

## Darwin Initiative, Darwin Plus and Illegal Wildlife Trade Challenge Fund Covid-19 Rapid Response Round - Final Report

*Due within two months of the end date of the Rapid Response Round project*

*(maximum 6 pages)*

Project reference	CV19RR21
If linked with an ongoing project, please include that project reference here (e.g. IWT001)	26-008
Project title	Community Response to COVID-19 Impacts on Biodiversity and Sustainable Livelihoods
Country/ies	Nepal
Lead organisation	Local Initiatives for Biodiversity, Research and Development (LI-BIRD)
Partner institution(s)	Local Government: Ward No 13 and Ward No 19 of Pokhara Metropolitan City (PMC) Provincial Government: Lake Conservation and Development Authority (LCDA) of Gandaki Province Three farmers groups: Pokhari Gau Krishi Samuha (PMC Ward No 13); Nepali Thar Krishak Samuha (PMC Ward No 19); Gautam Giri Krishak Samuha (PMC Ward no 19) Cooperative: Namuna Prangarik Krishi Sahakari (PMC Ward No 13)
Start/end date of project	01/01/2021 – 31/03/2021
Which fund was this project relevant to?	Darwin Initiative
Grant value (£)	£ 37,666.00
Project Leader name	Ram Bahadur Rana
Report author(s) and date	Ram Bahadur Rana, Niranjana Pudasaini, Indra Paudel, and Tejaswee Shiwakoti 31 May 2021

### 1. Project Summary

The pervasive impact of COVID-19 pandemic on all aspects of society is evident. Nepal recorded the first case of coronavirus infection on 23 January 2020, and the second case on 23 March 2020, which triggered a complete lockdown of the country from 24 March 2020 that lasted till 21 July 2020. From August 2020, within and between districts travel/movement was relaxed, and life gradually returned to normalcy but many businesses, industries, tourism, and academic institutions operated partially till Nepal experienced the second wave of coronavirus infection on 14 April 2021. The country went to lockdown from 29 April 2021, and the lockdown period has been extended several times because the infection rate and death rate have remained persistently high despite lockdown. During the first phase of COVID-19 pandemic (23 January 2020 – 13 April 2021), 280,254 people were infected, 3,053 people died, with 43 highest per day death recorded on 4 November 2020. Contrary to the first phase, the second phase (14 April – 27 May 2021, still continuing) has been extremely devastating, with 262,002 people infected, 3,898 deaths, and 246 highest one day death recorded on 19 May 2021. The vaccination rate

*Covid-19 Rapid Response Round Final Report Template 2021*

stands at 7.4%, with 2,113,080 people having received one dose while 654,851 people have received double dose of the vaccine. However, the future vaccination programme is in limbo because of delivery issues of vaccines from the Serum Institute of India.

The project ‘Community Response to COVID-19 Impacts on Biodiversity and Sustainable Livelihoods’ was implemented during 1 January 2021 – 31 March 2021 to generate two outcomes: 1) assessment of COVID-19 impact on biodiversity in Lake Cluster of Pokhara Valley (LCPV) – A Ramsar Site in Nepal; and 2) preparation of agricultural development strategy documents of Ward No 13 and 19. The issues for the Outcome 1 were jointly identified by LI-BIRD and Lake Conservation and Development Authority (LCDA – Gandaki Province), whereas the Outcome 2 was local government’s request to LI-BIRD. For Outcome 1, the project conducted systematic assessment on how the pandemic impacted biodiversity (agro-ecosystem, wetland ecosystem, and forest ecosystem) and sustainable livelihoods (income and employment, socio-cultural aspects, and gender dynamics) in the LCPV area (Ramsar Site). It was intended that the findings will allow provincial government to integrate key recommendations in their regular programmes for action. Likewise, Outcome 2 dealt with preparation of longer-term socioeconomic and environmental recovery plans, especially focusing most vulnerable communities (*Dalits*, women, returnee migrants, and jobless youths) for local government’s action. The project contributed to knowledge generation on the impact of COVID-19 on biodiversity and sustainable livelihoods at local, national and global databases.

