

*FinalDraft Report*

Nepal Eye Program  
**Tilganga Institute of Ophthalmology  
(TIO)**

Tilganga, Kathmandu

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**Final Evaluation of “Seeing is  
Believing” Project Phase (V) 2014-2020**

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Prepared by:

**Project Research and Engineering Associates**

Langankhel, Lalitpur

Phone:01-5539607

Email; [prenaconsult@gmail.com](mailto:prenaconsult@gmail.com)

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## ABBREVIATIONS

CEO	Chief Executive Officer
DCEC	District Community Eye Center
GoN	Government of Nepal
HCP	Himalayan Cataract Project
FHF	Fred Hollows Foundation
IAPB	International Agency for the Prevention of Blindness
IEC	Information Education and Communication
KII	Key Informant Interview
MoU	Memorandum of Understanding
NGO	Non-Government Organization
OA	Ophthalmic assistant
OP	Operation
OPD	Out Patient Department
OT	Operation Theater
SCB	Standard Chartered Bank
SEARO	South East Asia Region
SiB	Seeing is Believing
TIO	Tilganga Institute of Ophthalmology
ToR	Terms of Reference
USD	United States Dollar
WHO	World Health Organization

## Chapter 1

# Introduction

### 1.1 Background

World Health Organization (WHO) had launched Global Initiative Vision 2020 “The Right to Sight” in Geneva in 18 February, 1999 to reduce the global burden of blindness. East Asia Region (SEARO) declared on 30<sup>th</sup> September 1999 for member countries to come forward with strategies and guidelines for the elimination of avoidable blindness from the region by 2020.

Nepal Eye Programme was launched in July 1992 to support the Prevention of Blindness Programme in Nepal. Similarly, Nepal Health Policy, 2074 has mentioned the Vision 2020 for the effective programme implementation for alleviation of blindness by the government and non-government programs.

Tilganga Institute of Ophthalmology (TIO) is the implementing body of Nepal Eye Program, and is a not-for-profit, community-based, non-government organization. The current TIO facility was opened in 1994 with an aim to act as a model for treatment, research and training, remaining independent yet working in co-operation with all other eye care centers and organizations in Nepal. TIO in partnership with The Fred Hollows Foundation (FHF), Himalaya Cataract Project (HCP) and Standard Chartered Bank (SCB), is working in areas of capacity building for provision of comprehensive eye care services, human resources development, infrastructure, equipment and medical supplies, and advocacy at national level.

Seeing is Believing (SiB), a five years (2014-2019) project, was implemented by Nepal Eye Program-Tilganga Institute of Ophthalmology with financial support of Standard Chartered Bank (UK and Nepal) through International Agency for the Prevention of Blindness (IAPB) in Bhaktapur and Nuwakot districts of Nepal. The project aimed to upgrade Bhaktapur District Community Eye Centre into a sustainable model for secondary level eye hospital, and Nuwakot District Community Eye Center into regular and periodic surgical facility respectively.

#### 1.1.1 Seeing is Believing Project Description

SiB phase V project aimed to support Bhaktapur and Nuwakot District Community Eye Center for larger outreach activities. Further these eye centres’ physical facility was planned to be upgraded into surgical centre and hospital. The project aimed to focus on service delivery provided by the DCESs including cataract surgery,

refractive error correction, community screening and school screening. Further Bhaktapur and Nuwakot community service and awareness were planned to be strengthened through school teachers training, local advocacy and awareness programs. The project envisaged training health personnel from CECs up to Diploma in Community Eye Health intending to ensure comprehensive approach to sustaining and expanding the eye care service. The project activities were planned to help reduce avoidable blindness and visual impairment through the strengthening of health systems and increasing communities access to equitable and quality eye care services.

### **1.1.2. Goal of SiB Project**

The project's overall goal was to contribute in reduction of avoidable blindness and visual impairment in project areas of Nepal through provision of quality and affordable services from upgraded surgical facility and scaled up outreach activities.

TIO has been running District Community Eye Centers (DCEC) in Nuwakot and Bhaktapur districts for more than 16 and 14 years respectively. They provide basic eye care services such as eye examination with the help of a slit lamp, investigation, refraction and the dispensing of medicine and spectacles.

As per the project document, Log Frame has provision of the Final evaluation of the SiB project. TIO has been awarded consulting firm to carry out Final Evaluation of the project.

## **1.2 Objectives**

The main objective of the final evaluation is to assess the existing program output, outcomes as well as evaluate the progress of project period and recommend for the future activities. The specific objectives are as follows:

- To assess the progress of the program implementation with the effectiveness, efficiency and impact of the program on Nepal Eye Program.
- To evaluate the efficacy of project model and methods in achieving the output and outcomes of the project.
- Collect, assess and verify the quantitative and qualitative information of the beneficiary, stakeholders and projects.
- Assess the gap through in content analysis, depth interview/interaction and focus group discussion with community people and other stakeholders.
- Prepare an evaluation report and disseminate findings to TIO and other stakeholders. Incorporate all suggestions and feedbacks.

- To identify lessons learnt and provide recommendations for replication and scaling-up for future strategy for completion of the project.

### **1.3 Scope of work**

The consultant was tasked to carry out the activities for the final evaluation on the basis of output and outcomes of the project as mentioned in Log Frame. The performance evaluation included but was not limited to:

#### **1.3.1 Project Implementation Process**

- Review and assessment of project implementation methodology and providing recommendation to improve project implementation and processes of DCECs

#### **1.3.2 Project Implementation Gap and Evaluation**

- Identification of project implementation gap
- Providing recommendation on implementation plan/roadmap for comprehensive aspect of project component.

### **1.4 Methodology**

The study methodology of the final evaluation is based on the objectives and scope of services of the study as per the ToR. The methodology used includes quantitative (survey) data collection, qualitative data collection (focused group discussion and Key Informants' Interview) and triangulation of the data and information using mixed methods. The detailed methodology is outlined in the following sub-sections.

#### **1.4.1 Desk Study Stage**

##### Collection of Secondary Data and Analysis

The consultant collected secondary information from different agencies, projects and offices. Data was obtained through intensive desk review of following documents:

- TIO documents, project documents
- Progress report of Seeing is Believing Project
- Project database
- Other reports as necessary

The consultant team has reviewed the report, documents and literature related to the project and collected the relevant information for the evaluation study.

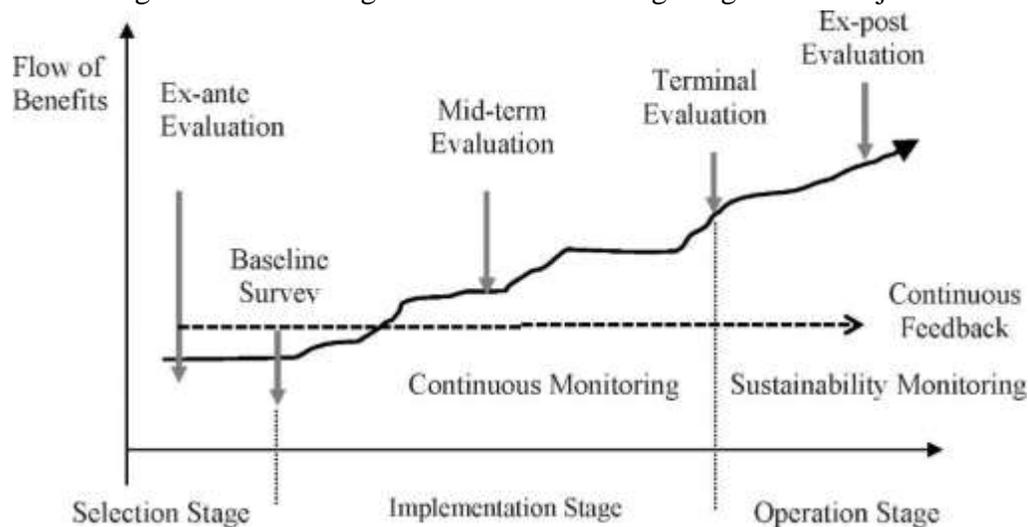
##### Preparation of Survey Tools (Questionnaire and Checklist)

The consultant prepared the survey tools in English language. A semi-structured questionnaire used for the patient survey and a checklist was prepared for Key Informants Interview (KII) with concerned stakeholders.

### 1.4.2 Evaluation Design

The program evaluation consisted of evaluation at different stages and proceeded as follows.

Figure 1: Monitoring and Evaluation during Programme/Project Period



### 1.4.3 Coordination Meetings

The consultant conducted meeting with TIO-SiB Project Management team and other stakeholders of Bhaktapur Secondary Level Eye Hospital and Nuwakot Periodic Surgical Eye Center. The study team contacted these officials and conducted the coordination meetings focusing on the methodology of final evaluation, data collection, and existing progress of the project.

### 1.4.4 Sample Size

The sample size for the study has been fixed for the exit interview of the patients of the DCEC. The total sample size of the study is 200, of which 100 is from Nuwakot and 100 from Bhaktapur district.

### 1.4.5 Sampling Methods

A random sampling method was used in the selection of respondents. The patients visiting the eye centers were selected at random.

### 1.4.6 Key Informants Interview (KII)

The Consultant carried out Key Informants Interview with concerned officials and relevant stakeholders. The consultant used a checklist during the collection of

information regarding the project. The interviews were conducted with the following stakeholders:

- DCECs Management Committee, Chief
- Public Health Office, at Municipality
- TIO Officials
- DCECs Officials
- Eye Center Persons

The consultant team visited in the concerned office and carried out interview with the officials.



KII meeting Chairperson Nepal Red Cross,



KII with Public Health Office, Nuwakot



**Field Visit and Discussion with Mayor and Deputy Mayor of Bhaktapur and team**



#### **1.4.7 Field Observation- Technical Assessment**

The consultant's team visited DCECs in Bhaktapur and Nuwakot. The team carried out physical observation of the building construction, equipment, services and facilities of the center.

#### **1.4.8 Data Collection**



Data collection activities were carried in the respective sample of patients (in- patient and out- patient) of the eye center. Interviews were conducted with the selected patients and necessary information and data collected.

#### **Monitoring and Supervision**

The study team members carried out supervision and monitoring activities for verification of the data collected. Team members checked the information and validated it in the field for the assurance of the collected data's

quality.

#### **1.4.9 Data Entry Computer Software for Data Entry**

The Statistical Package for Social Science (SPSS) software package has been used for data entry and analysis. Quality assurance of the data entry included re-checking of the questionnaire and entry fields. The quantitative and qualitative data were checked and confirmed after field visit. The data codes, consistency, range etc have been checked for each variable using the statistical software.

#### **1.4.10 Data Analysis**

Data analysis included the use of quantitative methods of comparison and qualitative methods of constructing information.

#### **Quantitative methods**

The quality of the entered data was assessed through the statistical software as mentioned above and this was followed by data analysis. Descriptive statistical measures such as mean, standard deviation, median, range etc. have computed for continuous variables to summarize the data. Rates ratios, percentages, etc, was carried out to summarize the categorical variables along with suitable diagrammatical presentations.

#### **Qualitative methods**

A qualitative method was used to analyze the qualitative information collected from KII, literature review, interview with key informants and consultant's observation. The

analysis comprised of the facts of the project, internal and external issues of institution, and recommendations were discussed.

#### **1.4.11 Final Evaluation**

The evaluation team analyzed the data, reviewed the documents, held consultative meeting, conducted field visit and observation, and evaluated the SiB project. The study team has prepared the Final Evaluation Report which was divided as follows:

##### **Findings and Recommendations**

The consultant has analyzed the findings of the evaluation made during the present study, and recommendations are given based on the facts and evaluation results in order to improve the eye services in the district, completion of DCEC building construction on time and operation of the project in the future as log frame.

##### **Lesson Learnt**

Lesson learnt, substantiated by facts and evaluation result, have been provided in order to facilitate the knowledge of program and for formulation of policy and future project planning.

#### **1.5 Limitation of the Evaluation**

The evaluation is based on the database, progress report, and field data of the DCECs which is provided by TIO and DCECs office.

- Field observation was carried out to verify the equipment and materials at eye center. However, the time to visit both eye centers was limited, and the evaluation presented is based on that information.
- Global pandemic of COVID-19 has limited our mobility to conduct consultative meeting with TIO Officials and DCECs. The sharing of information through email.

## Chapter 2

# Seeing is Believing Project

### 2.1 Background

In Nepal, about one percent of the total population are blind and over fifteen percent of them are visually impaired, mainly due to cataract and refractive error. (*Mid-Term Review of VISION 2020, Nepal 2011*). However, the new emerging diseases such as diabetic retinopathy are an increasing trend in urban areas, cataract and refractive error are the dominant disorders in the rural areas of Nepal. TIO provides comprehensive eye care services to the people from all communities with equality. Up to the year 2012, TIO had treated over 3.1 million people and performed over 0.2 million surgical operation. Therefore, TIO is quite determined to establish sustainable and permanent set-ups for eye care centers in each District where it has programs. So far, in the 12 Districts, TIO has established two eye centers and one community eye hospitals that have their own physical facilities. Having their own physical facilities has enabled the capacity of eye care services to grow by more than two fold with the services offered being up-scaled, such as periodical cataract surgery.

In Nuwakot and Bhaktapur Districts, the ‘catchment’ population is over one million including in migration. Currently, the demands for eye care services in both Districts are much higher than the current supply. The current demand for eye care is over 60,000 people of all ages for eye check-ups and over 2,000 cataract operations per year in each both Districts. At least 20 percent of the 60,000 are children who require eye check-up and treatment with medication or spectacles.

The number of patients will be increased by 20 to 30 percent for eye check-up and spectacle recipients at both DCECs and cataract surgery will be increased by 100 percent in during this Project. Furthermore, the number for cataract surgery would increase from 250 to 500 per year by end of the Project. Therefore, this Project will play an important role in the elimination of avoidable blindness in those Districts. Furthermore, the prevalence of blindness and incidence of diseases will be reduced by at least 50 percent by end of the Project.

In order to meet the demand for eye care services, Tilganga Institute of Ophthalmology (TIO) has been working in Nuwakot and Bhaktapur districts. As part of its work there, Seeing is Believing (SiB) project has been initiated to support District Community Eye Care Centers (DCECs) by upgrading of the centers ‘with physical facility/

infrastructures and equipments, necessary for quality services through hospital in reached unreached community. The several activities undertaken by the project aimed to reduce avoidable blindness and visual impairment by strengthening health system and increasing communities' access to equitable and quality eye care services.

SiB project has been initiated under the agreement between IAPB and Nepal Eye Program, Tilganga Institute of Ophthalmology (TIO) dated 28, February 2014. The project name is "Upgrading the facilities at District Community Eye Centers (DCEC) into achievable models for sustainable eye care in rural and semi-urban. Districts". The project period was from 1st April, 2014 to 31st March, 2019.

The overall goal was to reduce avoidable blindness by developing a surgical facility in rural and semi-urban areas. The main objective of the project was to upgrade the eye care services in existing CECs by establishing a surgical facility in its own permanent facility;

The specific objectives of the project were as follows:

- To complete building construction for eye centre at two CECs
- To upgrade Bhaktapur CEC into Secondary Level Eye Centre (SLEC)
- To upgrade Nuwakot CEC into a periodic surgical facility
- To build capacity of eye care personnel at rural eye centre of TIO
- To create an awareness of eye care among school teachers through training Program
- To provide eye care services to people at eye centre and community
- To provide cataract surgery service to people

## **2.2 SiB components**

The project interventions included as; upgrading Bhaktapur CEC into Secondary Level Eye Center and Nuwakot CEC into periodic surgical facility. These DCECs have constructed the building and other infrastructure and are equipped for providing eye care.

The major Project activities are as followings:

### **1. Building construction for a DCEC in Bhaktapur and Nuwakot Districts:**

Two DCECs were upgraded into the secondary level eye center and periodic surgical facility in Bhaktapur and Nuwakot respectively. This component included the construction of building/infrastructure and providing the facilities with required equipment and materials.

The TIO Management Committee was formed a Project Management Committee for the project implementation. The Building Construction Committee was also formed for the construction management of the Building in DCECs. This component included the construction of building/infrastructure and providing the facilities with required equipment and materials. The Committee will be responsible for the implementation of the Project in the two Districts.

**2. Equipping two DCECs**

According to the Project plan, for the procurement of equipment, an Equipment Procurement Committee was formed at TIO. This Committee was responsible the procurement process and installation of the equipments in DCECs. The list of equipments was procured and installed in the respective DCECs.

**3. Performance of cataract operations**

The Service Delivery Committee was responsible for the cataract surgery activities in the districts. The identified operable cataract patients were operated on at TIO, DCECs and OMECs in Bhaktapur and Nuwakot Districts. Each year, over thousand people will have their eye sight restored through cataract surgery.

**4. Eye check-up for children at schools**

The DCECs identified the potential schools for children's eye checks at their schools. The government run primary schools as well as private schools was carried out eye check up of children's. The school teachers were assisted Ophthalmic Assistants in checking the vision of children and eye examination at their schools and the complicated cases were referred to a DCEC.

**5. Eye check-up and treatment of people at screening eye programs**

In association with TIO and DCEC teams, the eye check up and treatment was organized through the screening eye programs in the rural villages of Bhaktapur, Nuwakot and its other neighboring Districts. The DECEs was responsible to select the venues, organise publicity, for the selection of technical teams, the arrangement of equipment, medicines and logistics such as transportation, report collection and coordination.

**6. Eye Check-up and treatment of people at two DCECs**

Under the Service Delivery Committee, the DCEC staff is responsible for carrying out the activities in their respective districts. The activities were carried out for creating awareness of eye care among their communities to increase the number of

people attending the DCECs for eye check up and treatment to the people of the district.

**7. Training of primary school teachers on basic eye care**

The Service Delivery Committee and DECEs organised the training programs for primary school teachers on basic eye care in the two districts. The primary school teachers were selected in coordination with District Education Office and school management committees of schools. TIO's Training and Outreach Departments will conduct the training programs. After the completion of training, school teachers were able to check the vision and identify the children with abnormal eye conditions.

**8. Training of Mid-level Ophthalmic Personnel in public eye health**

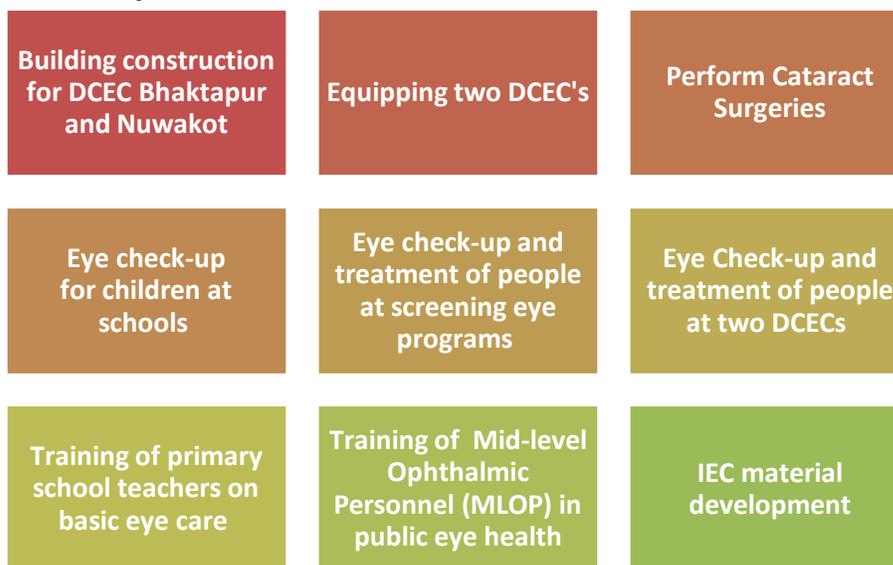
The Training of Mid-level Ophthalmic Personnel was carried out on SiB project support during the project period which enhance the capacity and capability o the personnel in public eye health. There were three ophthalmic assistants were send for training in Diploma in Community Eye Health and project officer was sent for Project Management training with in same allocated budget.

