative advantage). As such, **it seems that there are no physical constraints to meeting the seed demand or reaching KUBK seed production targets** (the demand for seeds in the six targeted districts is being estimated based on official SQCC data).

⁹ Socio-economic factors include mostly marketing opportunities, as well as the farmers' economic capacity of storing and / or holding sales, plus the opportunity-cost of selling seeds that can be used for household self-sustenance (food security, nutrition).

Table 2: Potential production of cereal / vegetable seeds in six KUBK target districts^{1a}

| Districts | TOTAL | Paddy | | Maize | | Wheat | | Vegetables | |
|--------------|--------------------------|--------------|--------------|---------------|---------------|--------------|---------------|------------|------------|
| | Cultivable land | Total | Production | Total | Production | Total | Production | Total | Production |
| | Ha | Ha | MT | Ha | MT | Ha | MT | Ha | MT |
| Rukum | 4,728 | 337 | 842 | 3,258 | 6,516 | 937 | 1,875 | 196 | 138 |
| Rolpa | 3,676 | 446 | 1,115 | 2,376 | 4,752 | 757 | 1,514 | 97 | 66 |
| Salyan | 5,412 | 656 | 1,639 | 3,256 | 6,512 | 1,336 | 2,672 | 165 | 124 |
| Pyuthan | 3,934 | 617 | 1,541 | 2,412 | 4,823 | 764 | 1,528 | 142 | 100 |
| Gulmi | 6,765 | 991 | 2,478 | 4,969 | 9,938 | 716 | 1,432 | 89 | 70 |
| Arghakhachi | 5,013 | 820 | 2,050 | 3,383 | 6,766 | 649 | 1,297 | 161 | 114 |
| TOTAL | 29,528 | 3,866 | 9,665 | 19,653 | 39,307 | 5,159 | 10,317 | 849 | 610 |
| | KUBK Targets (MT) | | 760 | | 830 | | 1,600 | | 500 |

Footnote^{1a}: Assuming 20% of the cereal/vegetable area is used for seed production

Source: KUBK (MTR mission calculations)

7. KUBK potential to fulfil the annual demand of seeds is calculated based on the projected approval of sub-projects and related KUBK's capacity, for a total of 360 grants for seed production. Their potential production is based on the planned production of the already approved 120 sub-projects (plus additional 32 expected to be approved in April 2016). Such potential production is shown in **Table 3**, that reports also KUBK targets (at appraisal).

Table 3: Projected production of cereal / vegetable seeds from 360 KUBK sub-projects^{1a}

360 expected to be approved by KUBK

| Districts | TOTAL | Paddy | | Maize | | Wheat | | Vegetables ^{1b} | |
|--------------|--------------------------|------------|------------|--------------|--------------|------------|--------------|--------------------------|------------|
| | area | Total | Production | Total | Production | Total | Production | Total | Production |
| | Ha | Ha | MT | Ha | MT | Ha | MT | Ha | MT |
| Rukum | 375 | 61 | 122 | 123 | 246 | 120 | 240 | 71 | 55 |
| Rolpa | 330 | - | - | 159 | 319 | 142 | 285 | 29 | 45 |
| Salyan | 303 | 57 | 115 | 144 | 289 | 69 | 139 | 31 | 29 |
| Pyuthan | 406 | 74 | 147 | 232 | 464 | 93 | 174 | 8 | 7 |
| Gulmi | 811 | 139 | 278 | 573 | 1,145 | 47 | 95 | 52 | 72 |
| Arghakhachi | 378 | - | - | 262 | 523 | 72 | 143 | 45 | 57 |
| TOTAL | 2,604 | 331 | 662 | 1,493 | 2,986 | 544 | 1,076 | 236 | 265 |
| | KUBK Targets (MT) | | 760 | | 830 | | 1,600 | | 500 |

Footnote^{1a}: productivity figures are taken from 120 approved sub-projects and used for the projection of 360

Footnote^{1b}: The selection includes vegetable seeds as per subprojects plans: Cauliflower, Peas, Cowpeas, Beans, Onion, Radish, Mustard, Chamsur

Source: KUBK (MTR mission calculations)