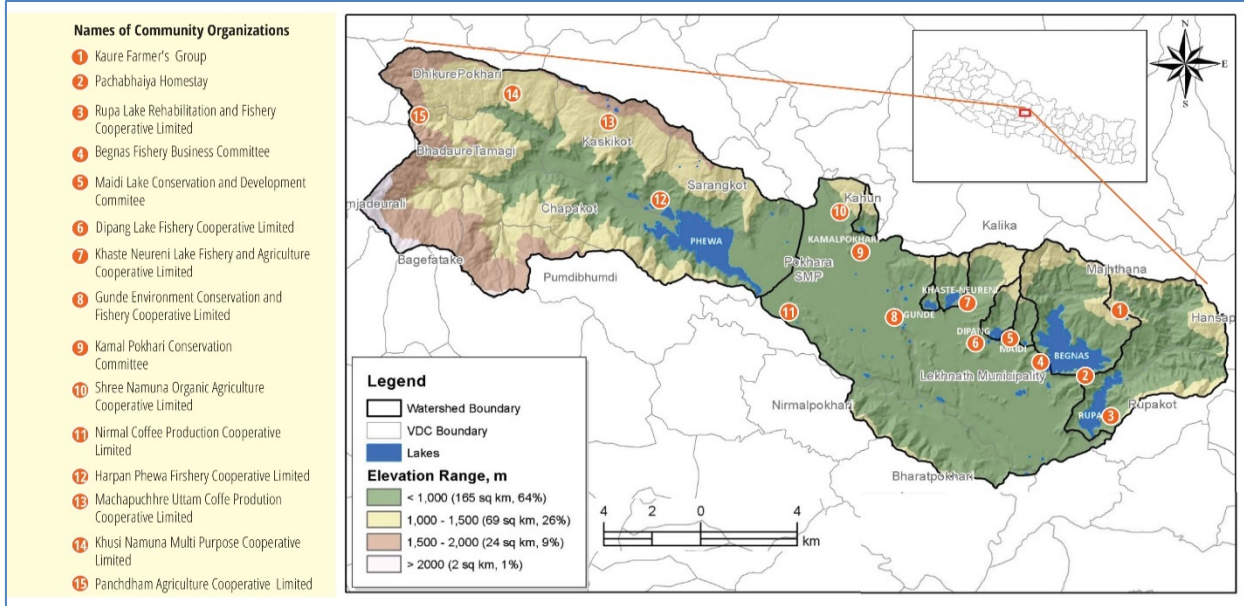


Figure 1. Location of the Study Sites within Lake Cluster of Pokhara Valley (Ramsar Site)

As presented in Figure 1, the current project (CV19RR) is directly linked to Darwin Initiative’s anchoring project (26-008: Market-led Approach to Sustainable Management of Agrobiodiversity for Livelihood Outcomes) implemented in the LCPV area. The findings from the assessment exercise is expected to inform the anchoring project in revisiting planned interventions in the context of COVID-19 impacts. The promotion of organic agriculture at local level is expected to contribute to project’s outcomes, i.e., increase farmers’ income, and contribute to self-employment. The organic produce (safe food) will be marketed by Annapaat Agro Pvt Ltd (packaging house – promoted by the DI Project 26-008).

**2. Project Achievements**

The project has two intended outcomes: 1) an assessment of the impact of COVID-19 on biodiversity and sustainable livelihoods in the Lake Cluster of Pokhara Valley - A Ramsar Site in Nepal; and 2) preparation of agricultural strategy documents with multi-year plans focusing on short-term high impact response followed by longer-term socioeconomic recovery of COVID-19 impacted vulnerable populations (women, *Dalits*, youths, returnee migrants) of Ward No 13 and 19 of Pokhara Metropolitan City (PMC).

Within the stipulated timeframe, the project was able to accomplish the above mentioned two outcomes. The project team is preparing a manuscript based on the assessment study for submission to a referred journal within August 2021. The progress on this aspect will be reported in the project 26-008 half-year report in October 2021. The second outcome, i.e., two reports (Nepali language), namely 'Agriculture and Livestock Development Strategy Plan 2021/22 – 2026/27' and 'Organic Agriculture Production Plan 2021/22 – 2026/27' can be accessed respectively. Following the health protocol (wearing mask, social distancing and use of sanitizer), the project team conducted field activities, which are described briefly in subsequent sections, directly contributing to the achievement of the above two outcomes. In addition, the project provided need-based support to beneficiaries with vegetable seeds, bee hives, and plastic tunnels for fresh vegetable cultivation, drip irrigation sets, etc. along with organization of skills enhancement events such as hands-on training, exposure visits, and technical monitoring by field technicians (Table 1 below).