**9. IEC material development**

IEC materials were developed for the awareness and dissemination of information to the community on eye care and treatment. The project has prepared a video clips on played by famous actors; Haribansha Acharya and Madan Krishna Shrestha about the Diabetic patient to go for eye check up, visual blindness, refractive error etc. The IEC materials like; broucher, flex print, audio jingles was prepared and distributed to eye camps and community events.

Broucher was developed for major blinding and common eye diseases, Pamphlet for glaucoma awareness and flex board for was developed to create awareness. Audio-visuals for Glaucoma, Diabetic Retinopathy, Cataract, Refractive Error and ROP were also developed and were boosted through Facebook page and You Tube channel of TIO..

A diagram of Project Activities



### 2.3 Project Management

TIO's Management Committee was formed a Project Management Committee for the implementation of SiB project by mobilizing its various departments such as Outreach, Training, Human Resources, Finance, Procurement and DCECs. The Project Management Committee is under the TIO Management.

Project Management Committee has played executive and policy level roles and responsibility for the implementation of the SiB project. The committee coordinated with TIO Management Committee at central and project implementation committees as well as DCECs management committees during the project implementation period.

The project implementation team was assigned for the overall project management, carry out the project activities, administrative, logistic support, financial support, procurement, and supervision and monitoring of the project. The team has headed by Project Manager- Nabin K Rai and Project Officer –Devesh Karan, Sr. M & E Officer- Ravi Gautam, Project Accountant – Rabindra Khadka in the central project implementation unit and district in charge in the district.

### 2.4 Project Variation

SiB project variation has been conducted due to the effect of earthquake of May 15, 2015 and blockade along the southern border which affected the project deliverables and activities like building construction, equipment purchase, community screening and cataract surgery. These activities were delayed, which affect the scheduled work plan.

TIO and SiB project team, including Standard Chartered Bank, had conducted a joint monitoring and supervision visit of the project on September 2017. A meeting held on 1<sup>st</sup>September, 2017 by.TIO Executives, SCB-SiB London Project Team, Himalayan Cataract Project CEO and SCB-Nepal CEO decided to extend the project for one year, and thus the project was extended to March 2020.

The request for variation was considered for the extended project completion period, and the project team held series of meetings on March and May 2019 for this purpose. It was agreed to revise the TIO contribution budget as per existing spending nature and plan for the remaining activities, especially the delayed building construction at Bhaktapur. TIO budget contribution was revised and approved on 4<sup>th</sup> June, 2019. (See Annex II)

The revision of target/deliverables of SiB project have been made on 2017 and 2019 respectively

Table 2.1: Revised SiB Project Targets

Output	As per Original			As per Revised – 2017			Revised – 2019		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Capital and Infrastructure									
Building Construction									
Building Constructed at 2 CEC			2			2			2
CEC Upgraded into Secondary level eye center			1			1			1
CEC upgraded into periodic surgical facility			1			1			1
Training									
TIO Staff Trained in Public Eye Care			3			4			4
School Teacher Trained			750			749			741
Patients									
Surgeries (per eye)									
Cataract OP Adult	2965	3209	6174			6179			6209
Cataract OP Pediatric	39	39	78			72			36
Other Minor Surgical OP Adult	187	187	374			374			415
Other Minor Surgical OP Pediatric	14	14	28			33			29
Total Surgeries	3205	3449	6654			6658			6689

Output	As per Original			As per Revised – 2017			Revised – 2019		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Medical Interventions									
No. of Patient Treated Adult	39682	54946	94628			142905			124545
No. of Patient Treated Pediatric	15264	18315	33579			33126			23921
No. of Patient Treated At CECs	54946	73261	128207			176031			148586
Total Medical Interventions	54946	73261	128207			176031			148586
Screening									
Children Screened at School	52091	66975	119066			119104			119086
Patient treated at Community Screening Eye Camps	67024	40879	107903			107897			107903
Other screening									
Total Screened	119115	107854	226969			227001			226969
Refraction									
Refractions/prescription (adults)	19422	23057	226969			46092			45986
Refractions/prescription (children)	4512	5688	453938			7950			10789
Spectacles supplied (adult)	14638	18530	680907			32491			35764
Spectacles supplied (children)	1677	2132	1361814			4082			4218
Total Refraction	40249	49407	2723628			90615			56787
Health Education (IEC) and Indirect Beneficiaries									
Advocacy Program Conducted			5			7			5
Participants Participated in Advocacy Program			14958			12375			14958
Other indirect Eye Health Education			40442			48265			40442
Total Health Education & Indirect Beneficiaries			55400			60640			55400

Table 2.2: Revised Budget Projection of SiB

Funding	Original Approved		Revised 2017		Revised 2019	
	Budget USD	%	Budget USD	%	Budget USD	%
SiB	\$ 976, 149	68%	\$ 976,149	56 %	\$ 973,717	57.59%
Tilganga Institute of Ophthalmology (TIO)	\$ 454,250	32%	\$ 767,220	44 %	\$ 732,468	43.49%
Total budget	\$1,430,399	100%	\$ 1,743,369	100%	\$ 1,706,185	100 %

## Chapter 3

# Final Evaluation of SiB Project

### 3.1 Rational of the Evaluation

SiB Project has been implemented from April 2014 to March 2019 for the period of 5 years initially but later on it was extended up to March 2020 with the verification of the target and cost. The project has been revised with the variation of the project proposal on November 14, 2017. The major activities of the project have been carried out for the upgrading of the DCEC of Nuwakot and Bhaktapur. The log frame of the project has outlined with the output. Logframe 6.3 has stated the evaluation of the project in Mid-Term Evaluation and Final Evaluation of the Project.

### 3.2 Review of Mid-Term Evaluation

Mid-Term Evaluation of SiB was held on 2018 after the half of the period of project implementation. The mid-term evaluation has major findings concentrated on the construction of the building at Bhaktapur district. The target and achievements of the mid-term evaluation has been outlined as follows;

Table 3.1: Target and Achievement of Mid-Term Evaluation

Original Output	Revised Output	Mid-Term Output (March, 2018)	% Achieved on Revised Output
2 buildings constructed at Two districts	2 buildings constructed at Two districts	1 building constructed	50%
3 TIO staff received knowledge on eye care management	4 TIO staff received knowledge on eye care	4 TIO Staff Trained	133%
750 primary school teachers received training on basic eye care	749 primary school teachers received training on basic eye care	569 School Teacher Trained	76%
6,100 cataract surgeries performed	6174 cataract surgeries performed	3759 Cataract surgeries performed	60.88%
107,000 people received their eye treatment at screening eye camp	107897 people received their eye treatment at screening eye camp	46816 People received eye treatment	43.40%
119,000 children received their eye check at school	119104 children received their eye check at school	62269 children received screening	52.30%
128,000 people received their eye check up and treatment at eye centers	176031 people received their eye check up and treatment at eye centers	115555 people received their eye check up	65.60%
5 advocacy programs conducted	7 advocacy programs conducted	5 advocacy programs conducted	71.40%

### **3.3 Final Evaluation of SiB**

Final Evaluation was carried out at the end of the project on March, 2020. The study team has visited the field and collected relevant information from the DCECs at Nuwakot and Bhaktapur. Several tools of assessment were planned as per the project agreement and the study team has implemented the tools to evaluate the activities and performance of the project.

#### **3.3.1 Building Construction**

The project aims to upgrade Bhaktapur district community eye centre into a sustainable model for secondary level eye hospital, where as in Nuwakot it was planned to upgrading a regular community eye center with sub speciality servives. In order to upgrade the CECs, building construction /infrastructure with facilities was one of the major activities. The study team visited the Nuwakot and Bhaktapur and observes the building and other infrastructure and facilities in the DCECs.

##### **Nuwakot**

TIO has purchased the land for the construction of the building at DCEC in the Bidur Municipality ward no 2 at the center of the Bidur market. The site is located in the east from the Kathmandu-Trishuli-Dhunchhe Highway, with access to the urban road about 100 m from the highway.

In Nuwakot, after earthquake new guidelines on building construction are laid by local government this pushed TIO-SiB to establish a pre-fab set up considering the budget constraint. By now outer and inner structural setup of Prefab house is completed as per revised plan. TIO received donated Prefab house from Komatsu Japan, this has been set up appropriate location considering the future expansion of building and activity at CEC premises.

During this half list of activities were conducted to set up pre-fab house in Nuwakot such as, finalizing the best possible location, selection of Contractor for land development, foundation works, transporting the building materials etc. Concern to Bhaktapur building team has agreed to build and complete the required structure in single phase rather than previously discussed 2 phase of building construction. Concern to design team have planned to reduce the cost of basement by make it semi-basement by utilizing the natural slope with elevated pillar structure. Further team has been communicating with donor Himalaya Cataract Project and others to bridge the funding short

There are 5 rooms which are managed for the different units of the eye services and these were:

In charge Office Room	1
Minor Procedure (OT) Room	1
Consultation Room	1
Optical and medical Shop/Registration/Record Keeping	1
OT Room (Sterilization cum OT)	1

Nuwakot CEC building construction has been completed and centre is upgraded into a surgical facility. In month of May one mini OMEC was successfully conducted with wider participation of local stakeholders, during surgical camp a total of 83 cataract surgeries were operated.



View of DCECs

Waiting Lounge and rooms

### **Bhaktapur**

The building construction at DCEC Bhaktapur was not completed yet but still under construction and it was delayed due to the different types of negotiations and issues on providing land for the building construction. Hence the building construction was not happened as per the schedule of project document. Finally this is quite impressive decision that Municipality was agreed to provide the space to operate the Eye Center at Bhaktapur.

A MoU was made on 2073 between Nepal Eye Programme, TIO Kathmandu Nepal and Bhaktapur Municipality to provide land for construction of building for Tilganga Community Eye Hospital, but later due to attached underground parking and other issues, TIO could not make independent building and as proposed by Bhaktapur Municipality they agreed integrate eye with general hospital, i.e. Khwopa Hospital. According to the agreement, Bhaktapur Municipality was agreed to provide the space under the premises of newly constructed khwopa Hospital. The fourth floor will be assigned for the Eye Center which has the area of 9,500 sq ft. It has a great advantage for the patients and hospital. It has eye and general health services/ facilities are available under the same the building/ premises of the Khawapa Hospital. It is good for eye center as more patients flow can be anticipated and laboratory facilities can easily be available for them within the premises. It helps in long term sustainability of the eye hospital.



Under construction of Khawapa Hospital



Sketch of Khowapa Hospital

The Khowapa Hospital is under construction work is going on and it is estimated to be completed within 2 years and DCECs of Bhaktapur will be used the space on the fourth floor of the hospital

The completion of building construction was found only in the Nuwakot which has been started the periodic surgery in the center .The Building Construction in Bhaktapur is under construction stage and now the cataract surgery is carried out on the hired building and it will shifted in new building.

### 3.4 Equipment and instruments

The consultant observed and carried out inspection of the equipments, instruments and others in the eye center. All these items were documented and verified with their brands, capacity and functional condition.

The study team observed the installed equipment and verify with the purchase order, delivery document provided by the central procurement at TIO. Following Equipment and instruments were procured for centers by TIO-SiB project as per TIO procurement rules.

The available equipment at Nuwakot and Bhaktapur is listed below;

#### 1. DCEC- Nuwakot

Nuwakot CECs was upgraded into the periodic surgical facilities in the premises of the center where the building construction was completed. The required equipments and materials were supplied in the center in order to upgrade the center.

**Table 3.2: Equipment and Instruments at Nuwakot**

A. OPDSECTION:VISUALACUITYANDREFRACTIONTESTROOM				Existing Status	Remarks
SN	ITEM	UNIT	QTY		
1	Triallens set	Set	1	Yes	
2	Vision Drum	Pcs	1	Yes	LED-Digital
3	Trialframes Child/Adults	Pcs	10	2 pieces	
4	Retinoscope	Pcs	1	Yes	Heine-Beta 200
CONSULTATIONROOM					
1	Slit-lamp withApplanation	Set	1	Yes, Topcon	No applanation
2	Slit-lamp portable	Set	1	Yes, Shin-Nippon	
3	90Dlens	Pcs	1	Yes	
4	Ophthalmoscope	Pcs	1	Yes	Heine
SPECTACLEFITTINGSETS					
1	Edging Machine	Pcs	1	Yes	
2	Drill machine	Pcs	1	Yes	
3	Lensometer	Pcs	1	Yes	Digital type
4	Fitting Set	Set	1	Yes	
B.OTSECTION					
1	Minor Surgical Set	Sets	5	5 sets	
2	Autoclave(Double)	Pcs	1	Yes	
3	Drums big	Pcs	2	Yes	
4	Drums medium	Pcs	2	Yes	
5	Drums small	Pcs	2	Yes	

6	Jar with cheadle forceps	Pcs	2	Yes	
7	Others OT accessories	Set	1	Yes	
8	Generator	Set	1	Yes	
9	UPS Big	Set	2	Yes	
10	Furniture	Lumsum	1	Yes	

The equipments as listed above are installed in the DCECs, Nuwakot which are in operational level, functioning well.

### **DCEC Bhaktapur**

Following Equipment and instruments were procured for Bhaktapur district eye centre (BECC) by TIO-SiB project as per TIO procurement rules. The procured equipments are installed at DCEC, Bhaktapur astemporary at rented building which will be further installed on the new constructed building.

**Table 3.3: Equipment and Instrument at Bhaktapur**

A.OPD SECTION:VISUAL ACUITY AND REFRACTION TEST ROOM				Existing Status	Remarks
S.N.	ITEM	UNIT	QTY		
1	Triallen sset	Set	1	Yes	Old
2	Vision Drum	Pcs	1	Yes	Old
3	Trialframes Child/Adults	Pcs	10	3 pieces	New
4	Retinoscope	Pcs	2	Yes	New, Heine-Beta 200
<b>CONSULTATIONROOM</b>					
1	Slit-lamp with Applanation	Set	1	Yes, Topcon	With applanation and slit lamp with chair unit
2	90Dlens	Pcs	2	Yes	New
3	Ophthalmoscope Direct	Pcs	2	Yes	Heinne
4	Ophthalmoscope Indirect	Set	1	Yes	Heinne
<b>SPECTACLE FITTING SETS</b>					
1	Edging Machine	Pcs	1	Yes	New Auto Edeger
2	Drillmachine	Pcs	1	Yes	Old
3	Lensometer	Pcs	1	Yes	New, Digital type
4	Yag LASER	SET	1	yes	New Elex
5	Silt Lamp portable		1	Yes	SHINN-NIPPON
<b>INVESTIGATION</b>					

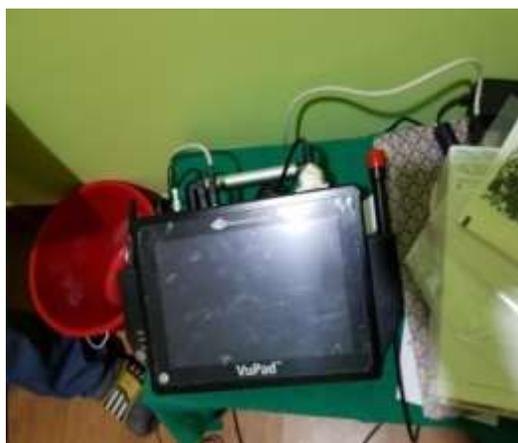
1	A Scan/BScan/Pachymetry	Set	1	Yes	
3	Keratometredesk top	Set	1	Yes	
4	HumphreyVisualAnalyser	Set	1	Yes	
<b>B.OTSECTION</b>					
1	Minor Surgical Set	Sets	5	5 sets	
2	Cataract Surgical Set	No of sets	15	15 sets	
3	Oertli Phaco Machine	Set	1	Easy Phaco	Oertli
4	Operating microscope	Pcs	2	Yes	Karl Caps
5	Schioetz Tonometer	Set	2	Yes	NonContact
6	Cautery Machine	Set	2	Yes	Aurocautry
7	Autoclave(Big)	Pcs	1	Yes	
8	IV stand	Pcs	5	Yes	
9	Drums bigs	Pcs	6	3 pcs	
10	Drums medium	Pcs	6	6 Pcs	
11	Drums small	Pcs	4	6 pcs	
12	Jar with cheatle forceps	Pcs	2	Yes	
13	Others OT accessories	Set	1	Yes	
14	Generator 10kVA	Set	1	Yes,	
15	UPS Big	Set	2	Yes	
16	Furniture	Lumsum	1	Yes	

The DCEC, Bhaktapur, has installed above equipments, instruments and other items which were required to run eye clinics, surgeries and community program. All these items were in functional condition.

Ophthalmic operating microscopeA/B scan



Keratometry



Cautry



Phaco machine (L)



Generator



The equipment and materials for the DCECs has been purchased and supplied to the respective eye center at Nuwakot and Bhaktapur. It is observed and the equipments were found to be in good and functional conditions.

### 3.5. Procurement Process

Procurement of the all items was done according to TIO Procurement Policy and Rules. The process includes the Material Requisition Note provided by the SiB project personnel. The quotation was called from the supplier (at least three companies). The

management has decision making authority to purchase of equipments from the quoted firms based on the quality, standard and price. The purchase order has been provided to the selected company. The delivery and checking of equipment was carried out and quarantine report was developed to receive the particular equipment or items in the eye center.

### 3.6 Cataract Surgeries (per eye)

Cataract surgery was one of the main activities of the project to eliminate the blindness. The project has focused on the number of cataract surgeries needs to conduct in DCECs. DCECs aim to make easily available cataract surgeries to the unreached communities/ rural community of the good quality and in affordable cost.

The project document has stated that the Service Delivery Committee is responsible for this activity. The identified operable cataract patients from Bhaktapur District will be operated on initially at TIO and after construction of the SLEC, surgery will be performed at the Bhaktapur SLEC itself. Those identified in Nuwakot District will have surgery at OMECs at the new Nuwakot DCEC. Each year, over thousand people will have their sight restored through cataract surgery.