WORKING PAPER 4: Financial Management

Fiduciary aspects

- 1. Financial management:** The implementation performance of this component is rated as *Moderately Unsatisfactory*. Accounting is done manually in accordance with cash basis of accounting of the Government of Nepal (GoN). The accounts at the PMO are managed by an Accounts Officers/Accountants deputed by the Financial Comptroller General's Office (FCGO), and at the districts, by the Account Officers of the DADOs and DLSOs. The account staff at the districts are also responsible for accounting and reporting of Government regular budget and other projects apart from the ISFP. The account staff of the DADOs and DLSOs prepares vouchers and maintain Cash Book, Budget Sheet and Advance Register manually in excel spreadsheet. The account staff at the districts prepare a monthly statement of the expenditure incurred under each budget head showing allocated budget, expenditures incurred and balance budget and the outstanding advances and are required to forward it to the PMO within 7 days after expiry of the month as per Financial Procedures Regulation and 15 days after expiry of the month as per PIM. The account staff of the DADOs and DLSOs prepare the monthly expenditure statement and monthly financial and physical progress report in excel.
2. The monthly expenditure statements are not received from the implementing partners within specified period. The statement of expenditures of the FY 2015-16 has not been received from the Heifer International. In the absence of all financial statements, the PMO is not able to compile the consolidated monthly expenditure statements and status of AWPB and does not know the status of expenditure and advances. Because of delay in submission of the financial statements by the implementing partners, the PMO has submitted Withdrawal Application of expenses incurred in FY 2015-16 by the PMO only and is unable to monitor actual expenditures comparing with the budgeted amounts on a regular basis. As on February 12, 2016, NPR 62.08 million (USD 0.58 million) is outstanding at PMO including advance which cannot be claimed from IFAD. The delay in submission of monthly financial statements also causes delay in settlement of advances, accounting expenses to the respective expenditure heads and claiming reimbursement. Therefore, the PMO should follow up the implementing agencies and partners to receive financial statements within specified period.
3. The accounts have been maintained manually at PMO. The accounting software for government **accounting** and reporting has been installed and it is functioning but the other features are still being customized for consolidation of all financial data received from the implementing agencies and partners, accounting expenses to be financed from IFAD source in categories and project component/activities and generating FMR and withdrawal application. Because of delay in computerization, the financial data received in hard copies and soft copies from the implementing agencies and partners are consolidated for preparation of the FMR and WA on trimester basis. The Financial Management Specialist (FMS) should ensure to get monthly financial data from all implementing agencies and partners and prepare the FMR comparing with the budgeted amounts to monitor the financial and physical progress within 30 days of the subsequent month.
4. The programme does not operate any bank account except designated bank account as all payments are made by the District Treasury Controller's Office (DTCO) on request of the PMO for the **expenditures** to be pre-financed by the government. Payments by DTCO are made only by crossed cheques and bearer cheques are issued on payees' request as per Financial Procedure Regulation. The invoices, bills and receipts are not defaced with "PAID" stamp which is required as per Financial procedure Regulation, 2007. The grants are being paid to the beneficiaries within 15 to 60 days from the date of receipt of the claim. The payment of grant should be expedited and cheques should be handed over through the concerned district PIU. The vouchers are prepared for transactions of designated account during the supervision mission. The designated account has not yet been maintained for the funds received from IFAD for initial deposit, transfer to Government treasury and reimbursement. The consolidated record of grant and loan disbursement has been maintained and separate record each for grant and loan have not been maintained. It is recommended to maintain separate records of grant and loan to tally with the records of IFAD.
5. The programme ledger to be maintained to record and monitor expenses incurred under each activity **has** not been maintained by the PMO. The DLSO, Arghakhachi has maintained the program ledger. Investment Fund Committee as envisaged in the Project Implementation Manual has not been constituted.

Similarly, Investment Fund Manager has also not been appointed for overall management and reporting of the investment fund. Annual progress report of FY 2014-15 was submitted on October 6, 2015 but the half yearly progress report of FY 2015-16 has not been submitted. Out of four agreed actions, only one that is submission of WA is complied with and other one relating to monthly financial reporting is partially complied with.

6. **Coherence with AWP&B:** The implementation performance of this component is *moderately satisfactory*. The activities are being implemented generally in line with the approved budget. An expenditures of NPR 173.82 million were incurred up to February 12, 2016 of the FY 2015-16 against budget of NPR 842.12 million which is only 20.64% of the budget. The AWPB for the year 2015-16 was not approved prior to the commencement of the fiscal year rather it was submitted on July 28, 2015 to MoAD after receiving budget authorization and it was approved on August 15, 2015 one month after beginning of the fiscal year. Due to delay in approval of the AWPB, the PMO was unable to initiate the activities till approval of the AWPB causing delay in programme implementation during first one month of the year. The project needs to prepare AWPB and submit immediately after submission of budget in the Parliament and work proactively in implementation of the planned activities to achieve the project objectives within the remaining period of the project.