As the prime deliverable/outcome, a multi-disciplinary team from LI-BIRD, and LCDA (partly involved) conducted assessment of the impact of COVID-19 pandemic on biodiversity and livelihoods in the LCPV area. During the course of the assessment exercise, the project team received excellent support from the partner organizations, and beneficiary communities primarily because of the longstanding working relations we have with these communities. In the process of the assessment, the study team visited 15 different communities (fishery cooperatives, coffee cooperatives, vegetable producer groups, farmer groups etc.) and interacted with 155 individuals (90 male and 65 female respondents) through focus group discussions (Figure 1; and Table 1 in Annex 1). The assessment also comprised rapid household survey (n=357; male=194 and female=163). In both the cases (focus group discussions, and household survey), verbal prior informed consent was sought by the project team. The assessment was specifically documenting impact of COVID-19 pandemic on: 1) agro-ecosystem; 2) wetland ecosystem; 3) forest ecosystem; 4) employment and income; 5) socio-cultural aspects; 6) gender aspects; and 7) cross-cutting positive changes. Excerpts of the key findings of the assessment study are presented below.

Amongst the six different systems under assessment (Figure 2), agriculture (agro-ecosystem) is the only sector that has benefitted from COVID-19 pandemic and subsequent lockdown, with abundant farm labour on-farm, supported by favourable monsoon rain, leading to better crop husbandry reflected in higher yield of rice, maize, and vegetables. This aspect was consistently reported across farmers groups, and corroborated by national level statistics.

Agro-Ecosystem	Wetland Ecosystem	Forest Ecosystem	Employment and Income	Socio-Cultural Aspect	Cross-cutting positive changes
<ul style="list-style-type: none"> <li>▪ Increased area of cultivation (Rice, Maize, and vegetables)</li> <li>▪ Increased number of goat and poultry (local) at HH level</li> <li>▪ Utilization of local crop/varieties increased as improved seeds were unavailable</li> <li>▪ Rearing trend of <i>Battai</i> increased</li> <li>▪ Farm workload shared amongst family members</li> </ul>	<ul style="list-style-type: none"> <li>▪ Pollution and illegal fishing increased in lakes -Rupa lake collected approx. NPR 60,000 as fine</li> <li>▪ Loss on fish business-<i>Jalari</i> of <i>Fewa</i> and <i>Begnas</i> Lakes</li> <li>▪ Economic loss of lake associated tourism business</li> <li>▪ Grant money froze due to lockdown - Gunde Lake</li> <li>▪ Difficulty in sourcing fingerlings from <i>Terai</i> due to lockdown</li> </ul>	<ul style="list-style-type: none"> <li>▪ Increased conflict on forest resource use: <i>Niguro</i>, <i>Gurjo</i>, <i>Firewood</i> and <i>Thangro</i></li> <li>▪ Human interference increased in peri-urban forests</li> <li>▪ Negative impact on regular forest management</li> <li>▪ Forest area encroachment and <i>Kalij</i> (wild fowl) hunting reported</li> </ul>	<ul style="list-style-type: none"> <li>▪ Returnee migrants involvement in Agri-business (Goat and Poultry - <i>Kadaknaath</i> farming)</li> <li>▪ Coffee cooperatives suffered loss as they could not export coffee</li> <li>▪ Loss of jobs, especially hotel and tourism related sector</li> </ul>	<ul style="list-style-type: none"> <li>▪ Cases of alcohol abuse increased</li> <li>▪ Discrimination towards sick, poor, and outside people</li> <li>▪ Added expenses, and frustration due to online classes</li> <li>▪ Increased mental stress amongst students, chronic sick people, and returnee migrants</li> <li>▪ Disruption of social, religious and cultural events/functions</li> </ul>	<ul style="list-style-type: none"> <li>▪ Young people learned various skills: bike riding, cooking, music, farming, etc.</li> <li>▪ Increased access to internet, and trend of online meetings</li> <li>▪ Behavioural change on personal hygiene/WASH</li> <li>▪ Value of domestic tourism and local products increased</li> </ul>