During planning phase project assumed that there was a huge gap to be filled with cataract operation in the districts. The target and achievement of the cataract surgeries and minor surgeries is given below;

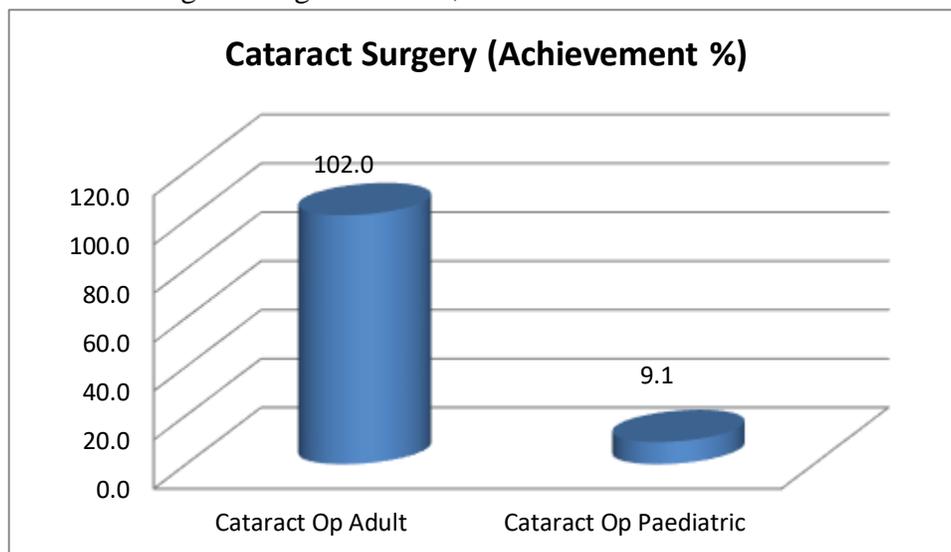
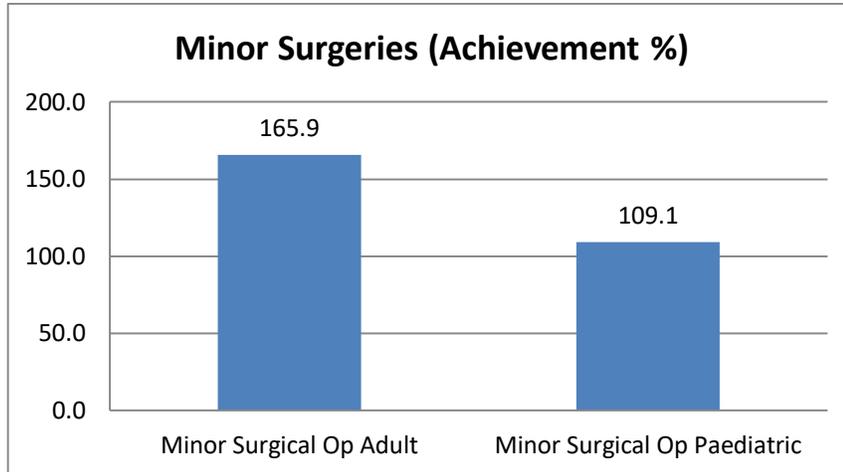


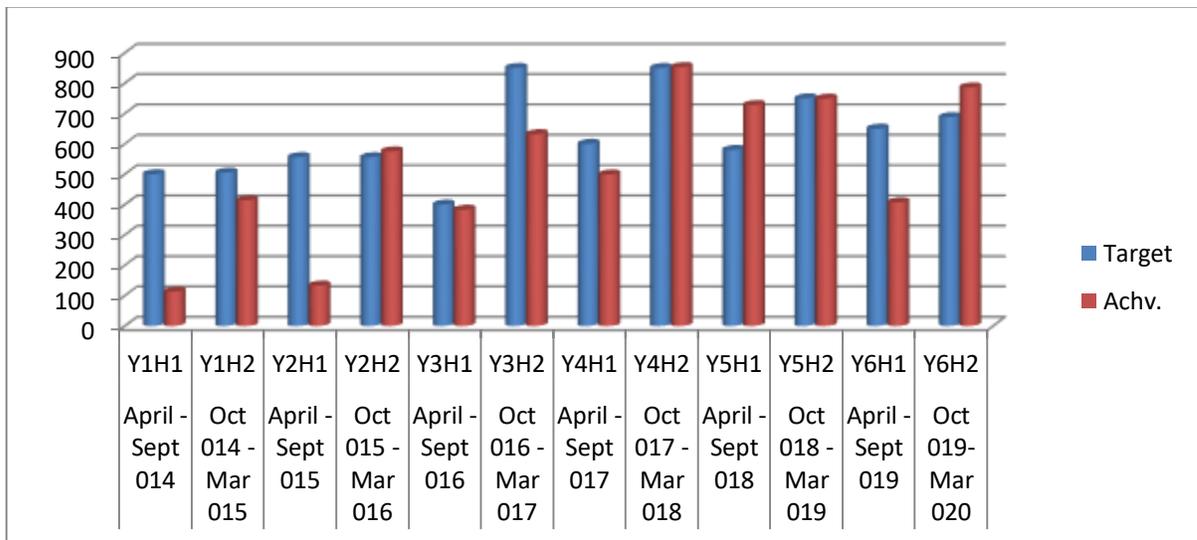
Figure 1: Cataract Surgery (target vs. Achievement)



**Figure 2 : Minor Surgery (targer vs. achievement)**

The final status of the cataract surgeries has completed overall target whereas Cataract OP of adult is 102 %, Cataract of Pediatric is 9.1 %, other minor surgical operation is 165.92 % and other minor surgical operation Pediatric is 102.1 % respectively. As stated on Log frame 4.1, the output level is satisfactory. But, the cataract surgeries to pediatric are very low. The pediatric screening and cases are not found for the cataract surgery.

Target vs. Achievement of the cataract surgeries on the yearly breakdown is assessment of the trend and the performance of the project implementation. The trend of Target and Achievement is given below;



**Figure 3: Targetvs. Achievement of Cataract Surgery**

The cataract surgery of Target vs. Achievement in the early trend shows the Y1H1 is the started year where there is not adequate number of screening. Then the Y2H1 is very low achievement due to the earthquake in Nepal. It is covered on Y2H2 period where achievement is higher. The trend of target and achievement is manageable and increasing trend of the achievement. The cataract surgery on Y6H2 is higher than the target that the cumulative remaining target was carried out in the last year.

### **3.6.1 Operation Theater and surgeries in Nuwakot**

The existing OT space was initially planned for minimum cases per surgery period without rush and crowd management. Although, this center runs periodic surgery in coordination of the TIO, the cataract surgery is carried out.

The surgical facilities available in the center is one room for surgeries and one autoclave which require to carry out OT related activities like; sterilization, OT, local anesthesia (block), store etc. In order to carry out fully fledged OT, the existing space is not enough to manage the demanded cataract surgery in accordance to increased number of patient flow in the center. Apart from this it is also difficult to manage the crowd and post up check up immediate on next day. There are no rooms for patient's admission.

Meanwhile, the existing periodic surgery will be continued. On same place, as the number of cases for surgery is more than expected. Hence, they have to plan to build new structure to run OT for increased number of cases in future.

### **3.6.2 Community eye screening camp and eye surgery in Center in Nuwakot**

OT date is scheduled in Nov/Dec of each year after the harvesting as farmers are free. Screening camps for cataract is scheduled 3 months prior the OT date and 4 persons are deputed for this (staffs from TIO and center). Now simple preoperative screening tests, like syringing, Blood Pressure and Blood sugar, are being done in camps side which reduced the drop out of surgical cases. Time will be given to selected cases for surgery and they will come to center themselves for surgeries. They will be charging for registration (Rs 50/-) and undergo surgery. Surgery and post operative medications are free of cost for patient. They will be discharged on next day with medicines after taking vision and counseling/ instruction.

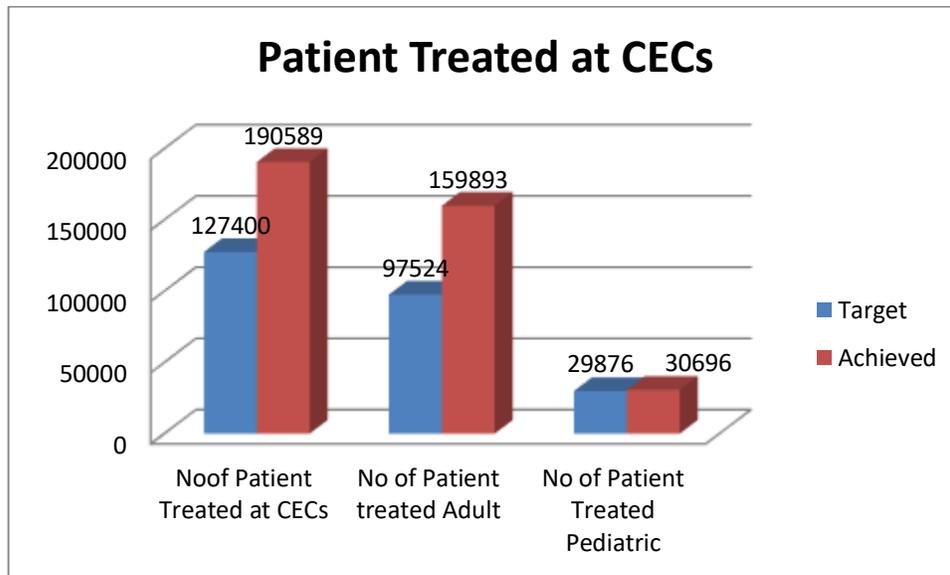
Dropout for surgery is about 25-30% and Post operative follow up is poor. This is because of the geographical difficulties and far locations in Nuwakot, livelihood problem to afford the services, old age people are reluctant to get surgery etc. Partners

to conduct the surgical eye camp: Local partner like community leader and from campus and others.

### 3.7 Medical Intervention

The patient flow from the catchment area to the DCEC center was impressive. Mainly patients, who were treated or received the services before, were coming for next visit also. This is a primary eye health center, where patients are screened, investigated, diagnosed and advised for medical, optical and minor surgical procedures and treatment. Furthermore, patients with suspected eye problems are referred to TIO for advance and care. The treatment services provided in the CECs are found encouraging and in the increasing trend. The catchment areas of the DCECs in Nuwakot have covered 2 municipalities and 10 rural municipalities as well as some parts of Rasuwa district. DCEC, Bhaktapur has coverage of the Bhaktapur district. Telemedicine service is also provided in Nuwakot which is very effective for patient consultation and teaching/learning activities for CEC staffs.

The status of the target and achievement of the patient treated at DCECs has found 146.0 % at this stage.



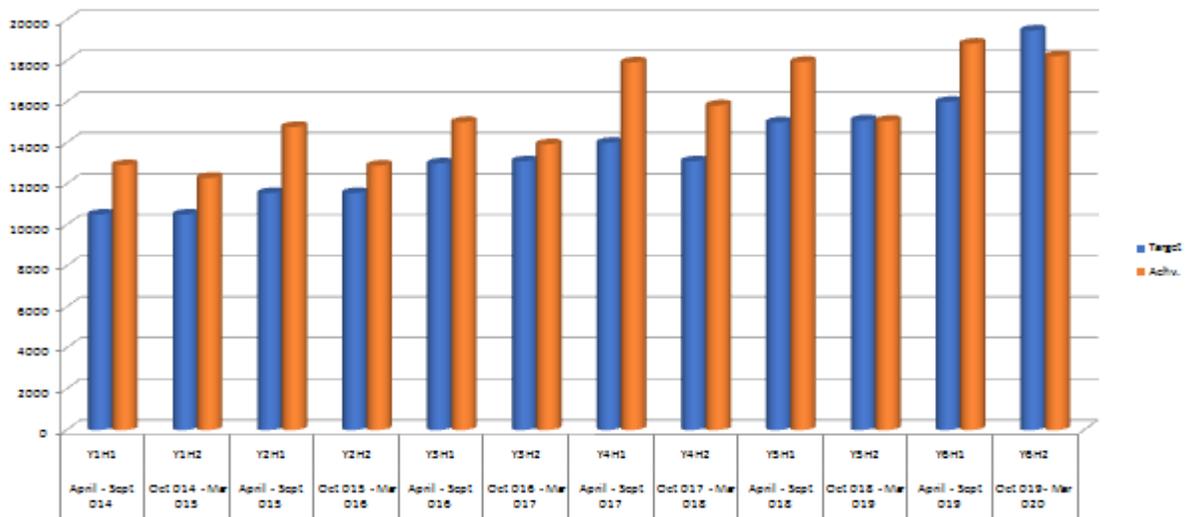
**Figure 4: Patient Treated at DCECs**

Medical Intervention of the target and achievement shows that no of patient treated adult has achieved 150 % and number of patient treated pediatric is 103 %. The total

achievement of medical intervention is 164 %. The progress of the medical interventions is highly encouraging that the patient flow in the eye center is increasing trend. The services of the eye center is satisfactory in one hand and the location of the eye center in district headquarter is on the other.

The logical frame of no. 4.4 has been stated the output of the medical intervention which has patient treated in the DCECs. The achievement at the final stage of the SiB project is more than 100 % which seems the effective implementation of the project as well as the impact of the eye services in the community.

## Target vs Output Trend



**Figure 5: Target vs. Output Trend of Patient Treated at DCECs**

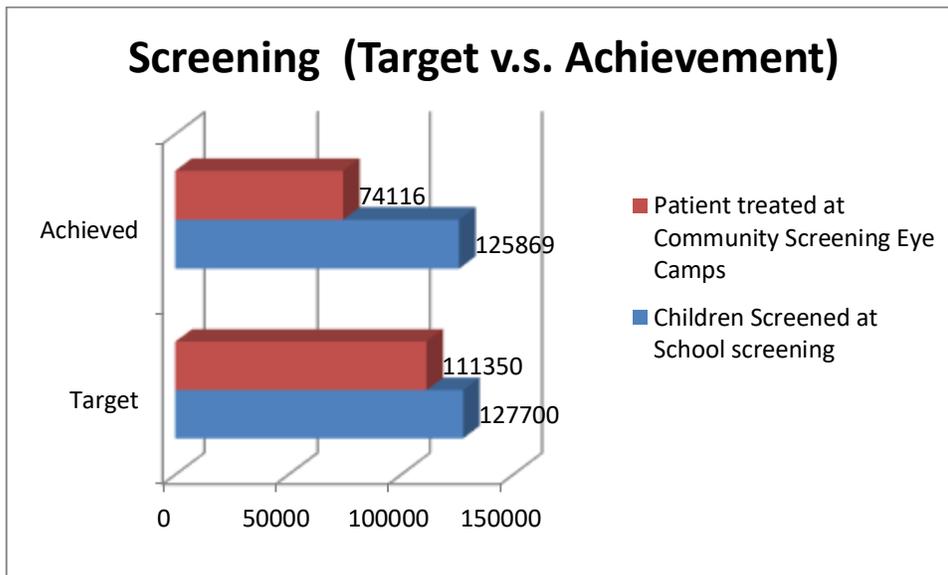
The trend of the patient treated in the DCECs on yearly basis has found higher than the targeted patient. It is noted that the progress on patient treated at DCECs is impact and performance of the DCECs management and service delivery.

### 3.8 Screening

Screening activities in the community's camps constitutes eye services like identification of the eye patient with minor eye problems, screening of cataract and other blinding conditions, counseling services, medicine, dispensing spectacle and referral services at local level, or eye centers. The outreach camps was conducted in public which increase the access of eye services to local people in one hand and

identification of cataract patient on the other. The camps were conducted in coordination with local stakeholders to select the venues, disseminate the information, and arrange equipment, medicines and logistics for eye screening camps. Both DCECs has conducted 120 screening camps in communities. Another was school screening camp at school, where school children were screened for eye sight and other ocular morbidities. Child were prescribed the glasses and if require, they were referred to the eye hospital/ or center for further evaluation.

The screening status of the both DCECs has been found the total community screening is completed of 74115 (67 %) number of people out of the total target of 111350. The screening of the children in school shows that the achievement is 125869 (99 %) children out of targeted 127700 children at school.

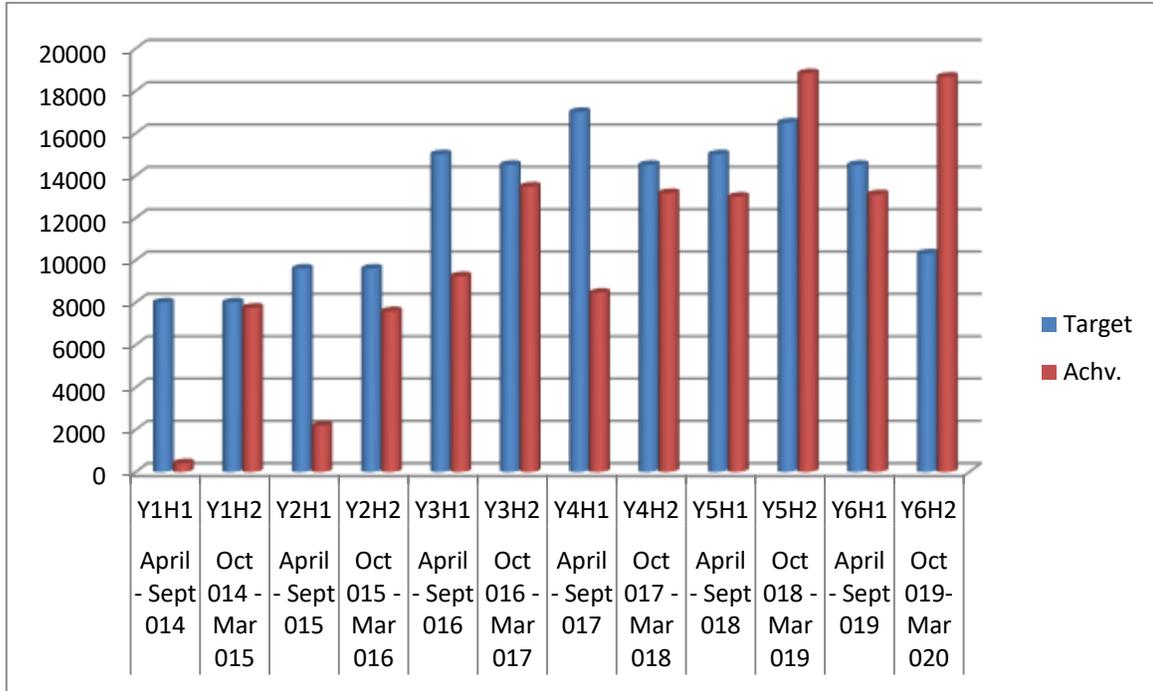


**Figure 6: Screening Activities of SiB**

The above data indicates that the target and achievement of screening activities of children screening at school and patient treated in community screening camp is 99 % and 67 % respectively. Patient treated at Community Screening Eye Camp has not been achieved as per the target. The community screening camp is not effectiveness that the DCECs working on screening activities are lacking the awareness and coordination with the community.

### **School Screening**

The school screening target vs. achievement has been further analysed with the periodic basis that the screening activities are performed at the schools in the district.