Summary of Expenses against AWPB (in NPR '000)

| Fiscal Year | Approved AWPB | Expenditure | Percentage of expenditures against AWPB | Remarks |
|-------------|---------------|-------------|---|-------------------|
| FY 2012/13 | 21,000 | 19,541 | 93.05 | |
| FY 2013/14 | 339,272 | 144,788 | 42.68 | |
| FY 2014/15 | 471,212 | 255,422 | 54.21 | |
| FY 2015/16 | 842,120 | 173,819 | 20.64 | Till Feb 12, 2016 |

7. **Disbursement:** The implementation performance of this component is rated as *Moderately Unsatisfactory*. As on February 12, 2016, the total disbursement under IFAD loan L-881 and IFAD grant DSF-8106 is SDR 4.311 million (including the initial deposit of SDR 1.658 million) which is about 16.78% of the total loan and grant allocation of SDR 12.85 million each. The net disbursement excluding initial deposit for the loan and grant is SDR 2.654 which is only 10.33% of the allocation. WA No. 7 of SDR 375,834 for the expenditures incurred by PMO only during July 17 to December 15, 2015 of FY 2015-16 was submitted and disbursed. The disbursement including expenditures of SDR 0.416 million (USD 0.581 million) incurred during December 15, 2015 to February 12, 2016 by PMO only and yet to be claimed will be SDR 3.07 million excluding initial deposit which is 11.95% of allocated amount. The WA should be submitted within 45 days from the end of the trimester obtaining financial reports on time from all district implementing agencies and partners so that disbursement can be expedited. Appendix 5 shows actual financial performance by financier; by component and disbursements by category. There is no disbursement from SDR 3.27 million allocated under IFAD Loan L-2000000460 due to delay in signing subsidiary loan agreement between the government and the Small Farmers Development Bank (SFDB).

8. **Withdrawal Applications** The WAs are prepared for the incurred expenditures to be borne from IFAD source after transfer of the expenditure amounts in equivalent USD from the Designated Account to the treasury of the Government of Nepal. The WA No. 7 of USD 528,354.77 (NPR 56,338,468.80) for the expenditures incurred during July 17 to December 15, 2015 was submitted and disbursed. On review of the **SoEs**, it is found that USD 39,515.15 (NPR 4,213,500) was excess claimed for outstanding advances of NPR 850,000 (USD 7,971.49) with the implementing partners under category 2 and NPR 3,363,500 (USD 31,543.66) with the project staff under category 3 & 4. The excess claimed amounts should be adjusted from the WA No.8 and it is advised to claim only incurred expenditures excluding outstanding advances in future.

9. **Counterpart funds:** The implementation performance of this component is rated as *Moderately Satisfactory*. The budget of NPR 842.12 million consisting NPR 79.00 million from GoN source (9.38%), NPR 96.90 million from Heifer International source (11.50%), NPR 333.11 million from IFAD Grant (39.56%) and NPR 333.11 million from IFAD loan (39.56%) has been approved for the FY 2015-16. The budget

authorizations were issued on July 28, 2015. Government of Nepal pre-finances all expenditures of the project except direct payment and claims reimbursement of the expenditures to be funded from IFAD source. The expenditures of USD 1.32 million (20.64% of the approved budget) consisting USD 0.47 million from GoN source (22.91%), USD 0.50 million from IFAD source (17.78%) and USD 0.35 million from Heifer International (38.49%) have been incurred up to February 12, 2016 in the FY 2015-16. The project has mechanism of recording the beneficiary contribution from the statement of expenditures submitted by the groups/Cooperatives for payment of grant based on grant agreement. However, the expenditures incurred in excess of grant agreement by the beneficiaries have not been recorded as beneficiary contribution. It is recommended to record and report actual expenditures incurred by the beneficiaries so that total expenditures of the project is reported in the project account.

10. **Compliance with loan covenants:** The performance of this component is rated as *Moderately Satisfactory*. The Programme has generally complied with all the Loan Covenants except: (i) Clause 7.01 - non submission of AWPB within the stipulated time, (ii) Clause 8.02 - setting up of MIS, (iii) Clause 8.03 - submission of periodic progress reports, and (iv) Clause 9.03 - delay in submission of the audit report and the audited financial statements. Appendix 6 summarises the status of compliance with legal covenants.