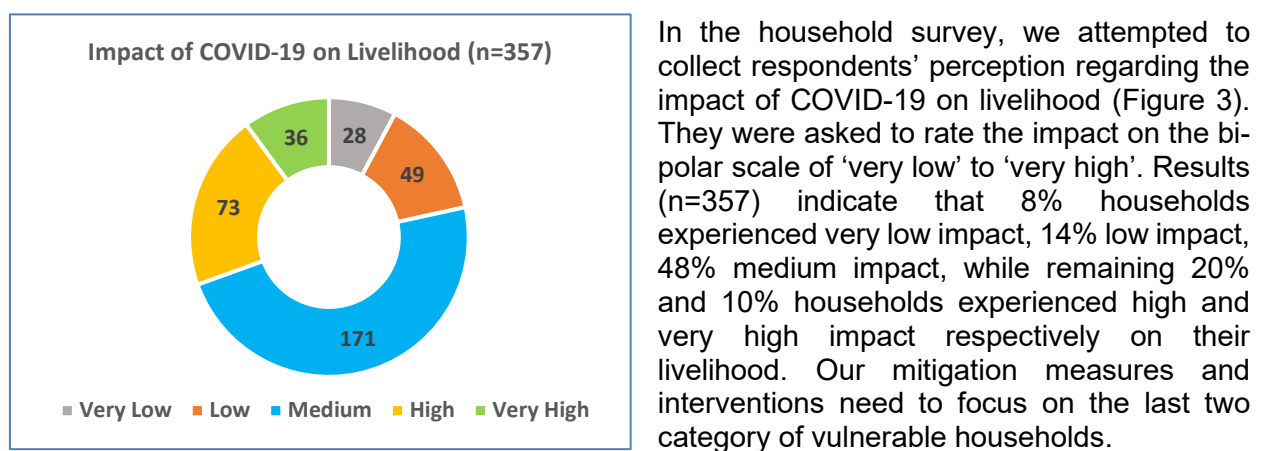
Figure 2. Impact of COVID-19 on different ecosystems (Focus Group Discussions, 2021)

Wetland ecosystem (Fishery cooperatives) has suffered immensely due to persistent lockdown because they could not bring fingerlings from *Terai* to replenish the fish stock in lakes. They also

could not harvest fish and sell because of market perturbation. On top of that, major lakes in peri-urban areas experienced increased level of human activity (pollution) and illegal fishing leading to conflicts between lake management committee and intruders. Similarly, forest ecosystem experienced increased illegal human activities including encroachment, felling of trees, wild fowl hunting, and harvesting of non-timber forest resources as mentioned in Figure 2.

Socio-economic impact (employment and income) on communities in the LCPV area has been significant, with 32% (n=115) respondents reporting loss of jobs by family members, and the job loss ranged from 1 to 4 members with a mean of 2 members. People have reported intense socio-psychological pressure, different level of depressions, and mental tensions resulting from extended confinement, uncertainty about the course of the coronavirus infections, and disruption of regular activities including social, religious and cultural events.

Some positive impacts, such as learning new skills (bike riding, cooking, etc.), improvement in personal hygiene (regular hand washing), and increased appreciation of local products were reported by the respondents. Wide scale use of digital means for learning, communication, and entertainment has been appreciated across the groups.



In the household survey, we attempted to collect respondents' perception regarding the impact of COVID-19 on livelihood (Figure 3). They were asked to rate the impact on the bipolar scale of 'very low' to 'very high'. Results (n=357) indicate that 8% households experienced very low impact, 14% low impact, 48% medium impact, while remaining 20% and 10% households experienced high and very high impact respectively on their livelihood. Our mitigation measures and interventions need to focus on the last two category of vulnerable households.

Figure 3. Impact of COVID-19 on livelihood (Household survey, 2021)