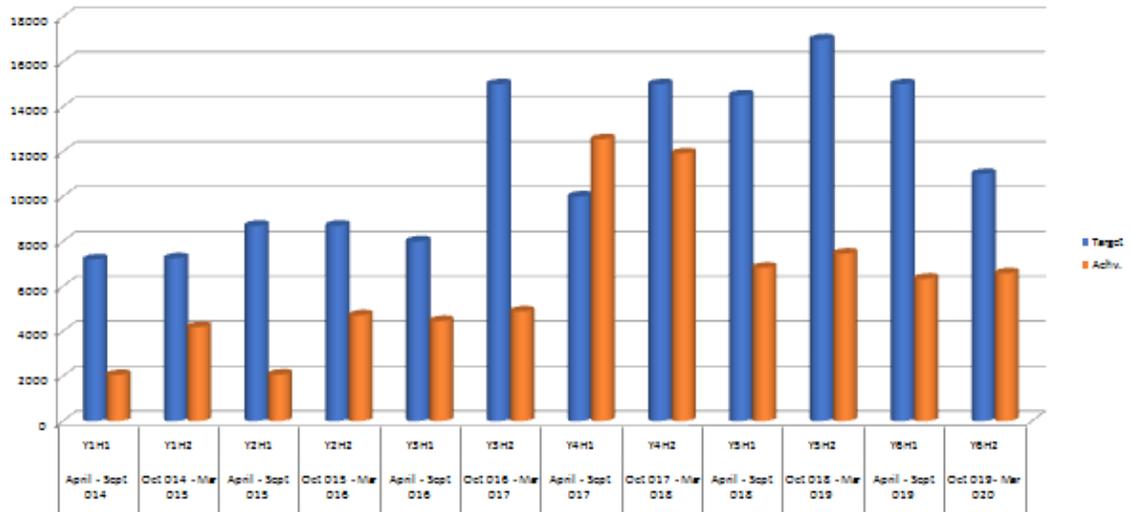
**Figure 7: Target Vs, Achievement of School Screening Trend**

The school screening activities is very low in the starting year Y1H1 because of the start up and selection of school is not performed on stating period. Similarly, Y2H1 period is found very low because of the earthquake in the districts which was affected on school. The target and achievement is higher in Y5H2 and Y6H2 to carry out the backlog of the target population.

### **Community Screening**

Community screening activities was conducted in the respected community in the district at the appropriate place in consultation with the community, school teacher and other stakeholders (NGOs). The community screening activities was performed 74116 people out of the targeted 111350 persons. The achievement rate of the community screening is 67 % of the project period. The target and achievement of the community screening on yearly basis is presented below;

## Target vs Output Trend



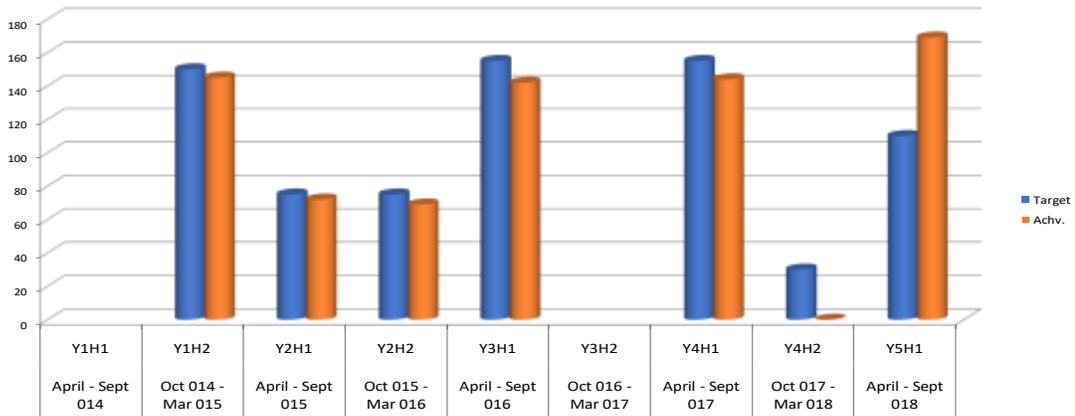
**Figure 8: Target vs. Achievement of Community Screening Trend**

### School Teacher Training

School Teacher Training was planned of 750 teachers during the project period. The achievement was 741 teacher trained. The school teacher training has been carried out in each half year period of the project.

**Figure 9: School Teacher Training Target vs. achievement Trend**

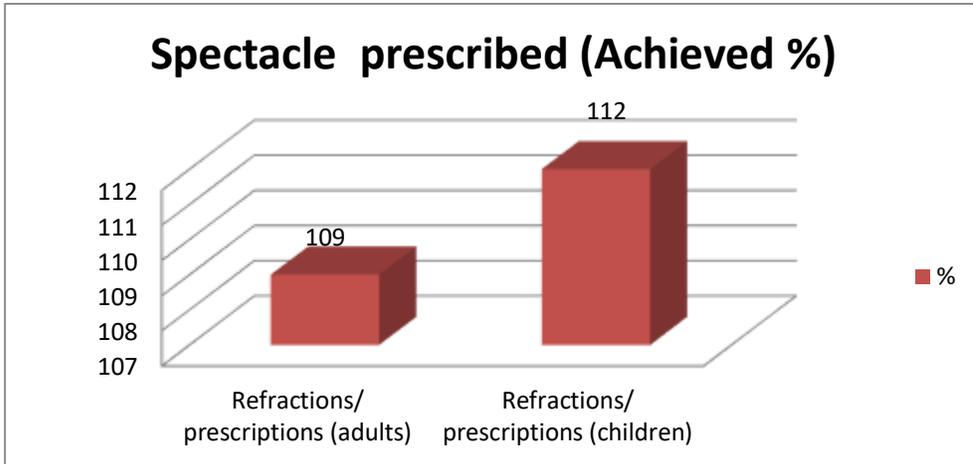
Target vs Output Trend



The school teacher training has been carried out at the schools of two districts which have been started from Y1H2 period. The target and achievement of the period showed that there was less achievement than the target. The trend of the target V.S. achievement is lower in Y2H1 and Y2H2 because of the earthquake which was affected by damaging the schools and opening was delayed. The target and achievement on Y5H1 was higher achievement than target. Overall 99% of target was met.

### 3.9 Refraction

Refraction and dispensing the spectacles is one of the important services of revenue generation of the eye centers and providing the spectacles to the patient as soon as possible is very crucial for better eye care. Refraction unit was established in both DCECs and provides the spectacles to the patient. The status of the refraction to the patient is given below;

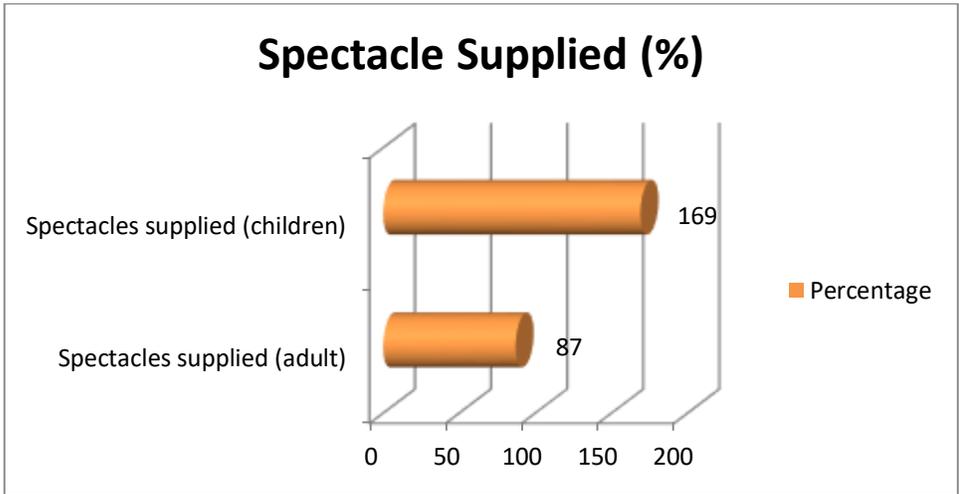


**Figure 10: Spectacle prescribed Targetvs. Achievement**

The above figure indicates that there is higher percentage of achievement on spectacle prescribed to adults (109 %) which is more than the targeted number of refraction. Refraction prescription to the children is 112 % which is above the targeted of refraction prescription.

**3.8.16 Spectacle Service**

Each center has provided spectacle services which is one of the major income sources of the center by providing the spectacle to the eye patient. The status of spectacle supply in the center is given below.



**Figure 11: Spectacles Supplied Target Vs Achievement**

The spectacle supplied to Children was 169 % achieved as target number of children during the project period. It shows that the target is minimized on spectacle supplied on

the original and revised situation. Similarly, spectacle supplied to adult is achieved 87 % only. The spectacle prescription to the adult is 109 % but the supply of spectacle is 87 % only. This is indicated that the patient who have prescription was not purchase the spectacles in the center. Whether they buy outside of the center is the risk factor of the spectacle services in the center.

### 3.8.2 Glass and dispensary

Good service: dispatches glasses promptly within 15 -20 minutes but they don't have much time for counseling. Lab investigation: The laboratory facilities for the checkup of diabetic patient in the center was not available. In case of Bhaktapur, the center is within the premises of Khowapa Hospital, would make available the lab services in the hospital is an advantage.

### 3.10 Advocacy Programme

Advocacy and awareness programme was conducted in the community through school and health institutions in the district particularly, health post and sub-health posts. During the advocacy program, the series of advocacy meeting were held in Nuwakot and Bhaktapur DCECs with wider participation from

concerned officials and stakeholders from Municipalities, District administration office, Nepal Red Cross and local organizations/Clubs. The people from rural areas are participated during the advocacy programme. The achievement of the advocacy program is 153 % of the target.



Figure 12: Advocacy Program Target Vs. Achievement

### 3.9.1 Health Education (IEC materials)

The advocacy component has been initiated to create the awareness on eye health education to the people. The activities to provide the information to the community people through the IEC materials like; pamphlets, poster, radio are applied for the eye camps, eye health and health care.

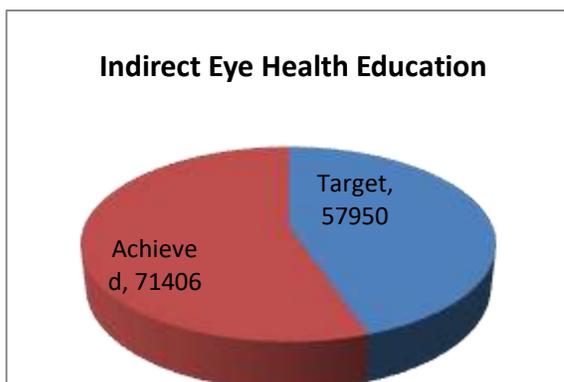


Figure 13: Indirect Eye Health Education (target Vs. Achievement)

Eye Health Education was significant to create the awareness and provide the information for the eye health care. DCECs were conducted the eye health education activities in the community

level during the eye camp, religious events, festival etc. The IEC materials were developed and used on different events and occasions on the health post outreach, camp and other activities. The status of the health education shows that the target is achieved by 123 %.

### 3.11 Service Delivery

The information about service delivery by DCECs has been provided to the eye patient mainly on opening time, charges, manpower and logistic services.

#### Nuwakot

- OPD time- 9 am to 3.30 PM. All days except Saturday. 50 patients/ day on average.
- Patients stay time is long as only one OA is consulting the Patients.
- Emergency service - all days. Attended by OA staff
- Volunteers are supporting on the patient registration, information and ready for check up
- Minor surgeries like chalazion, foreign body removal and procedure like syringing are performing. But sterilization is not doing regularly.
- Telemedicine- Center has facility for expert opinion of consultant from TIO through telemedicine as a conversation and sharing funds pictures, whenever required.

#### Bhaktapur

- Resident ophthalmologist doctor visited from TIO at Bhaktapur center on Monday and Thursday (from September 09, 2018)
- An ophthalmologist joined at Bhaktapur as a chief of secondary hospital, it has been upgraded though it's in rented building.
- OPD time - 8 am to 4.30 pm) all day except Saturday
- Average Patient Flow of 70/day now it's around 80+
- Cataract operation was carried out at rented house from March, 2019.

#### Charges

The charges for the patient for registration, follow up is fixed by the management committee. The existing charges of the registration and follow up are as follows;

Table 3.4: Charges of the eye service centers

S.N.	DCECs	Registration	Follow Up	Emergency
1	Nuwakot	50.00	40.00	100.00
2	Bhaktapur	30.00	25.00	100.00

The cataract surgery is free of charge. But, the management committee of Nuwakot has decided surgery charge of NRs. 2000.00 but not implemented. The management committee meeting on March 5<sup>th</sup>, 2019 has decided the charges of the medicinal and surgical charges of the center. (See Annex III).

### **Human Resources**

Human Resource of the eye center comprises with the Ophthalmic assistant, pharmacy and optical assistant are working to run the center. The staffs of the eye center are deputed from TIO. The existing human resources of the center are as follows;

Table 3.5: Manpower (Staffs) at eye service centers

S.N.	DCECs	Ophthalmologist Surgeon	Ophthalmic assistant	Pharmacy	Optical Assistant	Helper	Total
1	Nuwakot		2	1	2		5
2	Bhaktapur	1	3	1	1	2	7

In Bhaktapur, there seems problem due to not enough staffs when someone takes the leave or goes in eye camps. Only two staffs are handling about sale of medicines, receiving the order of glasses, fitting and dispense of glasses. Due to lack of manpower they are giving the glasses to patient on next only and not able to give the glass on the same immediately. OPD space is crowded.

In Nuwakot, there is lack of cooperation and helping each other in eye center's activities/ services like running the OPD or attending the emergency call. Refraction and eye examination in slit-lamp and prescribing the medicines for patients by one OA for all OPD cases, will compromise in quality of services and chances of human mistakes are higher. One staff should be in counseling.

As per the increasing trend of patient flow in Bhaktapur, the adequate manpower is to be mobilized at Bhaktapur. Particularly, the OA should be added for the general check up and facilitation to the patient in the center. Similarly, the assistant level staffs also are necessary to provide the crowd management and other office work.

### **3.12 Capacity Building Training**

The training shall enhance the capacity and performance is a significant aspect for staff's career development and upgrades the services of the center. The MLOP training has been provided to 3 DCEH training and 2 Project Management Training. The in charge of Nuwakot and Bhaktapur were participated in 6 months DCEH training at

India. The training subjects were quite useful and used for the operation and management of the eye center in the both districts.

- Day to day office management
- Community coordination and eye health education
- Management of the eye center
- Capacity enhancement of the staffs at center

School teachers training has been carried out in the district to screen the student in the school and refer to the eye center if there is patient for cataract cases. 741 school teachers were trained out of 750 targeted teachers in the school and achieved 99 % of the target.

### 3.13 Financial

The project cost of SiB is originally 1,427,980 USD and revised budget for the project is 1,515,558 USD in 2017 and further revised on 1,706,185.00 USD on 2019. The funding source of the project is SiB and TIO contribution on sharing basis. The budget expenditure of the SiB project has been reported as of March, 2020. The budget and expenditure to the date shows the financial performance of the project.

Table 3.6: Financial Status of SiB

Description	Log frame ref.	Original Budget \$	Budget Variation on 2017	Budget Variation in 2019	% Change on original
Applicant Organization costs	1.1				
Project over head cost	Pro	128,761	123583	100697	(21.80)
Consultant for project	Con	19,126	26795	26709	39.65
Equipment for project office	Eqp	6,798	7574	7574	11.41
<b>Subtotal</b>		<b>154,686</b>	<b>157952</b>	<b>134,980</b>	<b>(12.74)</b>
Support to local implementing partners					
Service Delivery Costs					
Community screening	4.2	14,744	24937	42107	185.59
School screening	4.3	11,476	10898	13612	18.62
Cataract sugary support	4.1	191,263	179333	176371	(7.79)
Building	2.1	271,512	271212	273289	0.65
Equipment	2.2	238,657	238772	238522	(0.06)
Medicine & consumables	4.4	95,631	189543	328685	243.70
Building Construction Consultant for project TIO contribution				6600	100.00

Project overhead cost TIO contribution				54410	100.00
Office operation cost	4.4	358,632	349866	342773	(4.42)
<b>Subtotal</b>		<b>1,181,915</b>	<b>1264561</b>	<b>1,476,369</b>	<b>24.91</b>
<b>Training</b>					
School teachers training on basic eye care	3.2	21,995	27901	28258	28.47
Diploma in Community eye health	3.1	24,721	24726	25862	4.61
<b>Subtotal</b>		<b>46,716</b>	<b>52627</b>	<b>54120</b>	<b>15.85</b>
<b>Communication – Advocacy and Community awareness</b>					
Advocacy at district level	5.1	4,463	4966	5323	19.28
IEC Material	5.2	15,939	14245	12886	(19.15)
<b>Subtotal</b>		<b>20,401</b>	<b>19211</b>	<b>18209</b>	<b>(10.75)</b>
<b>M&amp;E</b>					
Financial auditing	6.1	3,877	4194	4202	8.38
Program monitoring	3.2	7,332	5412	6052	(17.45)
Program evaluation	6.3	13,053	11600	12254	(6.12)
<b>Subtotal</b>		<b>24,262</b>	<b>21206</b>	<b>22508</b>	<b>(7.23)</b>
<b>TOTAL</b>		<b>1,427,981</b>	<b>1,515,557</b>	<b>1,706,186</b>	<b>19.48</b>

As per the revised budget on 2019, there are some changes (increase and decrease) on budget line of different heading. Organization cost has decreased 21.8 % on project overhead and increase 39.65 % on consultant for the project and increase 11.41 % on Equipment for Project Office. This organizational cost has been increased due to extension of the project completion period of one year.

On Service Delivery, there is increment on 185.59 % on Community Screening and 18.6 % on School Screening. Similarly, there is 7.79 % decrease on Cataract surgery support. Building cost is increased on 0.65 %. Medical and consumables budget is increased 243.7 %. The additional budget provisioned for Building Construction Consultant (TIO contribution) and Project Overhead Cost (TIO contribution) has been added. Office Operation budget is decreased by 4.42 % only. In case of Training budget, the School Teacher Training is increased 28.47 % and Diploma in Community eye health training is 4.61 % increased. The budget on Advocacy at district level is increased by 19.2 % whereas decreased 19.15 % on IEC materials.

There is increment of 8.38 % on Financial Auditing and decrease on program monitoring and program evaluation. The overall budget increment is 19.48 % on the original budget.

The SiB contribution on budget increment is same as original budget but the TIO contribution on total budget is increased.

### **3.13 Budget Expenditure**

The budget expenditure of the SiB has been assessed as per the information provided by TIO on the different budget heading. The expenditure of the budget for the implementation of SiB is given below;

The expenditure pattern of the SiB has been assessed on yearly basis that the allocated budget has been spent on the particular year.

Project Overhead is spend 1 % in first year and 34 % in fifth year which has not equal distribution of expenditure on project overhead cost. It is understood that the remaining budget was fully spend on the last year. Consultant for project has also been spending 7 % in 1<sup>st</sup> year and 24 % in 5<sup>th</sup> year. Office Equipment was spent 53 % on 1<sup>st</sup> year 19 % on 2<sup>nd</sup> year and 28 % in 3<sup>rd</sup> year. This shows that the office equipment is purchased in 1<sup>st</sup> year.