11. **Procurement:** Procurement performance is rated as *Moderately Unsatisfactory*. The Programme follows the GoN Public Procurement Act and Regulations consistent with IFAD's Procurement Guidelines. Procurement plans are not adequately prepared, updated, monitored and revised during the course of implementation. The mission was unable to ascertain associated risks resulting from **variances** and non-compliance between the approved procurement plan and actual procurement undertaken based on needs as identified by the Programme. The Project Management Office (PMO) has started to update procurement plan in accordance with the provisions of IFAD Procurement Handbook for goods, works and services with the support of the IFAD Procurement Consultant to mitigate potential risk of delays; understatement or overstatement of the needs; impractical target dates; insufficient funding; probity failure; splitting or inappropriate procurement packaging; inappropriate procurement methods to avoid transparent and competitive processes and risk of the expenditure being declared as ineligible expenditure consistent with the provision of Section 4.08 and Section 7.05 of the IFAD General Condition to the Financing Agreement. This would enable the Programme to monitor; revise and report on the implementation of the procurement plan and to seek IFAD's approval on any envisaged changes to the procurement plan, a mandatory requirement.

12. The mission reviewed the procurement packages for (i) Training Hall Construction of DLSO, Rukum (Contract ID: KUBK-ISFP/NCB-CWTH-07/2072/73); (ii) Supply and Delivery of Branded Desktop Computers (Contract ID: KUBK/PMO/GD-02/2072-73); and (iii) Liquid Nitrogen Container Supply and Delivery (Contract ID: KUBK-ISFP/NCB-GPLNC-01/2072/73) based on the procurement plan maintained by the project. IFAD no objection was obtained for procurement of **Training Hall Construction of DLSO, Rukum** and remaining two procurements were subjected to post review hence do not require prior no-objection. Standard Bidding Document (SBD) issued by the Public Procurement Monitoring Office (PPMO) has been used for procurement, which is good. Relevant district rates and standard norms have been used in preparation of cost estimate for construction works. The estimate for supply and delivery of goods are found preparing based on the past year experiences, which may not be adequate to reflect current market price hence, estimate could also be substantiated by the current market survey. The technical specifications for the construction and the specifications for the supply of desktop computers were found to be satisfactory. The specifications prepared for procurement of liquid nitrogen container could have been improved to mitigate the risk of procuring or the supply of goods that do not meet the user needs.

13. The time gap between the time of bid submission and opening of bid of two hours, in general, is high, which could be reduced to 30 minutes. The information recorded in bid opening record is not adequate, which may cause difficulty in decision making during bid evaluation hence require improvement in bid **opening** record. The mission has identified that the information included in bid evaluation report (BER) is insufficient to provide adequate and complete picture of evaluation and examination of the bids received and should be the basis to review the potential risks associated with non-compliance of the ensured principle of procurement such as transparency; accountability; fairness; ethical standards and value for money outlined in the bid document. As per Procurement Law of Nepal, a standing list of vendors is maintained by the respective

entities, which is revised at the beginning of each fiscal year based on quotations called for the purpose of direct procurement. Procurement of regular supplies is done from the approved list.

14. The insurance requirement is not mentioned rightly in the Special Conditions of Contract (SCC) and such lacking prevents enforcing insurance provision during execution of contract. The register of contracts has been maintained by the PMO. While the mission has been able to access documents, the mission has identified a significant need for the project to improve its records management essential to the evidencing of a transparent and auditable procurement process. Based on the above findings, the **Mission** recommends a procurement and contract management review within 4 months period to ensure improvement in procurement planning and preparation, maintaining systematic records and timely monitoring and updating contract management. For further strengthening of procurement capacity, training on procurement and financial management seems essential. Additionally, it is essential to report procurement progress as well as the contract implementation status on trimester basis.

15. Stock registers have been maintained at the programme offices. One vacuum cleaner has been recorded in expendable (consumable) stock register instead of fixed assets (non-expendable) stock register. Fixed assets issue register has not been maintained separately rather issues of fixed assets are recorded only in the fixed assets register. Physical verification at the PMO has also been carried out on July 22, 2015 and documented. The fixed assets except third party insurance of the vehicles and motorbikes have not been insured. Log book of the vehicles has been maintained. One Scorpio jeep of the **project** (Ba.1 Jha 9844) has been provided to MoAD for its use on December 27, 2015. The project vehicle should be used only for the project and not for any other purpose otherwise the cost of the vehicle will be declared ineligible. Hence it is recommended to return the vehicle to the project. Assets maintenance assessment report has not been prepared and submitted to IFAD that should have been submitted within 3 months of the end of the fiscal year. The consolidated records of fixed assets to be submitted to the IFAD have not been prepared.