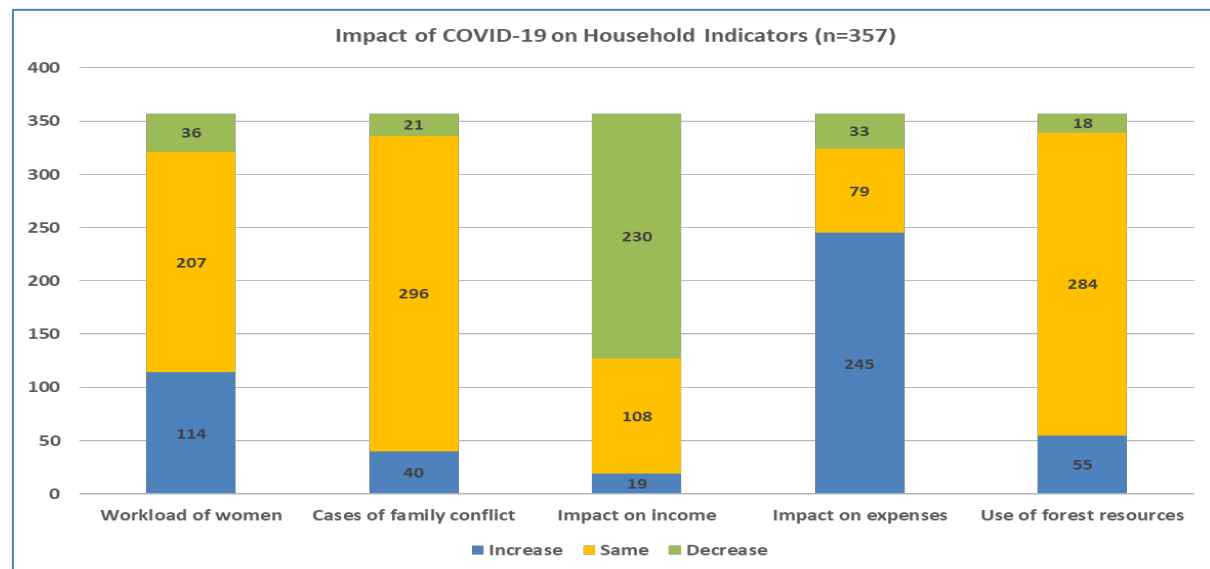


Figure 4. Impact of COVID-19 on household indicators (Household survey, 2021)

Respondents were asked about COVID-19 impact on five household indicators (Figure 4). Almost 32% respondents reported increased workload for women, and 11% reported increased family conflict. The most striking impact was reported for decreased income (n=230; 64%) with concurrent increase in family expenses (n=245; 69%) having a significant negative impact on household's living standard. Households reported an additional expense of NPR [redacted] month (GBP [redacted]/month). Some households (15%) reported an increased use of forest resources,

which is directly linked to increased demand for staking materials for fresh vegetables production (cucumber, bitter gourd, sponge gourd, bottle gourd, beans, etc.).

The second deliverable/outcome includes preparation of ‘Agriculture and Livestock Development Strategy 2021/22 – 2026/27 for Ward No 19’ and ‘Organic Agriculture Production Plan 2021/22 – 2026/27 for Ward No 13’. Consultants with support from the project team accomplished the assignment. In the process of preparing the reports, a multi-disciplinary team conducted a series of interaction meetings including SWOT analysis (Strength, Weakness, Opportunities, and Threats) involving 125 farmers (70 male and 55 female), and a household survey involving 178 farmers (48 male and 130 female) (Tables 2 – 3 in Annex 1). The strategy has five major components: food security and livelihood; commercial agriculture development; organic agriculture; livestock development; and agriculture infrastructure and market development, with a total budget of NPR (GBP ) over a five-year period. Likewise, pilot programme on organic agriculture plan will be implemented in two villages. The plan has four components: increase agriculture and livestock production and productivity; capacity building on organic farming; soil testing and nutrient management; and infrastructure and market support, with a total budget of NPR (GBP ) over five-year period. It’s expected that these two organic villages will serve as demonstration and learning sites while replicating the model in other villages of the ward. These reports provide year-wise production targets, budget requirements, specific guidelines on implementation, monitoring indicators/targets, and review and reflection mechanism to achieve the intended objectives.

Table 1. Status of project deliverables

SN	Deliverables	Status	Remarks
1	One assessment report of COVID-19 on biodiversity and sustainable livelihoods	Assessment completed	Assessment completed; manuscript for referred journal article being prepared (Aug 2021)
2	Agricultural strategy document and detail multi-year activity plan prepared	2 reports prepared	Plans shared with local government; requested to allocate some budget in next year budget
3	Formally register 3 farmer groups at Pokhara Metropolitan City (PMC) office	2 registered; 1 ongoing	Registration of one farmer group is pending; expected in July 2021
4	Train 128 individuals on mushroom production and apiculture (honeybee management)	36 farmers	Mushroom production training dropped; training on honeybee management conducted
5	Distribute approximately 200 bee hives to interested target beneficiaries	105 bee hives	Since farmers had to contribute 50% cost, so only 105 bee hives could be distributed
6	Train 225 households on off-season vegetables production; supply vegetable seeds	611 farmers	Overwhelming demand from farmers, so we conducted almost three times the proposed number
7	At least 55% trainees will be female, and 45% participants will be from Dalit communities	360 women out of 611 farmers	59% participants were women farmers; 85 <i>Dalit</i> HHs – all included