Table 3.7: Budget Expenditure of SiB

Description	Current Approved Budget \$	Variance %	Actual Expenditure \$	Year 1		Year 2		Year 3		Year 4		Year 5		Year 6		Total Expenditure	Total %
				\$	%	\$	%	\$	%	\$	%	\$	%	\$	%		
Applicant Organization costs																	
Project over head cost	100697	0	100697	10027	10	11812	12	19492	19	25519	25	33847	34	0	0	100697	100
Consultant for project	26709	0	26709	1914	7	7447	28	4939	18	6097	23	6311	24	0	0	26709	100
Equipment for project office	7574	0	7574	4040	53	1410	19	2124	28	0	0	0	0	0	0	7574	100
Subtotal	134980	0	134980	15982	12	20669	15	26555	20	31617	23	40158	30	0	0	134980	100
Community screening	42107	0	42357	3419	8	6543	15	6188	15	7583	18	8374	20	10250	24	42357	100
School screening	13612	0	12099	214	2	674	6	1485	12	1711	14	4849	40	3167	26	12099	100
Cataractsurgery support	176371	0	173168	16486	10	20653	12	29032	17	39428	23	39132	23	28436	16	173168	100
Building	273289	0	274677	192	0	0	0	57416	21	40390	15	0	0	176678	64	274677	100
Equipment	238522	0	245508	423	0	0	0	13848	6	21145	9	112105	46	97986	40	245508	100
Medicine & consumables	328685	0	338837	28965	9	33114	10	28562	8	53667	16	78472	23	116057	34	338837	100
Building Construction Consultant for project Tio contribution	6600		8828	0	0	0	0	0	0	0	0	0	0	8828	100	8828	100
project overhead cost tio contribution	54410		54514	0	0	0	0	0	0	0	0	0	0	54514	100	54514	100
Office operation cost	342773	0	331717	34332	10	39539	12	32399	10	59744	18	76259	23	89444	27	331717	100
Subtotal	1476369	0	1481706	84031	6	100523	7	168930	11	223668	15	319192	22	585361	40	1481706	100
Training																	
School teachers training on basic eye care	28258	0	28258	7483	26	5802	21	4515	16	5901	21	4556	16	0	0	28258	100
Diploma in Community eye health	25862	0	25421	0	0	0	0	10299	41	11320	45	1743	7	2059	8	25421	100
Subtotal	54120	0	53679	7483	14	5802	11	14814	28	17221	32	6299	12	2059	4	53679	100
Communication – Advocacy and Community awareness																0	
Advocacy at district level	5323	0	5323	1861	35	418	8	1780	33	1137	21	126	2	0	0	5323	100
IEC Material	12886	0	12582	898	7	1273	10	776	6	1882	15	1816	14	5936	47	12582	100
Subtotal	18209	0	17905	2759	15	1691	9	2557	14	3020	17	1942	11	5936	33	17905	100
M&E																0	

Description	Current Approved Budget \$	Variance %	Actual Expenditure \$	Year 1		Year 2		Year 3		Year 4		Year 5		Year 6		Total Expenditure	Total %
				\$	%	\$	%	\$	%	\$	%	\$	%	\$	%		
Financial auditing	4202	0	3732	0	0	1146	31	110	3	1087	29	458	12	930	25	3732	100
Program monitoring	6052	0	6233	42	1	99	2	1451	23	3518	56	591	9	532	9	6233	100
Program evaluation	12254	0	9090	0	0	0	0	0	0	582	6	3673	40	4835	53	9090	100
Subtotal	22507	0	19055	42	0	1245	7	1561	8	5187	27	4722	25	6297	33	19055	100
<b>TOTAL</b>	<b>1706185</b>	<b>0</b>	<b>1707324</b>	<b>110297</b>	<b>6</b>	<b>129930</b>	<b>8</b>	<b>214416</b>	<b>13</b>	<b>280713</b>	<b>16</b>	<b>372314</b>	<b>22</b>	<b>599654</b>	<b>35</b>	<b>1707324</b>	<b>100</b>

<b>Funding Sources</b>	<b>Budgeted</b>	<b>%</b>	<b>Expenditure</b>
SiB	\$ 973,717	57%	\$ 973,428
Partners			
Tilganga Institute of Ophthalmology	\$ 732,468	43%	\$ 733,896
Other	\$ -		
<b>Total budgeted expenditure</b>	<b>\$ 1,706,185</b>	<b>100%</b>	<b>\$ 1,707,324</b>

**The funding of SiB Project has been analysed with the 57 % of the Budget Expenditure by SiB and 43 % by the partner Tilganga Institute of Ophthalmology (TIO) contribution.**

The expenditure on service delivery has outlined with the yearly breakdown of expenses on different budget line. Community screening activities has spent 8 % in 1<sup>st</sup> year, 16 % in 2<sup>nd</sup> year, 15% in 3<sup>rd</sup> year, 18 % in 4<sup>th</sup> year, 20 % in 5<sup>th</sup> year and 25 % in 6<sup>th</sup> year. As per expenditure the community screening has been carried out higher in 5<sup>th</sup> and 6<sup>th</sup> year. The output indicates that 73 % of the total target was achieved on community screening activities. Year and The expenditure on school screening is 2 % in 1<sup>st</sup> year, 5 % on 2<sup>nd</sup> year, 11 % on 3<sup>rd</sup> year, 13 % on 4<sup>th</sup> year, 36 % on 5<sup>th</sup> year, 34 % on 6<sup>th</sup> year. This is also heavy expenditure on 5<sup>th</sup> and 6<sup>th</sup> year.

Cataract Surgery Support activities expenditure has been carried out 9 % in 1<sup>st</sup> year, 12 % in 2<sup>nd</sup> year, 16 % in 3<sup>rd</sup> year, 22 % in 4<sup>th</sup> year, 22 % in 5<sup>th</sup> year and 18 % in 6<sup>th</sup> year. The yearly expenditure on cataract surgery support has been distributed more and less equal basis and the DCECs are able to carry out the cataract surgery in the respective districts.

Building Construction budget was spent on 21 % in 3<sup>rd</sup> year 15 % in 4<sup>th</sup> year and 64 % in 6<sup>th</sup> year. The expenditure on 3<sup>rd</sup> and 4<sup>th</sup> year was the purchase of land and construction of building in the Nuwakot. The expenditure on building construction at Bhaktapur was delayed due to the management and logistics problems on availability of land for building construction. Finally, the management committee, Bhaktapur has reached a MoU with Bhaktapur Municipality and the 3<sup>rd</sup> floor is being made available for the District Eye Center under the premises of the Khowapa Hospital in 2020. The budget is provided to the Hospital construction for the construction of building.

Equipment purchased for the DCECs was on the 5<sup>th</sup> and 6<sup>th</sup> year where 47 % and 38 % budget was spent respectively. The equipments were purchased after the construction of building in Nuwakot and at the end year for Bhaktapur.

Medicine and consumables purchased for the DCECs to provide the medicine to the patient. The expenditure on medicine and consumables is higher of 24 % and 32 % on 5<sup>th</sup> and 6<sup>th</sup> year. The flow of patient is increased in the DCECs and medicine and consumables are provided in 5<sup>th</sup> and 6<sup>th</sup> the year.

Building construction Consultant is hired on the 6<sup>th</sup> year for Bhaktapur that the budget is spent on 6<sup>th</sup> year. Project Overhead expenditure was done in the 6<sup>th</sup> year. The office operation expenditure was found 10 % in 1<sup>st</sup> year, 12 % in 2<sup>nd</sup> year, 9 % in 3<sup>rd</sup> year, 17 % in 4<sup>th</sup> year 22 % in 5<sup>th</sup> year and 29 % in 6<sup>th</sup> year. It shows that the office operation cost in higher in the 5<sup>th</sup> and 6<sup>th</sup> year.

The expenditure on the School Teacher training was 26 % in 1<sup>st</sup> year, 21 % in 2<sup>nd</sup> year, 16 % on 3<sup>rd</sup> year, 21 % in 4<sup>th</sup> year and 16 % in 5<sup>th</sup> year. This distribution of expenditure is quite balance and completed on 5<sup>th</sup> year. The Training to staff on Diploma in community Eye was spent 40 % on 3<sup>rd</sup> year and 44 % on 4<sup>th</sup> year. The two persons were participated on the Training in India. The total expenditure on this training is 98 %.

The expenditure on Advocacy at District Level was 35 % in 1<sup>st</sup> year, 8 % on 2<sup>nd</sup> year 33 % on 3<sup>rd</sup> year, 21 % on 4<sup>th</sup> year and 2 % on 6<sup>th</sup> year. The advocacy and coordination with district was carried out from the first year which has series of meeting and visits for the project launching are high budget expenditure. IEC materials was spent higher on 6<sup>th</sup> year which is 48 % is not equal distribution of expenditure on fifth year.

Financial Auditing budget was spent higher of 33 % on 6<sup>th</sup> year. Programme monitoring budget was spent 58 % in the 4<sup>th</sup> year which is not equally spent in each year. The program monitoring activities are not carried out effectively as budget was spent only in 5<sup>th</sup> year. Program Evaluation budget is also spent on 5<sup>th</sup> and 6<sup>th</sup> year of 30 % and 65 % respectively for Mid-Term Evaluating and Final Evaluation of the SiB project.

The budget expenditure situation of overall is 6 % in 1<sup>st</sup> year, 8 % in 2<sup>nd</sup> year 13 % in 3<sup>rd</sup> year, 16 % in 4<sup>th</sup> year, 22 % 5<sup>th</sup> year 35 % on 6<sup>th</sup> year. This indicates that the higher percentage of budget expenditure was on last year.

## Chapter 4

# Evaluation Findings

### 4.1 Background

TIO has designed and implemented the Seeing is Believing (SiB) project to provide quality and standard eye services through its DCECs in Nuwakot and Bhaktapur district. SiB project has outlined the activities of building construction, training, cataract surgeries, medical interventions, refraction services, screening and eye camps, eye health education etc. The project has provided ample input on the eye services which is contributing to the elimination of blindness in the districts and ultimately in Nepal.

The SiB project is relevant to the stated Health Policy of Government of Nepal (2017) to carry out the program of Vision 2020 (Vision 2020, Right to Sight is a global initiative to eliminate blindness, a joint program of WHO and IAPB). The project was designed and implemented for providing eye care services with the goal of reducing blindness. As per Vision 2020 program, Nepal has planned to establish at least one district eye centre nationally in each district by the year 2015. As an active member of VISION 2020 Nepal under the Ministry of Health, TIO has been playing a leading role in developing an achievable sustainable eye care model by establishing six major components in a base Centre at TIO such as the Surgi-centre, Intraocular Lens Production, Eye Bank, Outreach, Training and Research.

The project is relevant to address the policy and strategy of Government of Nepal (GoN), vision 2020 initiatives and continuity of TIO's project interventions for upgrading the DCECs and provide the quality eye services in the rural areas of the districts.

### 4.2 Performance/output (compared to Log Frame)

Project performance and progress is evaluated against the output and outcomes on the Log Frame of the project. The status is analyzed comparing the targeted output to the achieved output of the project. The final evaluation of SiB project includes an assessment of the output; progress based on data, reports and observation, and the Log Frame analysis is given below:

Table 4.1: Log frame- Output Analysis

	No.	Original Output	Indicators	Revised Output	Final Evaluation Output (March, 2020)	% Achieved on Revised Output
Outputs:	1.1	2 buildings constructed at Two districts	# of building constructed	2 buildings constructed at Two districts	Building construction at Nuwakot completed and Under construction at Bhaktapur	100%
	1.2	1 Eye Centre upgraded into Secondary level eye centre	# of Secondary level eye centre	1 Eye Centre upgraded into Secondary level eye centre	Eye Centre upgraded into Secondary level eye centre	100 %
	1.3	1 Eye centre upgraded into periodic surgical facility	# of eye centre with surgical facility	1 Eye centre upgraded into periodic surgical Facility	Eye centre upgraded into periodic surgical Facility	100 %
	2.1	3 TIO staff received knowledge on eye care management	# of staff trained in eye care Management	4 TIO staff received knowledge on eye care	5 TIO Staff Trained	125%
	3.1	750 primary school teachers received training on basic eye care	# of school teachers trained	749 primary school teachers received training on basic eye care	741 School Teacher Trained	99%
	4.1	6,100 cataract surgeries performed	# of cataract surgeries performed	6152 cataract surgeries performed	6272 Cataract surgeries performed	102%
	4.2	107,000 people received their eye treatment at screening eye camp	# of people checked and treated	111350 people received their eye treatment at screening eye camp	74116 People received eye treatment	77 %
	4.3	119,000 children received their eye check at school	# of children received their eye check up	127700 children received their eye check at school	125869 children received screening	99 %
	4.4	128,000 people received their eye check up and treatment at eye centers	# of people checked and treated	127400 people received their eye check up and treatment at eye centers	185634 people received their eye check up	146 %
	5.5	5 advocacy programs conducted	# of advocacy meeting	15 advocacy programs conducted	23 advocacy programs conducted	153 %

### **4.3 Building Construction**

Building construction is completed at DCEC of Nuwakot district for providing eye care services. The pre-fabricated steel building was constructed as per the design approved by TIO. The building space is 80.3 sq.m. and has partition of rooms for the refraction, registration, administration, and treatment and OT services. Open space is available in the premises, water supply has been installed and a toilet has been constructed. However, there are no separate toilets for male and female.

Bhaktapur DCEC, which is under the Khowapa Hospital which is in turn under the Bhaktapur Municipality, has started the building construction in the final year of the project. The fourth floor will be assigned for the Eye Center which has the area of 9,500 sq ft. will be provided for the Eye Care Unit. It is noted that the DCECs building is located in the Khowapa Hospital, which is advantageous in terms of the available lab service, increased patient referral cases from hospital and conducive environment for health service delivery.

### **4.4 Service delivery and coverage**

The service delivery of the DCEC were upgraded with the eye center at Bhaktapur being upgraded to secondary level eye centre and that at Nuwakot being upgraded into a periodic surgical facility. The services provided by the DCECs includes creening, treatment, medicine, refraction and surgery. The progress of the service delivery of the centers is satisfactory in terms of the provided eye treatment.

Surgical services have achieved 56.5 % of the targeted number of surgeries which includes cataract operation and other minor surgical operations. This progress, measured in comparison to the target for March 2020 isn't encouraging.

Medical treatment of the adult and pediatric patients at the DCECs has achieved 65.6 % of target and shows a progressive and increasing trend. The present mid-term status is satisfactory and the ratio of patient flow will easily meet the targeted population.

The catchment area of Nuwakot district is mainly Bidur municipality, Telkot Municipality, Kaisagn Rural Municipality, Meghang Rural Municipality, Suryagadhi Rural Municipality, Tadi Rural Municipality, Likhu Municipality and other rural municipalities as well as some parts of the Rasuwa district. The catchment area of Bhaktapur district is Bhaktapur Municipality, Suryabinayak Municipality, Changunaraya Municipality and MadhyaapurThimi Municipality. Bhaktapur Eye Center will be the gate way point of the eastern districts through the transport movement in B.P. High Way and Arniko Rajmarga. Improvement in the quality of

services provided and timely service delivery by the DCECs will increase the coverage area of the both districts.

#### 4.5 Perception Survey of Eye Services

The perception survey was carried out at Nuwakot and Bhaktapur district. The respondents were the outpatients and follow up patients in the center. The survey questionnaire was used for the collection of the data from the respondent. The findings of the survey are discussed below:

##### **Socio-economic Status of the Respondent**

The socio economic status of the respondents has been assessed and the findings of the survey are as follows:

##### **Cast and Ethnicity**

The cast and ethnicity of the respondents comprise of Brahmin, Chhetri, Newar, Tamang, Rai, Limbu, Magar and others. The distribution of the cast and ethnicity of the surveyed households are as follows;

Table 4.2: Cast Ethnicity of Surveyed Household

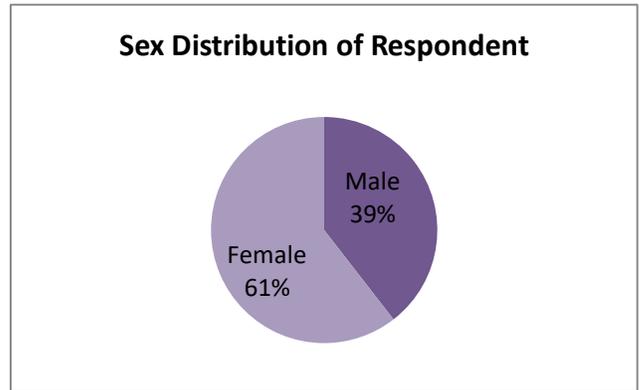
Cast/Ethnicity	Number	Percent (%)
Brahmin	28	14
Chhetri	34	17
Newar	72	36
Tamang	42	21
Rai	7	3.5
Magar	2	1
Limbu	1	0.5
Dalit	12	6
Others	2	1
Total	200	100

Source: Field Survey, 2020

The cast and ethnicity of the survey household shows 36 % of Newar community, 14 % Brahmin, 17 % Cheetri, 21 % Tamang and 3.5 % of Rai respectively. The highest percentage belongs to Newar Community because most of the respondents were from near the Bidur Area which has a large community of Newars.

**Sex Distribution**

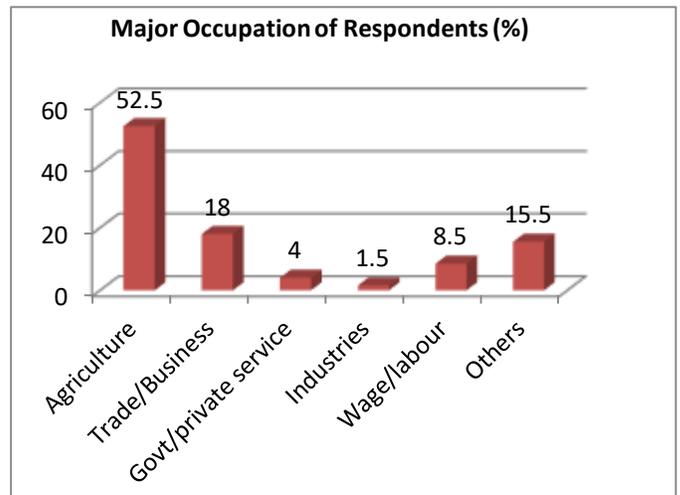
The surveyed respondents were 61 % female and 39 % male. The higher number of respondents was female who were interviewed during the field survey. Respondents of the survey included new patients; follow up patients and patients who had undergone cataract operations.



**Figure 14:Sex Distribution of Respondent**

**Occupation**

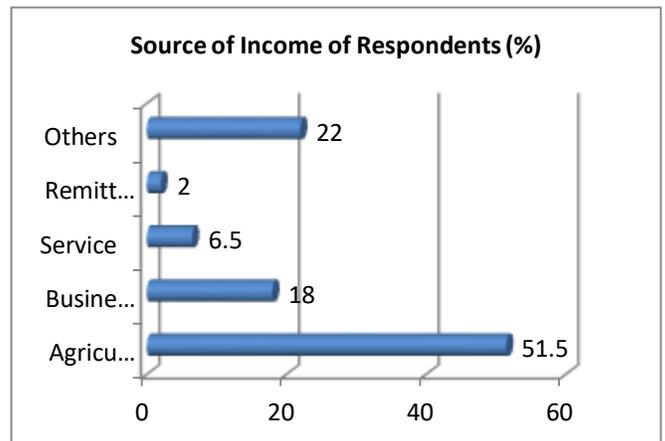
The major occupations of the respondents were agriculture, trade/business, government/private services, industries, wage/labor etc. Agriculture was found to be the main occupation which was done by 52 % of the surveyed respondents. Trade/business is done by 18 % of the respondents whereas only 1.5 % engages in industries. The wage/labor workers comprise of 8.5 % and lastly, people who work for government or private service were 4 % among the total respondents. Agriculture is still pre-dominantly the major occupation of the surveyed respondents with low income status.