16. **Audit:** The performance of audit is rated as *Moderately Satisfactory*. Audit of the programme is being carried out by the Office of the Auditor General (OAG) of the GoN. Separate audit teams from the OAG visit the PMO and the district offices. The financial statements of the PMO and the DADOs and DLSOs are compiled for preparation of the Project Financial Statement (PFS). The management letter issued to PMO by the OAG along with the audit report contains observations of the PMO only and audit observations of DADOs and DLSOs are not incorporated. The PFS have been prepared in accordance with IFAD Guidelines except omission of showing government reimbursable fund in the source of fund resulting in short closing balance to the extent of outstanding amount of government reimbursable fund in the statement of receipts and payment (By category and component), mistake in total amounts of expenses in status of source to be changed table, and minor mistakes in amounts in SDR and USD of the categories of IFAD Grant and loan. The mistakes of previous years have been rectified in the audited project account of FY 2014-15. The audit report of FY 2014-15 along with the management letter issued on January 14, 2016 is qualified but there are no reasons of qualification. The issues raised by the auditor in the management letter are: (i) the role of AEC is not effective, (ii) the TOR, its activities and payment for AEC have not been seen positively correlated, (iii) there is no justification to pay additional amount to AEC as a management cost, (iv) the PMO has not maintained program-wise account, (v) master procurement plan is not prepared, and (vii) financial and physical progress is not satisfactory as targeted. The Heifer International, Agro Enterprises Centre (AEC), Small Farmers Development Bank Ltd (SFDB) and Nepal Agriculture Cooperative Central Federation Ltd (NACCFL) have submitted the unqualified audit reports for the FY 2014-15. The programme has maintained the detailed audit log based on preliminary audit report instead of final audit report which needs to be validated by the auditor and this is given in Appendix 8. DTCO has conducted internal audit of six months of FY 2015-16 instead of trimester basis but the internal audit report has not yet been received.

| Agreed action | Responsibility | Agreed date |
|--|---------------------------|---------------------|
| Conduct training on procurement and financial management (Expected participants are management level and Finance staffs of PMO and of implementing partners) | PMO | Within May 31, 2016 |
| Ensure monthly financial reporting by all the Implementing Partners by the 10th of the subsequent month. | All implementing partners | March 31, 2016 |
| Customize accounting software for accounting and reporting requirements. | PMO | April 30, 2016 |

| | | |
|---|---------|---|
| Comply with all the financing covenants within the stipulated time | PMO/OAG | Ongoing |
| Incorporate audit observations of the districts and PMO in the management letter of the auditor and submit to IFAD | OAG/PMO | In the audit report of 2015-16 and thereafter |
| Maintain Designated Account, Grant and Loan Register and program ledger | PMO/FMS | April 15, 2016 |
| Submit assets maintenance assessment report and consolidated records of fixed assets to the IFAD | PMO/FMS | April 15, 2016 |
| Prepare complete procurement plan separately for Goods, Works and Services in IFAD format. | PMO | April 15, 2016 |
| Ensure trimester procurement progress reporting | PMO | April 15, 2016 |
| Prepare status of contract implementation (According to number of contracts planned under each category – Goods, Works and Services and value of contract awarded and completed in the reporting period). | PMO | April 15, 2016 and thereafter |

Annex I

Financial Management Assessment at Supervision – Guidance Questionnaire^{10/11}

| | |
|--|--|
| Country: Nepal | Loan /Grant ID: 8106-NP and DSF-8106-NP |
| Project Name: | Improved Seeds for Farmers Programme |
| Executing Agency: Ministry of Co-operatives and Poverty Alleviation | CPM: Lakshmi Moola |
| Reviewing Finance Officer/FMS: Pradeep K Shrestha | Date of this review: 10 March 2016 |

| Topic | | Risk Rating (H/M/L) | Issues / Comments |
|-------------------------------------|--|---------------------|---|
| A. Inherent Risks | | | |
| B. Control Risks | | | |
| 1. Organization and Staffing | | | |
| a. | Adequacy of organizational structure to meet functional needs of the project. | L | The structure is well defined and adequate. |
| b. | Availability of clear job description for key project positions, including fiduciary positions. | L | Job descriptions are available for key positions. |
| c. | Adequacy of project financial management staff (numbers and skill) matching functional needs of project. | L | There are one Finance Office, one accountant and one FM specialist at the PMO. The staff at PMO is adequate commensurate to the function of the project and workload. The FM specialist has been recruited w.e.f July 31, 2015. |
| d. | Availability and adequacy of operating manuals and guidelines for staff. | L | The project has a Project Implementation Manual (PIM) which includes financial management and Financial Procedures regulation 2007 also prescribes the financial procedures. |
| e. | Existence of a performance based evaluation system in place and timely completion of performance evaluation for all staff. | L | Performance evaluation of staff is done biannually for the officers and annually for the assistants by the PM and DPM at PMO and PIU and by Chief Officer for the staff of DADO and DLSO. |
| f. | Adequacy of health insurance coverage for all staff (where applicable). | M | The project staff at the PMO and the PIU are not covered by health insurance. Accident insurance is planned for this FY. |
| g. | Timely payment of social security fees (where applicable). | L | Social security tax is being paid. |