Table 1 presents the seven deliverables committed by the project, their current status and the associated remarks. Since we have already discussed the first two deliverables, here we will focus on the remaining deliverables. We managed to register two farmer groups in PMC office, and the third will be registered as soon as the current lockdown eases and offices open. Planned training on oyster mushroom production was dropped due to limited interest amongst farmers (unavailability of raw materials), and the number of bee hives distribution and orientation to farmers was less than planned because farmers had to bear 50% of the cost, which proved to be a challenge for resource-poor and *Dalit* households. Exceptional result (n=611; 2.7 times more than planned) was achieved in engaging farmers in off-season vegetables production technologies. Women’s participation was expected at 55% and the project was able to exceed the target, with 59% participation of women in various activities. All 85 *Dalit* households have been included in project activities. The project also provided material support, orientation/training, and exposure visits to target beneficiaries, and the detail is presented in Annex 1 (Tables 4 – 6).

The results obtained from the assessment study directly contribute to knowledge base at local, national and global databases in relation to the impact of COVID-19 pandemic on biodiversity (agro-ecosystem, wetland ecosystem, and forest ecosystem) and sustainable livelihoods (income and employment, gender dynamics, socio-cultural aspects) in the LCPV area. Upon request from the Lake Conservation and Development Authority (LCDA), the project team used the assessment findings to propose three recommendations for inclusion in next year budget (July 2021 – July 2022). These recommendations are: 1) budget support to fishery cooperatives for establishment of hatchery for fingerlings production; 2) allocate certain budget to contribute to basket fund 'Biodiversity Conservation Fund'; and 3) budget for capacity strengthening of fishery cooperatives, and biodiversity conservation committees so that they can effectively discharge their duties. The project team have also communicated with Ward Chairpersons of Ward No 13 and Ward 19 and briefed them the major interventions proposed in the strategy document and the multi-year plan. These documents will serve as proposal to negotiate for additional funds from Pokhara Metropolitan City, and Gandaki Provincial Government. These Wards have promised to allocate certain budget to initiate first-year activities as per the plan. Communities have been assured that organic products coming out of their farms will be marketed by Annapaat Agro Pvt Ltd (packaging house promoted by DI funded project 26-008).

The project had a budget of GBP 37,666 along with co-funding commitment of GBP from Lake Conservation and Development Authority (LCDA), and GBP from farming community for accomplishing the above mentioned deliverables. The LCDA fulfilled their co-financing commitment by contributing to the study design, and participating in the field study. In case of co-funding from communities and third party, the project was successful in raising co-funding worth GBP exceeding the target by GBP thereby generating good value for money. We have diligently followed standard procurement procedure of the organization that also ensured good value for money. Having said that, we could only utilize GBP (of the budget), with major variance observed in Operating Costs (36% variance) (Table 7 in Annex 2) (Please find a proposal attached together with this report in regard of utilizing underspend budget to support the DI working area). There are basically three reasons for the underspending: 1) higher level of co-funding from the third party (Pokhara Metropolitan City) meant the project had to spend less on material support; 2) short-term nature of the project constrained us to revise our plans and utilize the unspent money in providing need-based support to beneficiaries; and 3) co-funding norms for bee hives (resource-intensive intervention requiring GBP per bee hive), and other material support to communities meant that resource-poor and Dalit HHs found it difficult to fulfil the co-funding requirement, thus stifling our spending target (Table 1 bee hives).

### **3. Lessons learnt**

LI-BIRD has learnt a few lessons, which will be useful for implementing similar projects in future. First, the cost-sharing mechanism/norm for materials support to communities may be a hindrance for participation of ultra-poor/Dalit HHs, which we have observed in this case. The norm may have to be relaxed/waived, especially when the intervention is resource-intensive and demands higher co-investment from beneficiaries. Without a beneficiary-sensitive cost-sharing mechanism, projects risk further perpetuating the existing social and economic inequalities.

Second, the standard organizational procurement procedures, which normally takes 2-4 weeks, may have to be readjusted with inclusion of waivers for very short-term projects (<4 months). This especially is true when dealing with number of vendors for variety of items.

Third, the project has benefitted immensely by hiring local resource persons to orient, provide hands-on training, and follow-up support to farmers. This practice can be replicated elsewhere. Finally, it makes more sense to hire local women resource person to conduct HH interviews, especially when questions about women issues viz. domestic and farm workload, family conflict, social issues, expenditures, etc. are being asked. These are sensitive issues and women respondents tend to confide to women enumerators rather than men enumerators.

### **4. Other comments and feedback**

We do not have any specific comments and feedback.