**Figure 15 Major occupation of respondent**

**Source of Income**

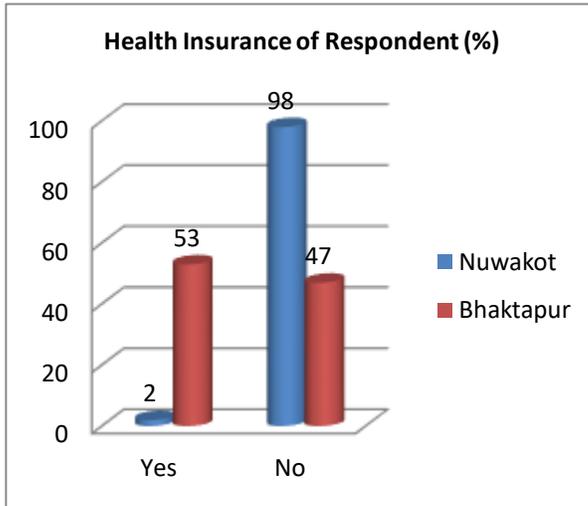
The income source of the respondents indicates the income status of the surveyed households. The income sources are Agriculture, business, services and remittance among others. The major source of income was agriculture (51.5 %) followed by business (18%), services (6.5%), and 2



**Figure 16:Source of Income of Respondent**

% from remittance. Agriculture is the top most income source of the respondents which is done by 52.5 % of the total respondents. The agriculture income seems to be lower in comparison to business and services.

### Health Insurance



**Figure 17: Health Insurance of Respondent**

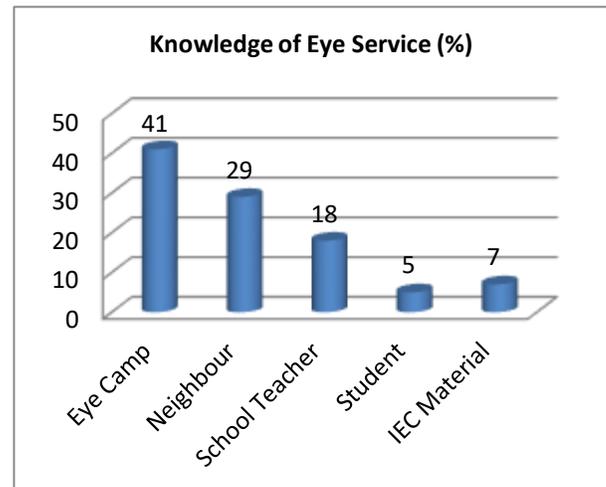
Health insurance is important for the patients to pay the charges of eye checkups (ones which are covered). The status of health insurance conditions of the respondents for eye services is assessed. The survey showed that 98 % of the respondents were not insured in Nuwakot district. In case of Bhaktapur, 53 % were insured and 47 % don't have insurance facilities. The low percentage of insured people in Nuwakot is due to the remoteness of the district and ineffectiveness of health insurance facilities.

### Knowledge of Eye Service

One of the SiB activities is to distribute IEC materials and create awareness about eye services among the people of the affected population in the district. The eye services include eye camp, identification of eye cases, cataract patients and general services. The analysis of the perception of knowledge regarding these services and their effectiveness is discussed below;

### Information Sources

People may have different sources of information about eye health services. There are some pertinent sources and media to deliver the information to the concerned people. The effectiveness of these information sources are analyzed from the respondent's answers. The findings show that 41 % of the people were informed from eye camps and continued routine camps conducted in the district. 29% of people found out

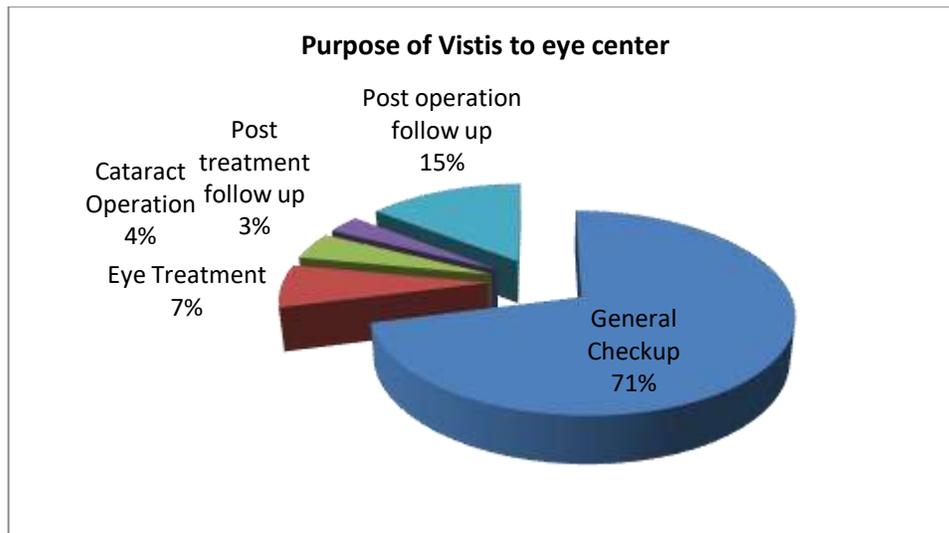


**Figure 18: Knowledge of Eye Service**

through their neighbors. School teachers seem to be a good media for providing information to the community as 18 % of the respondents found out through them. 7 % of the respondents were awarded with the help of IEC materials. This indicates that the eye camps, school teachers, IEC materials, etc. were effective in information dissemination and knowledge on eye services in the community level.

**Purpose Visit to Eye Center**

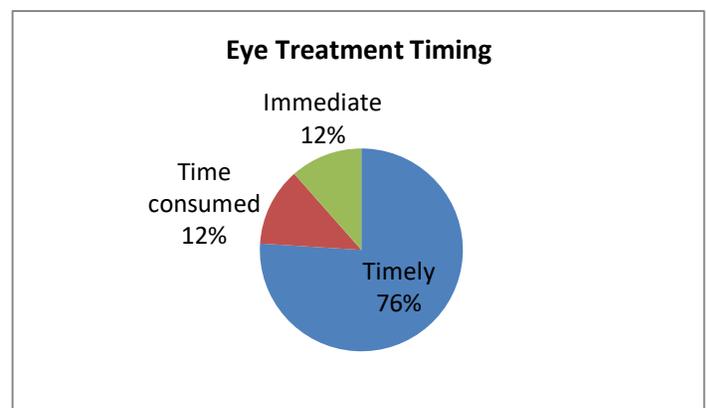
Patients visit the eye center mainly for general check up and treatment, cataract cases, cataract operation etc. Nuwakot DCEC has upgraded and now provides periodic cataract surgery. Bhaktapur has upgraded into the secondary level of eye services where cataract surgery is being carried out regularly. The chart below shows that 71 % of respondents visited the eye center for general eye check up, 15 % visit follows up, 7 % visit for eye treatment, and 4 % of the respondents are operated in the center.



**Figure 19: Purpose of Visit of Eye Center**

**Eye Treatment (Time)**

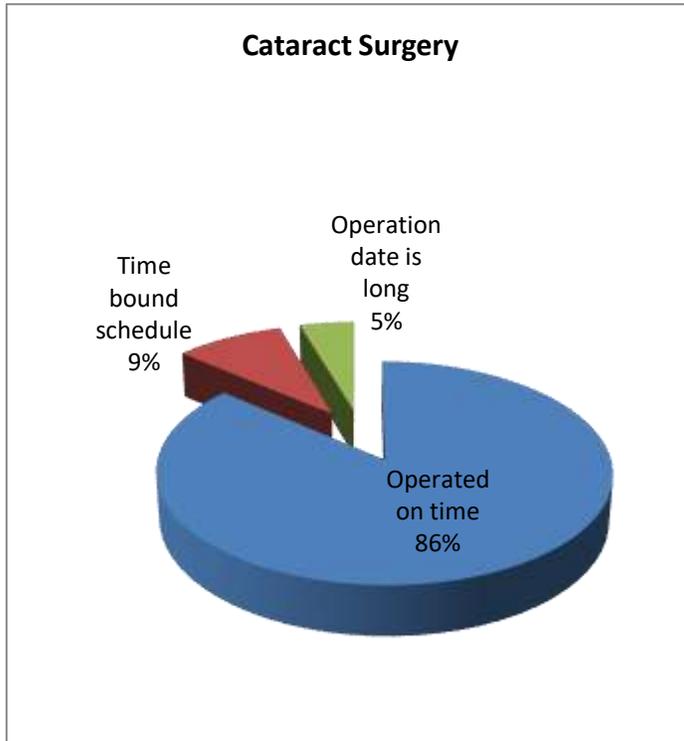
The eye center has carried out eye treatments to the respective patients from general check up, spectral service, cataract surgeries etc. The survey shows that 76 % of the respondents expressed that the checkups and treatments were timely in the eye center. The treatment services were offered



**Figure 20: Eye Treatment timing**

immediately after registration to 12 % of the respondents. Another 12 % expressed that it is time consuming to get an eye treatment. It seems that the services of the eye center were effective as 76% of the people expressed that they got timely care. However, 12 % respondents say that they weren't received on time.

### Cataract Surgery



The main services and project interventions is to provide cataract surgery in the districts and community centers. Nuwakot has been conducting periodic cataract surgeries from time to time on identified cases. Bhaktapur is carrying out cataract surgeries in the eye center by an ophthalmologist. The findings revealed that cataract surgery has been carried out timely as 86 % expressed but 9 % respondents agreed that time had bound schedule for the cataract surgery. This case was found in the Nuwakot district where periodic cataract surgery was carried out. Lastly, 5 % of the respondents say that the cataract surgery was time consuming.

**Figure 21: Cataract surgery at DCECs**

This concludes that the cataract surgery of the SiB interventions is effective and timely conducted as per the target. This will be more effective in Bhaktapur after construction of the Building.

### Post Cataract Vision Assessment

The survey was carried out to find the visual outcome perceived by the patient after cataract surgery for which visual assessment tools were used. The respondents were selected randomly from the cataract operated patients for the survey. The visual condition of patients after cataract services is analyzed on near vision, middle vision and distant vision as below;

### Near Vision- Read News Paper

The nearest vision after cataract operation could read the news paper. It is found that 14 % patients could excellently read the newspaper, whereas 30 % respondents found good vision to read the newspaper. Similarly, 34 % have fair vision to read newspaper while 18 % are poor vision to read newspaper. Ultimately 5 % respondents have very poor vision to read newspaper.

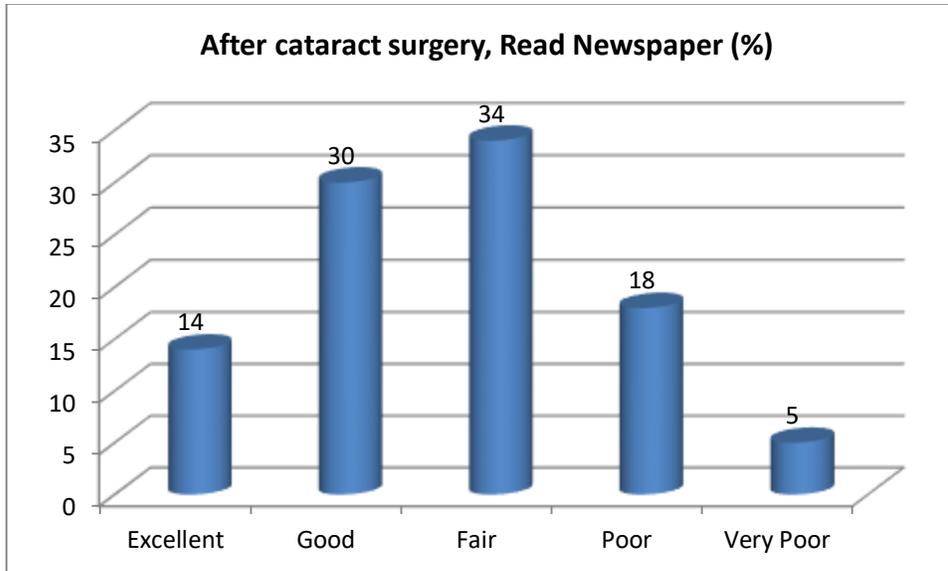


Figure 22: After Cataract Surgery read newspaper

### Read Labels

This is the near vision which allows a person to read the labels of different signs, objects in the near distance and can help us in doing works like putting thread up a needle etc. The finding of the survey on near vision to read labels shows that 18 % have excellent vision to read labels. Similarly, 34 % have good vision on read labels followed by 25 % who have fair vision and 18 % has poor vision as

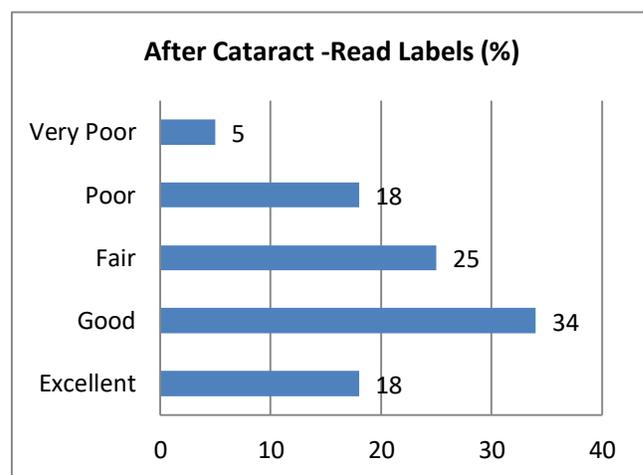


Figure 23After Cataract read labels

well as 5 % had very poor vision. It shows that near vision after cataract surgery is good. But in some cases, there is very poor vision after surgery.

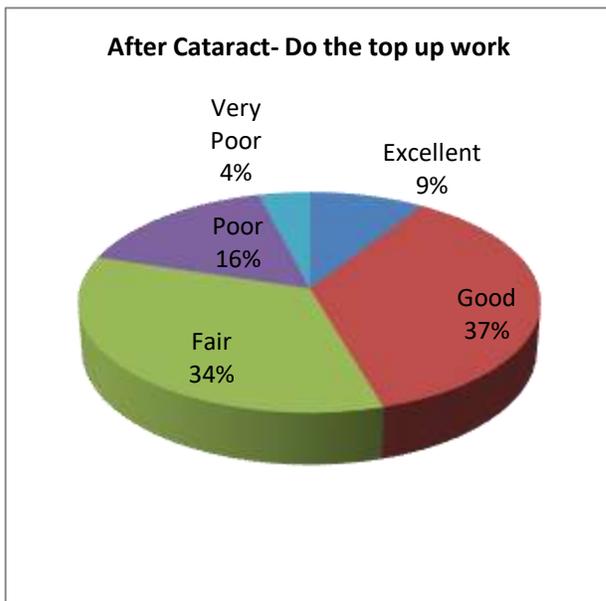
**Read Prices (Currencies)**

The near vision of the patients allows them to read the prices/currencies to know the number. The survey of post cataract surgery patients were carried out in Bhaktapur and Nuwakot. The feedback of the respondents shows that 43 % are good at reading prices. 5 % of people were excellent at reading prices. 27 % of the respondents have the vision to read labels fairly whereas 20 % have poor visibility and 5 % have been found to have poor visibility.



**Figure 24**After Cataract read prices

**Do the top up (recharge card)**



**Figure 25**After cataract-Do top up work

How well the people can read the digits of a recharge card of mobile is another aspect of the near vision assessment. The surveyed respondents were asked the conditions of their vision while reading recharge card digits. The findings show that 37 % respondents had good vision while reading a recharge card and charging their mobiles with it. 34 % respondents found fair vision while reading a recharge card. 16 % respondents were found to have poor vision reading recharge cards. The respondents who could read excellently were 9 %. Similarly, 4 % respondents had very poor vision to read recharge card.

### Recognize People

This is the mid level vision which is taken to assess the vision level of the patient after the cataract surgery. Based on the data analysis, 23 % of the respondents can recognize people excellently, 34 % respondents expressed that their vision is good enough to recognize people. Similarly, 27 % respondents have fair recognition, 14 % poor and 2 % have very poor vision to recognize the people after the cataract surgery. The mid level vision seems to be good after cataract surgery.

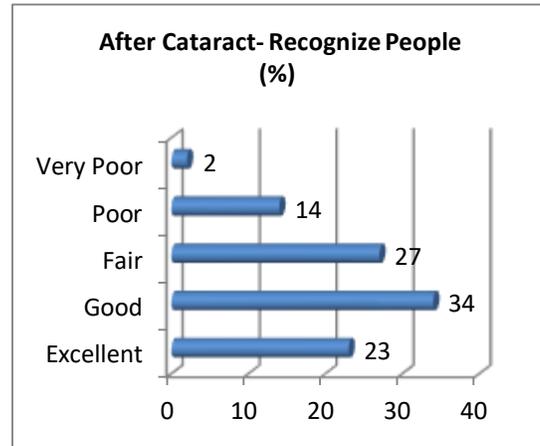


Figure 26 After cataract-recognize people

### See Steps

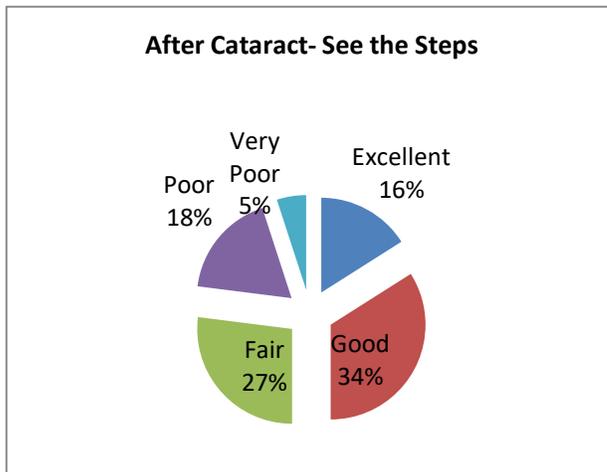
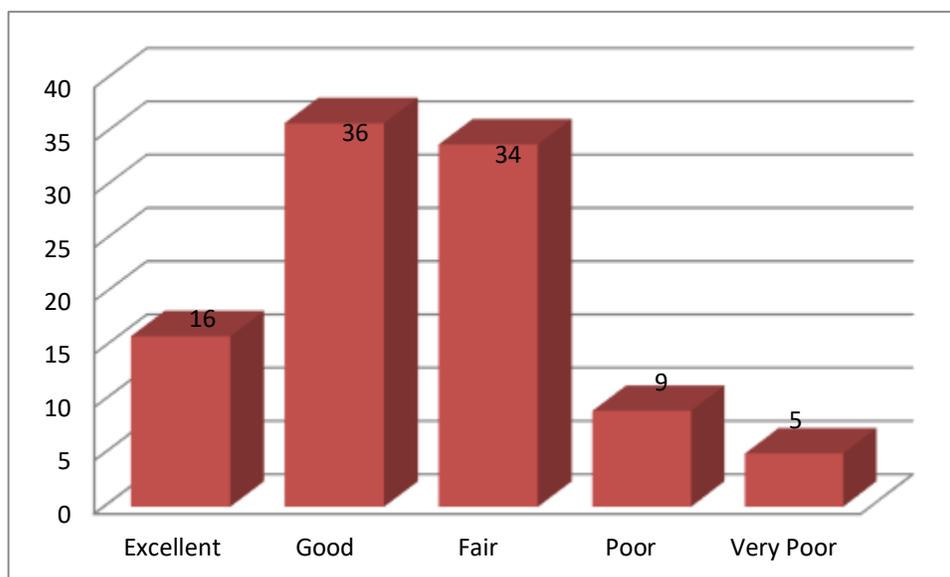


Figure 27 After cataract-see steps

The middle level vision assessment to see the steps is considered for the post cataract surgery in the eye centers. The study findings have revealed that 16 % of the respondents have the vision to see steps excellently, 34 % respondents have a good vision to see the steps. Further analysis indicates that 27 % respondents have fair vision, 18 % have poor vision and 5 % have very poor vision respectively. This mid level vision was well enough after the cataract surgery in the districts.