¹⁰ This questionnaire should be used as guidance for and in support of the Summary Project Fiduciary Risk Assessment at Supervision. It is to be completed during the Mission.

¹¹ Include relevant findings of project supervision and progress reports, field visits, and audit report findings.

| Topic | | Risk Rating (H/M/L) | Issues / Comments |
|--|---|---------------------|---|
| h. | Staff adequately informed about IFAD's national and anti-corruption policy and relevant contact details. | L | Informed |
| 2. Budgeting | | | |
| a. | Timely preparation and approval of AWPB. | M | Preparation and submission of AWPB is generally delayed. |
| b. | AWPB in line with expenditure categories in Financing Agreement Schedule 2. | L | Not mentioned the category but can be identified with the category |
| c. | Financing sources and implementing agencies for each category in the AWPB are identified. | L | Sources are not identified individually but sources of fund are given in total. |
| d. | Linkage between AWPB and Procurement plan are identified (for cost estimate and activities). Check assumptions to support cost estimates. Test check high value items. | L | |
| 3. Fund flows and Disbursements / Withdrawals | | | |
| a. | Timeliness of funds disbursed by different sources (and co-financiers funding if applicable). | M | Delay in release of funds by the Govt. due to delay in approval of the AWPB. |
| b. | Timeliness of counterpart funds disbursed. | L | Budget authorization is issued but budget is released based on payment request. Funds for the first trimester are generally disbursed by the Govt after approval of AWPB. |
| c. | Efficiency of the funding channels. Timeliness and traceability of funds flows. | L | Government pre-finances the expenditures for Govt. and IFAD sources. |
| d. | Efficiency of the funding channels for credit lines. Timeliness and traceability of funds flows, if applicable. | L | Government pre-finances the expenditures for IFAD sources & IFAD has provided advance and reimburses incurred expenditures. |
| e. | Special Account(s)/Dedicated Account(s) Management, Disbursements. | | |
| | i) Adequacy of the authorized allocation to ensure a smooth flow of funds | L | Adequate |
| | ii) Appropriateness of disbursement methods used | L | Disbursement methods as specified are being used. |
| | iii) Adequacy of documentary support for SOE disbursements, reimbursements, direct payments and Special Commitments. (refer to Appendix IV and complete, reflecting finding in rating). | L | There are adequate supporting documents. |
| | iv) Timely preparation and accuracy of Withdrawal Applications | L | WA is being prepared on time from WA N0.6. Last WA No. 7 was submitted for period ended 15th December 2015 and disbursed. |
| | v) Authorization of WA preparation. | L | Authorized |
| | vi) Status on expenditures withdrawn from Special Account but not yet claimed for replenishment (old cases to be noted) | L | Amount withdrawn from designated Account has been replenished. |
| | vii) Regularity of Special Account(s) monitoring and monthly reconciliations signed by the project manager. Review and assess the reconciliations | L | Yes |