### See Far Object

The distant vision of the patients after cataract surgery has been considered in order to assess the condition of the patients in the district. The survey was carried out to the respondents after the cataract surgery and interviewed. The findings of the survey have been analyzed as excellent, good, fair, poor and very poor vision to see the far objects. As a result, 16 % respondents expressed their feedback as excellent vision to see far objects. 36 % respondents were found to have good vision to see far object whereas 34 % have fair vision to see the objects. Similarly, 9 % respondents have poor vision and 5% respondents have very poor vision to see the far objects.



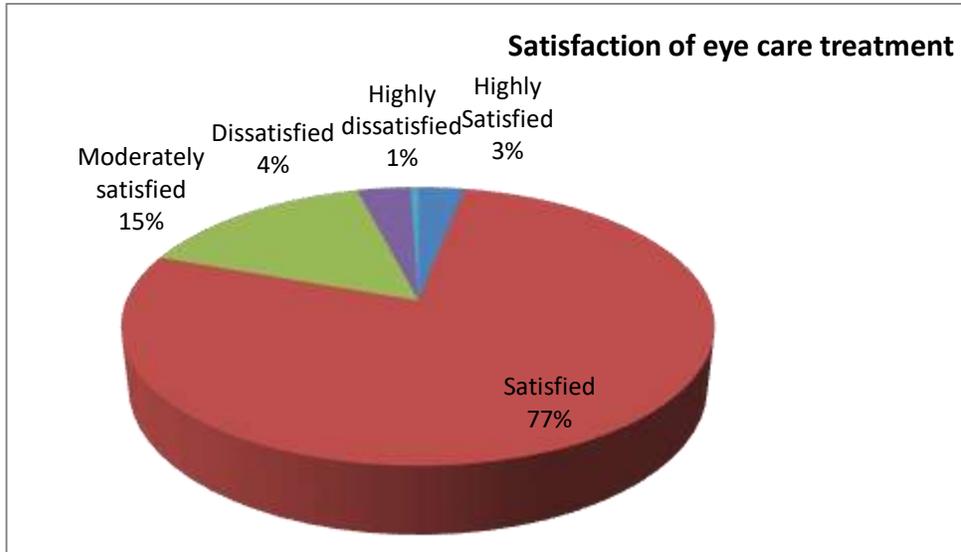
**Figure 28**After Cataract-See far Object

#### **4.6 Satisfaction of Eye Services**

The preemption survey considered the satisfaction level of the eye service delivery in the eye centers. Eye service has to be effective and efficient in the centers in order to increase the number of patients and good will of the center in the district and adjoining districts. The level of satisfaction consists of highly satisfied, satisfied, moderately satisfied, dissatisfied and highly dissatisfied are the levels to assess the satisfaction of the respondents.

#### **Satisfaction of Eye Treatment**

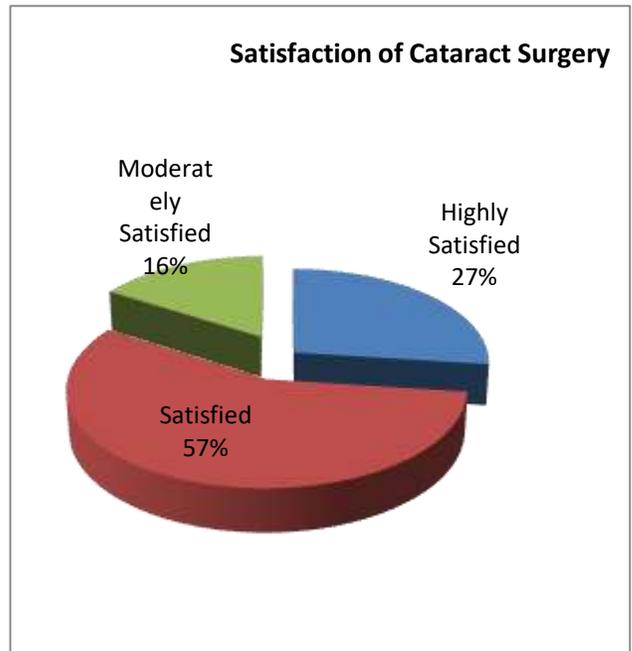
The survey is concentrated on the satisfaction of eye treatment in the eye centers in the district. The satisfaction level is revealed that highly satisfied is 3 % and satisfied are 77 % of the respondents. Similarly, moderately satisfied is 15 % and dissatisfied is 4 %. The data shows that there is satisfactory on the level of satisfaction on service delivery of eye care and treatment in the eye center. The level of satisfaction is high level which indicates the better performance and effective eye treatment in the center of respective district.



**Figure 29 Satisfaction of Eye Care Treatment**

**Satisfaction of Cataract Surgery**

Cataract Surgery is main intervention of the SiB project to deliver the high level of eye care services to reduce the blindness in the community. The cataract surgeries were carried out on periodic basis in the Nuwakot where as it was in regular basis in Bhaktapur eye center at present. The centers provide cataract surgery to the screened patients in the districts. The satisfaction level of the patients who had undergone cataract surgeries was asked during the field survey. Their answers indicated that there are 27 % highly satisfied, 57 % satisfied and 16 % moderately satisfied of cataract surgery in the district.



**Figure 30 Satisfaction of Cataract Surgery**

**4.7 Relevancy of SiB Project**

National Health Policy -2071 has provision of the strategy no. 1.23“the eye and ear health services should be delivered to the people of all over the country and implemented immediately”

Blindness and vision impairment affect at least 2.2 billion people around the world. Of those, 1 billion have a preventable vision impairment or one that has yet to be addressed. Reduced or absent eyesight can have major and long-lasting effects on all aspects of life, including daily personal activities, interacting with the community, school and work opportunities and the ability to access public services [WHO, Blindness and Vision Impairment, [www.who.int/health-topics/blindness](http://www.who.int/health-topics/blindness)].

Nepal National Blindness Survey was conducted in 1981. Results of the survey showed that 0.84% of the Nepalese population was bilaterally blind (<3/60); in those aged 45 years and older the percentage was 3.77%. It was estimated that 80% of this blindness is either curable or preventable. The major cause of blindness was cataract: 83% in those  $\geq 45$  years (65.4% in all ages).

The 1981 survey led to the establishment of a national eye care programme for the control and prevention of blindness in Nepal. The programme was launched with a two pronged strategy: (1) development of training programmes for eye care professionals to staff hospitals and eye care centers, (2) establishment of primary, secondary, and tertiary eye care centers in areas where services were most in need. For both of these activities, the national eye care programme obtained substantial support from international non-governmental organisations.

Vision 2020, Right to Sight is a global initiatives for elimination of blindness, a joint program of WHO and IAPB. Vision 2020 Nepal chapter has planned to establish at least one district eye centre nationally in each District by the year 2015. As an active member of VISION 2020 Nepal under the Ministry of Health, TIO has been playing a leading role in developing an achievable sustainable eye care model by establishing six major components in a base Centre at TIO such as the Surgi-centre, Intraocular Lens Production, Eye Bank, Outreach, Training and Research. It provides comprehensive eye care services to the people from all communities with equality. Up to the year 2012, TIO had treated over 3.1 million people and performed over 0.2 million surgical operations.

The SiB project undertaking by the TIO is relevant to upgrade the DCECs with physical and equipment facilities and enhance the capacity of eye care services on periodic cataract surgery in line with the elimination of blindness.

The initiatives of the eye care centers are significant to carry out eye services to the people for control and prevention of blindness. The organized national eye care

programme was established of Tilganga Institute of Ophthalmology in 1994 and carrying out extensive eye care services in Nepal. SiB programme is relevant to provide the services on eye care for the prevention of blindness and address the strategy of national health policy.

#### **4.8 Effectiveness of the SiB interventions**

Effectiveness of the SiB program on the eye cares services in the program districts has been assessed. SiB project was designed to upgrade the DCECs on secondary level eye center at Bhaktapur and periodical surgical facility at Nuwakot.

The effectiveness of the SiB interventions can be achieved by upgrading capacity of the DECEs which is essential to provide effective and quality eye services (e.g. general checked up and treatment, cataract surgery, spectacle services etc.) to the eye patient in time and as necessary.

The emergency services on eye care are effective service in the districts. The cataract surgery is remarkable to achieve the target of the project which is effective to reduce the blindness and meeting towards the national health policy of the Government of Nepal (GoN). The effectiveness of SiB project to the DCECs is outlined below;

Training to Staffs and School teacher has been performed in the districts which has achieved the 125 % and 99 % of the targeted number. Training has enhanced the capacity of the staffs has been upgrade the efficiency of the working behavior. As per the discussion with the in charge of the DECEs of Nuwakot and Bhaktapur, the training was very intensive and related to the community eye care services. After the training, the in charge is able to coordinate, manage and implement the community eye programmes in the community level. The capacity to handle the community issues and problems is handling effectively. The in charge is more confident on the operation and management of the eye caters on full capacity. The in charge has been transferred the knowledge and skill to the sub-ordinate staff i.e. OA and other staffs to provide the efficient service delivery and handling of the patient in one hand and performed their jobs effectively and maintain the standard.

The cataract surgeries are one of the main activities of the SiB project intervention to provide the services in the districts. Cataract surgery to adult is achieved 100 % target which has been remarkable to eliminate the blindness to the patients in the district. The Minor Surgical Adult is achieved 130 % of the target which is the outlined services on eye care in the district. The cataract and minor surgeries are found effective work

performance to deliver the eye care services to the community people who were seeking the services in their own community and district.

Cataract Surgery to Pediatric is only achieved 9 % of the target which is not effective to achieve the target of the surgeries. The outcome of the cataract surgeries of Pediatric is found lower as per the target which may be the less number of cases found in the school screening. Due to the number of cases is lower in screening, the number of cataract surgery is minimum than the target. Similarly, minor surgical to pediatric patients is achieving 93 % as targeted.

Visual assessment was carried out in post operative cases of cataract during the field survey and asked the questions to the respondents for the near, middle and distant vision. These all three types of vision are interrelated i.e. if patient has poor near vision then he or she may have poor vision for middle and distant as well. The better vision indicates good surgical out come with clear media, healthy retina and optic nerve. Visual assessment was performed and recorded for near (ability to do OR /read any one of three like news paper, labels of price sticker, or top up the recharge card etc), mid level vision (ability to do any one of two like see the steps or recognize the people or object) and distant vision (ability to see or recognize the people at far. The findings of the survey on vision after cataract surgery is shown in the following tables

Table: 4.3: Comparison of Visual perception/outcome in post cataract cases.

		Excellent %	Good %	Fair %	Poor %	Very poor %	Average % (satisfactory vision)	Average of near vision of satisfactory level
A. Near vision	1. News paper	14	30	34	18	4	78	76.66%
	2. Read the Labels of prices	18	34	25	18	5	77	
	3. Able to Top up/ recharge card	5%	43%	27%	20%	5%	75%	
B. Mid level vision	1. recognize the people or objects	23%	34%	27%	14%	2%	74%	Average of satisfactory level 75.5%
	2. See the steps	16%	34%	27%	18%	5%	77%	
C. Far or distant vision	See the distant object or man or animals	16%	36%	34%	9%	5%	86%	Average of satisfactory level 86%

Above Table of visual assessment shows that on an average 80% of the cases were satisfied with their vision after cataract surgery as they are able to do and perform daily task and activities inside the room or in outdoor. It indicates the good quality of cataract surgery and it is very important for long-term sustainability of the eye center/hospital as well.

Community Screening and eye camp has been carried out which achieved 67% of the targeted output in the program period. The Children screened at school screening was 99 % of the targeted number. This indicates that the community screening eye camps is not been effective and has not been able to perform the activities as per the programme log frame. But, this is because of the coordination with the community is lacking and not been able to manage the eye camp in time.

The medical services of number of patient treated are 146% at CEC where target was 128207 patient and outcome is 185634patient. The medical services provided by the eye center are more effective that the number of patient is increased and achieved the target. This will effect on the sustainability of the eye care and quality standard of the services.

Refraction services at the center have found 114 % to the patient comprising the target of 42,479 and outcome is 48129 patients. The refraction is one of the areas which provide the spectacles to the patient on demand. The spectacles will be provided as soon as possible in the center within 1-3 hours. The refraction services in the center have been effectively running to provide the spectacles. The sale of spectacles is a source of income of the centers which will contribute on annual expenditure and management cost.

Advocacy Programmed was carried out to advise, coordinate, rapport building and information sharing to the stakeholders, Municipality Health Units, schools and community in the district. The program was performed 20program out of targeted 15 program which is 133 % achievement as targeted. Advocacy Programme is effective to create the conducive environment on eye care services in the district which facilitates the center to run the projects smoothly. As per the KII with Health Coordinator of Bidur Municipality, Mr. Purna Dhoj Shrestha would like to support the eye care services and also can provide the small funds for the awareness and eye camps. He also would like to mobilize the FCHV on community level coordination. The advocacy program is effective to provide the information and coordination in the concerned stakeholders and community in the district which extends the eye services in the future.

Tele medicine is started at Nuwakot which is effective to identify the eye diseases, for counseling and treat immediately. The video and photo has been sent to the TIO eye specialist and consultation on the diagnosis and treatment. This technology and methods are effective in Nuwakot.

The drop out of identified cataract persons will not come on the center for the cataract surgery. There are some reasons pertinent to occur the drop out of patients are; a) remoteness and far location of the vicinity b) livelihood matter to work in their farm c) old aged persons unable to come without their supporting person but, the supporting persons are not found and financial problem.

### **Project Management**

Project Management team was played significant role for the implementation and success of the project. Project Management Committee has been provided the policies and decisions related to the project implementation. Project Implementation Committee has functional and operational working activities of the project in the districts. The Project Management committee reviewed the schedule, and list out the priority task of coordinating for land acquire in the project location. Program orientation and advocacy meeting were conducted with local elective and government bodies. A meeting held at TIO on 3<sup>rd</sup> November formed a team for inspection of land sites which were already selected from CEC management team

During the period SiB, IAPB team from London visited seeing is believing project phase V, team visited and observed community and its outreach activities from 12<sup>th</sup> to 15<sup>th</sup> of Sep. Project has achieved significantly low achievements in outreach screening outputs and building construction due to earthquake, so TIO and SiB team duly agreed to extent the project duration for one year and complete on March 2020. Project team engaged in meeting with local newly elected representatives, during the meeting team briefed about project and updated the status. Project Management Committee and Project Implementation Committee hold internal meeting to discuss and decide over the recommendation and suggestion provided by SiB visiting team and communicated and coordinated with CEC management team and list out the priority task for next half and reviewed the project target as per one year project extension agreement.

Community eye centre mid-term review and planning meeting was conducted at TIO to ease the process of building construction, training, community screening in coordination with local governing body, Bhaktapur Municipality. During review and planning meeting, newly elected local representative express their concern to expand

the eye care services to local level (Municipals and Rural Municipals) and collaborate to mobilize local resources. TIO-Project team was hold series of meeting with CEC personnel to ease the issues seen during project implementation, and also discussed over scaling up the current activities to meet the desired goal.

TIO Executive Director/ Board Member Prof. Dr SandukRuit and Deputy Program Director Mr. Nabin Kumar Rai and project team had a meeting with Bhaktapur Municipality Mayor Mr. Sunil Prajapati, Dy. Mayor Ms. Rajani Joshi and Municipality members during last reporting half. Decision and action of the meeting were followed up and regularly monitored to implement. During meeting TIO share its concern that proposed land (far from existing health premises) is not feasible and strategically located to operate eye hospital, and cost of land development and construction would go high, after discussion TIO is assured that Bhaktapur municipality will provide its 3<sup>rd</sup> floor on it 5 storey hospital building (under construction) to provide eye care services in an integrated way.

Project team members has been coordinating to make agreement in changing context of jointly building the hospital and SiB project contributing for eye health facility. It is agreed that Bhaktapur Municipality will provide the space and TIO will be responsible for interior design and management of eye care facility.

The high-level meetings and coordination with the concerned parties and stakeholders was effective for the timely decision on the project implementation matters and management of the project. The project implementation members have performed high level efforts and activities to complete the projects. The series of meetings and field visits were carried out by the team in the districts.

### **SCB involvement**

SCB Nepal team volunteered on the 4 day long OMEC surgical camp. During the surgical camps 2 volunteers from SCB Nepal engage on registering and helping the patients on medicine, dresses and routing the patients along with support to logistic installation and deliver at camp location

### **Monitoring and Evaluation**

The series of monitoring activities were performed during the period of project implementation. Project Management Committee, SCB team, project implementation committee, and project officials were visited the districts, community in the course of the various tasks, coordination meetings, follow-up and monitoring the activities.

SCB-Nepal team actively engaged during meeting, Mr. Nawin Rana, Asst. Manager Corporate affairs co-visited in monitoring visit of community program along with SCB-UK and SiB London Team. SCB-Nepal representatives Joseph Silvanus, Chief Executive Officer; Diwakar Poudel, Head of Brand and Marketing and Corporate Affairs; and Nawin Rana, Assistant manager-corporate affairs participated in two different meetings on 15<sup>th</sup> and 18<sup>th</sup> September, 2017. Both of the meetings were participated by SCB-Nepal team and get the in-depth information of project update as well as planned to engage and support actively to TIO in the execution of remaining activities for successful project completion.

Sr. M&E Officer, Visited Community Eye Centre (CEC) with the purpose of monitoring overall performance and management of CEC, He observed the Overall activities of CEC, such as Clinical (centre and outreach), Financial, and Administration & Management, documentation, record, Assets management, Awareness activity, local Coordination related activity with the perspective of performance and management. During the course, Bhaktapur CEC, was visited on 28<sup>th</sup> Feb 2016. Both of the CECs have already achieved the targets of patient treated at Centre, where as in community level program, significantly low achievement is seen Nuwakot CECs and Bhaktapur, this was due to concentration on earthquake disaster management, and fuel crisis seen due to blocked.