| Topic | | Risk Rating (H/M/L) | Issues / Comments |
|---------------------------|---|---------------------|--|
| | viii) Disbursement rate compared to the AWPB and whether satisfactory given the remaining implementation time. Provide comments as appropriate | H | Disbursement is Moderately Unsatisfactory as compared to the AWPB and very low considering the total appraisal targets |
| | ix) Recovery of SA balances by loan closure | NA | |
| 4.Internal Control | | | |
| a. | Segregation of duties - are the following functional responsibilities performed by different units or persons: (i) authorization of a transaction (ii) execution of a transaction (iii) recording of the transaction; and (iv) custody of assets involved in the transaction. | L | Yes. Accountant prepares and records the transaction after it is authorized by the Project Manager on recommendation of the concerned Official and Finance Officer. The Store Keeper is responsible for custody of the assets. |
| b. | Clarity and adequacy of decision processes and sequence of events for control functions in project implementation reflected in the Financial Manual (or equivalent thereof). | L | The PIM has a chapter on financial management. The Govt. has a financial manual which is being followed by the project. |
| c. | Adherence to Financial Manual. | L | Yes except not affixing "PAID" stamp on supporting invoices and bills. |
| d. | Effectiveness and efficiency of internal controls over inflows of funding sources other than IFAD. | L | Yes |
| e. | Adequacy of contract management (use of contracts register and monitoring form) and filing there-of. | M | Contract register has been maintained but all required information are not recorded and updated. |
| f. | Effectiveness and efficiency of internal controls over expenditures (full cycle from commitment, payment, receipt of goods and services, approval of payments, classification, etc.) | M | Internal control over expenditures is to be strengthened to avoid non-compliance with the prevailing Financial Procedures Regulation. |
| g. | Documentary evidence to confirm delivery and acceptance of contracted goods, works or services. | L | Complied |
| h. | Physical controls over cash, documents and records. Adequacy of filing systems. Is the petty cash subject to monthly reconciliation as well as surprise checks; custody of cash box and control of keys. | L | There is no petty cash rather advance is given for petty expense. |
| i. | Adequacy of physical management of cash. | NA | |
| j. | Timely payment to suppliers and consultants. | M | Yes except some delay in payment of grant to the beneficiaries (Group/Co-operatives) |
| k. | Eligibility of expenditures with respect to Financing Agreements. | L | Yes |
| l. | Legality/eligibility of advances from project funds and timely justification for use thereof. | L | Advance is being given for implementation of the project activities but some of advances are not being settled on time. |
| m. | Compliance with financial management covenants in the Financing Agreements and LTB. | M | (i) Clause 7.01 - non submission of AWPB within the stipulated time, (ii) Clause 8.02 - setting up of MIS, (iii) |

| Topic | Risk Rating (H/M/L) | Issues / Comments |
|----------------------|---------------------|---|
| | | Clause 8.03 - submission of periodic progress reports, and (iv) Clause 9.03 - delay in submission of the audit report |
| n. | L | Maintained but one vacuum cleaner is recorded in expendable stock register. |
| o. | L | Physical verification is conducted. Log book is being maintained. DSA is paid to staff at the rate specified by the government. |
| p. | M | Except third party insurance of vehicles and motorbikes, the assets are not insured |
| q. | L | Workshops: i) Availability of list of participants ii) DSA paid to participants iii) Receipts for workshop expenditure |
| r. | L | There is adequate control. |
| s. | L | Bank statement of Designated Account is obtained to confirm the balance. |
| t. | M | Accounts are being maintained using accounting software based on government accounting system but it is being customized to maintain as per IFAD reporting requirement and prepare withdrawal application. |
| 5. Accounting | | |
| a. | L | Cash basis of accounting is being used |
| b. | M | Double entry accounting system is used to maintain account using government chart of accounts. The programme ledger specifying the allocated budget and expenditures incurred under each activity has not been maintained. The expenditures are classified as per component and category using excel spreadsheet. |
| c. | L | Maintained. |
| d. | L | Maintained in the government |

| Topic | | Risk Rating (H/M/L) | Issues / Comments |
|--|---|---------------------|--|
| | reconciled (sample and physical check). | | approved format and reconciled during physical verification |
| e. | Adequate documentation and controls for Information Systems, including documented accounting procedures, backup of financial records, integration of all sub-systems. | M | The accounting procedures are documented using accounting software as per the Govt. Financial Procedure Regulation in the approved format. Backup of the computer data is not taken. All the sub-systems of data being generated are not integrated for authenticity of the information. |
| f. | Adequacy of chart of accounts for project accounting purposes | L | Budget heads of the Govt. system is used as chart of accounts and it is adequate for accounting project expenses but the expenses are classified to the component and category based on nature of expenses and activities. |
| g. | Timeliness of recording transactions, regularity of performance and approval of reconciliations, controls on erroneous recordings. | L | Transactions are recorded on time after payment is made |
| h. | Appropriate/ adequate accounting and reporting of counterpart funds contributions (incl. tax and tax exemptions) as well as beneficiary contributions. | M | Beneficiary contributions are recorded based on statement of expenditures submitted for reimbursement of grant to the extent of contribution committed by the beneficiaries. Beneficiary contribution in excess of committed amount is not recorded. |
| 6. Financial Reporting & Monitoring | | | |
| a. | Completeness, accuracy, usefulness, and timeliness of financial reports. | M | Preparation and submission of financial reports by implementing partners are delayed |
| b. | Interim FM reports and linkage to progress reports - timely preparation, submission to IFAD. | M | Progress reports are submitted yearly and half yearly progress report is not prepared. |
| c. | Preparation of reports showing actual vs. budget income/expenditure and AWPB execution rate. | L | The programme's financial statement shows the actual and budgeted expenditure and physical progress report shows the AWPB execution rate. |
| d. | Follow up of previous aide-memoirs fiduciary recommendations. | M | One recommendation was complied with while one is partially complied out of four recommendations of the earlier report. |
| e. | Reasonable alignment between disbursement rate of recurrent versus investment cost categories. | L | |
| 7. Internal Audit | | | |
| a. | Existence of Internal Audit arrangements. | L | The District Treasury Controller Office (DTCO) has conducted internal audit of six months of FY 2015-16 instead of trimester basis but the internal audit report has not yet been received. |

| Topic | | Risk Rating (H/M/L) | Issues / Comments |
|---------------------------------------|---|---------------------|---|
| b. | Adequacy of internal audit arrangements (organization - staff capacity). | L | |
| c. | Adequacy of internal audit scope of work and quality of reports. | M | Audit is not done every trimester as required to be done but it is conducted for first six months. |
| d. | Assessment of matters raised in audit reports. | L | The issues being raised in previous report are related to role of implementing partner, procurement plan and financial and physical progress. |
| 8. External Audit¹² | | | |
| a. | Adequacy of scope and ToR. | L | The audit report generally adheres to IFADs requirements |
| b. | Adherence to ToR. | L | |
| c. | Timeliness of audit report. | L | Audit Report for the year 2014-15 was signed on 14th January, 2016 and submitted thereafter on 19th January, 2016 |
| d. | Quality of audit. | L | Audit report of FY 2014-15 is qualified but there is no justification of qualification. Hence, it is acceptable. |
| e. | Implementation of audit recommendations/agreed action plan in place to address these. | L | Being addressed. |

¹² Refer to IFAD audit review.

Annex II

Summary of Project Fiduciary Risk Assessment at Supervision¹³

Project # Improved Seeds for Farmers Programme

Implementing Agency : Ministry of Co-operatives and Poverty Alleviation

| | Risk Assessment H/M/L | Proposed Mitigation |
|---|--------------------------|---|
| Inherent Risk | | N/A |
| Control Risks | | |
| 1. Organization and Staffing | L | |
| 2. Budgeting | M | Timely preparation and submission of AWPB |
| 3. Funds flow & Disbursement Arrangements | M | Timely approval of AWPB and implementation of annual work plan as per project design document. |
| 4. Internal Controls | M | <ul style="list-style-type: none"> • Contract register is to be maintained containing all required information for contract management. • Strengthen the internal control system to comply with the Financial Procedure Regulation. • Timely payment of grant to the beneficiaries. • Comply with the covenants of the Financing Agreement and LTB. • Insure the fixed assets and maintain stock register correctly. • Complete customization of accounting software. |
| 5. Accounting | M | <ul style="list-style-type: none"> • Program ledger should be maintained and expenses should be also accounted based on component and category for reporting purpose. • Backup of the computer data should be taken on daily basis. • Beneficiary contribution in excess of committed amount should also be recorded. |
| 6. Financial Reporting and Monitoring | M | <ul style="list-style-type: none"> • Obtain financial reports of the implementing partners within prescribed period. • Prepare and submit half yearly progress report. • Comply with the recommendation of the supervision mission within prescribed period. |
| 7. Internal Audit | L | |
| 8. External Audit | L | |
| | | |
| Overall Project Fiduciary Risk | M | |
| H=High, M=Medium, L= Low | | |

¹³ This is a summary of the findings documented in the 'Project Supervision Financial Management Assessment – Guidance Questionnaire – see Appendix I. It is to be completed by the Finance Officer.

Comments: Timely preparation, submission and approval of AWPB and release of funds by the GoN will assist in implementation of the project activities as per project design document to achieve the yearly financial and physical progress and intended project objectives. The internal control system should be strengthened maintaining contract register with all required information and following the prevailing Financial Procedure Regulation and policies to comply with the covenants of the Financing Agreement, make timely payment of grant to the beneficiaries and account actual grant contribution. The accounting software should be customized to generate required data and management information system should be computerized to monitor and implement the project effectively. The program ledger should be maintained and expenses based on component and category should be accounted to know expenses incurred for each activity under each component and category. The project should obtain monthly financial reports from the implementing partners and prepare interim financial and progress reports within specified period for submission to IFAD.