Monthly meeting are held with Project team. Building designing, bidding, construction is set as high priority activity. At meetings team shared the overall project achievements YTD and progress seen in Y3H1 project period. Team outlined the scheduled activity are not being implemented as work-plan and reinforces on implementing the revised activity timely.

On 27<sup>th</sup> of October, Project officer in coordination with M&E, account and finance team reviewed overall progress and spending against budget, and shared deviation of activity timeline and presented the variation seen in the budget/expenditures and Targets outputs/achieved outputs.

Project officer have monitored the project activities closely with the visits in the DCECs and community and assess the work progress (target vs. achievement) in every work activities in the center. The follow up of the instructions and decisions related to administration and finance was performed on timely in order to complete the activities on specific period of time (half yearly/yearly).

The mid-term evaluation was conducted in 2018 after the implementation of the project from 2014. Mid-term evaluation has evaluated the project outcomes and outputs based on the log frame indicators. The evaluation findings was presented the status of the mid-term which has been assessed the progress made over the period. SiB Mid-term evaluation was completed and recommendations were carried out by the project.

### **Advocacy and IEC Materials**

The advocacy and coordination meeting was carried out to the concerned DCEC management committee, stakeholders and local government as;

- As a part of advocacy, Program manager, coordinator, project officer visited the proposed land sites on 5<sup>th</sup> November and studied the various aspects of land and soil. Team prioritized the land sites according to size, location and rate and was forwarded in executive meeting for discussion and its legal procedures.
- Dr. Ruit visited the prioritized sites during Nuwakot OMEC on 4<sup>th</sup> December and asked the land management team to look after other sites. Again land management team started searching appropriate land for the construction. On 10<sup>th</sup> February team from TIO went to visit new site and the team found appropriate land and put recommendation and forwarded the documents to the executive management committee.

The ICE materials was produced and distributed as well as aired in the public to create awareness on eye care. The IEC materials like; brochour, flex board, pamphlets were prepared and distributed in the eye camp and public places. Videos was prepared on the presence of Madan Krishna Shrestha and Haribansha Acharya demonstrate and talk on various matter of eye awareness which is uploaded in the face book page.

These IEC materials are effective for the create awareness and informed the concerned people of the catchment area.

## **4.9 Efficiency of SiB Implementation**

The efficiency of the SiB project implementation has been assessed by looking at the project's budget and expenditure. The budget was subdivided into different sub-headings and the expenditure under these headings has been analyzed for assessing the project efficiency as given below:

Expenditure on project overhead, consultant's fees, and equipment for the project office is found to be 100 % of the total budget. The efficiency of the budgetary expenditure capacity under this sub-heading was found to be satisfactory.

Service delivery budget and expenditure has been assessed under headings including community screening, school screening, cataract surgery support, building construction, equipment, medicine and consumable items. Community screening expenditure is found to be 101 % of the budget. Similarly, 100 % of the budget provisioned for school screening activities was spent; however 34 % of budget was spent on last year (6<sup>th</sup> year) alone. Cataract Surgery support activities have expenditure of 100% of the budget as well. The SiB intervention on cataract surgery has also achieved 100 % of the targeted budget. Building construction has been one of the major activities of the SiB and the building construction up to the mid-term evaluation was completed only in Nuwakot. Mid-term evaluation suggested that the building construction activities in Bhaktapur have been completed. However, the construction of the 3<sup>rd</sup> floor of the Khowapa Hospital under the Bhaktapur Municipality was still ongoing during the evaluation. The expenditure on building was 100 % of the budget; however, disbursement of 64 % of the budget was made on the 6<sup>th</sup> year (last year). The reason for this maybe that the final MoU was signed only in the last year and the amount was thus spent only on that year. Equipments have been supplied to the center as per the list of equipments required to upgrade the center. The expenditure on equipment is 100 % of the budget but 38% of that amount was spent in last year alone. This is because the purchase and supply of equipment at the Bhaktapur Eye Center was done after the building construction was carried out. 100% of the budget for medicine and consumables was spent. However, 32% of this budget was also spent in the last year. The expenditure in last year was necessary for purchasing and supplying medicines to the eye centers.

Building construction consultant cost and project overhead of TIO was added to the budget during the 2<sup>nd</sup> amendment of the project review. The expenditure on these activities was found as 100 % of the budget.

The office operation cost of the eye center was found 100 % at the end of the project period. The expenditure on the office operation is fully utilized the budget which is the efficiency of the budget use. The performance of the office operation unit is satisfactory to perform the logistics, administrative activities of the project.

The school teacher training budget was also spend of 100% as allocated. The activities of teacher training were effective and budget spent is optimum which enhances the ability to screen eye patient in the school and community.

Advocacy at the district level has been carried out and the budget expenditure for this was 100%. The advocacy activities were performed for coordination between, information sharing and interactions with stakeholders.

IEC materials on eye care were prepared and distributed in the community and utilized 100% of budget. The budget expenditure is found efficient as it used up the full budget.

Program monitoring was carried out to monitor, follow up and instruct the eye center activities and outcomes of the activities outlined in the log frame. 100 % of the budget was spent of which 65 % was spent on last year, meaning that it wasn't spent uniformly.

**Program evaluation expenditure was 100 % of the budget.**

Overall efficiency of the SiB project was 100 % of the budget expenditure which means that financial resources were maximally utilized as provisioned in the project document. The efficiency on the project management, service delivery, building construction, equipment supply, medicine supplies, trainings are optimized which shows the efficiency of TIO management team in implementation SiB in terms of policy level decision, target monitoring, disbursement of budget and procurement system was efficient.

**4.10 Impact of the project**

The impact of the SiB project has been assessed in the community level, program level and implementation level. As per the discussion during the Key Informants Interview, other discussions and reports of the SiB, the impacts of the project have been identified. The impact of the project may be categorized in several ways such as direct and indirect, short term and long term, and as positive and negative.

**Direct Impact**

**Quality Services Delivery in the DCECs**

The eye centers have been delivering eye care services, mainly eye check up, treatment, minor surgeries, cataract surgeries, refraction services, eye camp etc. These services have directly impacted the community seeking the eye treatment services in the respective districts. SiB project has supplied quality equipment in the centers which has positively impacted the quality of services delivered on eye care and treatment. The people seem to believe in the quality and standard of TIO. The service is under the banner of TIO management and TIO services.

The survey has revealed satisfaction towards the eye care treatment and cataract surgeries. The results of the survey indicate the satisfaction level of eye care treatment as: 3 % highly satisfied, 77 % satisfied, 15% moderately satisfied, 4% dissatisfied 4 % and 1% highly dissatisfied. The measured satisfaction of more than 95 % clearly indicates that the impact of SiB project interventions to provide equipments, management support and financial support to the eye centers has benefited the community people.

### **Short Term Impact**

#### **Timely Treatment**

The eye center is able to deliver treatment on vision check and spectacle services on time. The treatment time has been increased for the evening extra paid clinics. The emergency services and clinics have been carried out for the emergency treatment in the center where people feel easy and comfortable.

#### **Access to community**

DCECs located in the Nuwakot and Bhaktapur district are accessible to the community and provide eye care services in the catchment area that covers a wide range of geographical area. The influence area of these centers is large and it takes a long time to reach the center in the hilly terrain of Nuwakot district. However, they still have to come to Kathmandu for eye treatment.

#### **Low Cost services**

The eye center has impacted the cost required for treatment and cataract surgery in the district. As service charges are low and cataract surgeries are free in Nuwakot district, medical intervention is affordable and accessible even to patients with low income. Thus, SiB support for the operation and management of the eye centers has ensured low cost service delivery to the community people.

#### **TIO Goodwill on Eye Care**

TIO has been providing its support to run the eye centers for couple of decades and runs the district level eye services in Nuwakot and Bhaktapur. The goodwill of TIO has impacted the eye services available, and people believe the quality of treatment and services. It is also known in the community that the eye treatment and staffs are all under the TIO. This has generated a mass support to TIO and its brand which helps it keep a step ahead from other competitive eye care services.

## **Long Term Impact**

### **Programme Implementation**

SiB program has been contributing to the eye care service delivery to the people in the districts. The targeted population is treated with medicine and cataract surgeries in the districts which fulfilled the demand of the eye care in the country. The programme implementation has been successfully completed and it has impacted the outcome of the program.

### **Advocacy and Awareness**

SiB programme has carried out advocacy and awareness activities in the district which will have a long term impact in terms of coordination, rapport building, access to information and communication with district level stakeholders and community. This will facilitate the creation of a favorable environment for service delivery of the eye center.

### **Capacity of TIO staff and Training to School Teacher**

SiB has provided the Diploma in Community Health Training to the in-charge of eye center. The training, which was conducted in India, was very useful for the operation and management of the community eye centers. The technical and practical capacity was enhanced for further carrying on the quality services. The school teacher training was also advantageous for creating awareness about eye diseases and identifying cataract patient at community level. These trainings have long term impact on the capacity development of the staffs in the eye center and awareness of eye services in the community.

#### **4.11 Sustainability of the DCECs**

Sustainability is a major component of the evaluation that accounts for technical, financial, and marketing aspects of the DCECs operation in the future. DCECs operation at present has been supported by the SiB project funding for operating and managing the cost of the DCECs.

##### **Technical Sustainability**

The technical facilities and infrastructure facilities include the capacity of the center to deliver the eye care services. New buildings are constructed in Nuwakot which has been providing adequate rooms and small Mini OT rooms in the center. The buildings and facilities are well equipped in the center which is adequate for the service delivery in the future. Bhaktapur DCEC is planned to occupy 3<sup>rd</sup> floor of the Khowapa Hospital

in the newly constructed building, which means that the infrastructure is expected to have a long life. The newly installed machines and equipments in the center are likely to provide eye services into the future. The technical support from TIO will still be continued for the maintenance of equipment.

Technical sustainability depends upon the quality equipments, trained manpower, and infrastructure, introduction of new technology, leadership and management. The DCECs have their new equipments which is purchased and installed in the eye center would provide the quality output of the equipments. The buildings and infrastructure are new and completing at Bhaktapur which has modern facilities would provide the sustainable infrastructure. Human Resources are trained and qualified to perform the standard services in the center is technically sustainable on human resources. The leadership and management of the center has been operated by the experienced in charge are capable to handle the management of the DECEs.

### **Market sustainability**

Market aspect of the eye services looks at thereof the number of patients visiting the eye center and potential population of eye patients in the district (s). The flow of the patients in the center has to be increased and quality services have to be provided at a competitive level. There are competing eye services mainly near Bhaktapur area where there are hospitals with eye clinics. Private eye clinics are also established and operate nearby the DCECs and a clinic is situated in front of the DCECs of Nuwakot. These clinics attract patients for various services which affects the patient flow in the center.

The competition is based on the quality of services and service delivery which affect the patient flow and increases the cataract surgeries in the center. The catchment area of Nuwakot is Bidur Municipality and surrounding Rural Municipalities as well as Rasuwa district. Bhaktapur district has its own local community in one hand and the referral patients from Khowapa hospital, which is in same building. For the sustainability of the eye center, quality and standard services should be provided to the patients. Price is another aspect which needs to be competitive and reasonable. SiB support has increased the patients flow in Nuwakot and Bhaktapur which has provided quality and standard eye services at minimum cost.

The existing patient flow is 60 new patient and 40 old patient per day in Bhaktapur district. The patient flow is new 61 and old 20 patient per day in Nuwakot. The catchment area of Nuwakot is the adjoining Rural Municipalities and from Rasuwa district. The average patient flow in DECE Nuwakot is satisfactory to deliver the eye services. The potential number of patient are from the surrounding catchment area

which will be further extended and marketed in Nuwakot. In case of the Bhaktapur, the patient flow is satisfactory and cataract operation is started in the center. Marketing aspect of the eye care needs to be standardized and under the umbrella of TIO, would be extended to the nearby municipalities. The referral patient from the Khowapa Hospital which is under same premises will increase the patient in Bhaktapur. The marketing strategy in Nuwakot is to develop and distribution of IEC materials to all the ward level health institutions and community.

The existing patient flow of outpatient and old patient should be maintained for the market sustainability and further market expansion has to be carried out in DCECs. The follow up patient ratio should maintain regularly for the sustainability of the DCECs.

### **Financial Sustainability**

Financial sustainability is crucial for the eye center to operate in the future. SiB support to the eye center for the buildings, equipments and medicines has reduced the cost to the center. However, the operation and running cost of the eye center is essential for maintaining the financial budget and expenditure. The revenue of the eye center is mainly from the registration, spectacles sales, medicine sales and cataract surgery. The annual operating cost consists of salary, office overheads, purchase of spectacles, medicines etc.

In case of Nuwakot, the cataract surgery is made free. The cataract surgery charge will be applied in order to increase the income of the center. If the charges are enforced, the income will increase and the eye center will be financially sustainable.

Bhaktapur has set new charges that can increase the income of the eye center. The revised charges are as follows;

S.N.	Description	Existing At Bhaktapur CEC	Through Health Insurance for ECE	Through Health Insurance for Hospital	Rate for TECH
1	Registration New General	30	140	200	50
2	Registration Old General	25	140 days after 1 Week	200 after 1 Week	40
3	Special Clinic				100
4	Extended Service				250
5	Emergency	100	400	400	100
6	Biometry		396	396	300
7	B Scan		500	500	200

8	Foreign Body Removal	100	700	700	100
9	Cgalazion	500	2800	2800	200
10	I & D	200	1000	1000	500
11	Pterygium		6000	6000	4000
12	Lid Repair Small		3500	3500	3000
13	Lid Laceration Repair Large		6000	6000	4500
14	Conjuctival Cyst Removal		4500	4500	1000
15	Conjuctival Laceration Repair		7200	7200	1500/2500
16	SICS+IOL (FH) Rigid		9000	9000	5000
17	SICS + IOL (FH) Flex				7000
18	Phaco + IOL (FH) Flex		12050	12050	9000
19	Orthoptics		300	300	150
20	Color Vision	100	200	200	150
21	Visual Field		2000	2000	1000
22	Yag Laser		2500	2500	500
23	Auto Refraction				80
24	Fundus Photo				500

### **Management Sustainability**

Project Management is a strategically significance on decision making, policy formulation and executing of the project. SiB project management team has performed effective management to complete the project on stipulated time. The DCECs management is also smooth and coordinated between the in charge, OA and subordinate staffs. The capacity of to handle the issues and problems immediately related to eye service, patient care, external environment is good management. The sustainability of the management aspect of DCECs is to continue with the existing management system under TIO management.

## **4.12 Major Issues**

### **Internal Environment**

#### **Variation of Original Project Proposal**

The first verification was conducted in 14<sup>th</sup> November, 2017. The original project proposal was revised due to earthquake of May 15, 2015 which damaged the residence, school building and public properties in the Nuwakot and Bhaktapur district. After discussions between TIO Executives, SCB-SiB London project team, Himalayan cataract project CEO and SCB-Nepal CEO, it was concluded to extend the program to

March 2020. The project output was revised and the budget was also revised. The total budget of the project was USD 1,515,558.00.

The second verification of the project budget was carried out on 4<sup>th</sup> June, 2019. While the SiB project's regular clinical and management activities were ongoing as planned, building construction and establishment of equipment was delayed behind the revised schedule. This resulted in under spending of HR and other cost of Bhaktapur CEC. TIO, SiB-IAPB and SCB had review meeting in September 2017 on project activities and as per TIO's proposal, a house was rented for surgical facility. Now eye surgeries have been started on every 2 weekly basis with 12 clinical team led by an ophthalmologist. Considering these facts, and with one year remaining till project completion, the project team held series of meetings on March and May 2019. The meetings agreed to revise the TIO contribution budget as per existing spending nature and plan of remaining activities. TIO budget contribution was revised and approved to a total project cost of USD 732,468.00 till March, 2020. The revised budget mainly provisioned for building construction consultant cost and project overhead of TIO.

The study team has reviewed the documents and discussed with TIO officials on these variations on the original project proposal. TIO Executives and SiB team officials realized the unavoidable circumstances the earthquake had created in terms of movement and management of the eye camps. TIO officials thoroughly discussed with the CEC's in-charge, management committees of respective district and stakeholders about the consequences post-earthquake on the project implementation. The high level SCB-SiB team discussed and the variation is approved for genuine reason.

### **Human Resource Planning**

The staffs working at present in the DCECs are found to be qualified and experienced. The technical and supportive manpower during peak season, however, is not adequate. The human resource planning for that period is an internal issue as there are problems with coordination among staffs in Nuwakot DCEC.

Career opportunity and recognition of the staffs is another issue which could encourage the motivation of the staffs. The in-charge of the center has performed their activities very well.

### **Technology**

The technology available needs to be upgraded from time to time for the better services in the DCECs. New equipments have been purchased and installed in the CECs.

Technology transfer and training for the operation will have to be provided to the OA of the respective centers.

### **Vehicle Facilities of Outreach Program**

During the discussion with KII, the problem of vehicular access is noticed for the outreach programme and eye camps in the remote areas at Nuwakot district.

### **External Circumstances/Environment**

#### **Competition of Eye Clinics**

Dristi Nepal is going to open its clinic in Nuwakot which is one of the competitors for providing eye services. There are other local eye clinics situated in front of DCEC in Nuwakot which is another competitor to the eye center. The patients are diverted and attracted away by the services provided by these competitors. Similar competition also exists in Bhaktapur as there are number of private clinics and hospitals in the Kathmandu.

#### **COVID-19**

COVID-19 is a worldwide pandemic which spread in Nepal. COVID -19 affected from the Corona Virus cases and Government of Nepal (GoN) has locked down the country and stop the mobility in the country. Government of Nepal has issued lockdown order from March 24, 2020 in the country which affected the activities of SiB project at last movement. Final Evaluation was carried out in the mean time of the lockdown. The consultant visited field before lockdown but the consultation with TIO, DECEs personnel was carried out by email.

## Conclusion and Recommendations

### 5.1 Summary and Conclusions

SiB project has been initiated under the agreement between IAPB and Nepal Eye Program, Tilganga Institute of Ophthalmology (TIO) dated 28, February 2014. The project name is “Upgrading the facilities at District Community Eye Centers (DCEC) into achievable models for sustainable eye care in rural and semi-urban Districts”. The project period was from 1<sup>st</sup> April, 2014 to 31<sup>st</sup> March, 2019 originally but, there is variation in 2017 and the project period was extended on March 2020.

The overall goal was to reduce avoidable blindness by developing a surgical facility in rural and semi-urban areas. The main objective of the project was to upgrade the eye care services in existing DCECs by establishing a surgical facility in its own permanent facility. The Bhaktapur DCEC was upgraded into Secondary Level Eye Center and Nuwakot DCEC into periodic surgical facility. The main activities of the project was carried out i) construction of building in DCECs, ii) procurement and install of the equipment in DCECs iii) Cataract Surgery iv) eye check-up for children at school v) eye check up and treatment at screening camp vi) eye check-up and checkup at DCECs vii) School teacher training viii) training to mid-level ophthalmological personnel ix) advocacy

Mid-term evaluation of SiB project was conducted on 2017 and the recommendations were followed by the project. Final evaluation of the SiB project is carried out at the end of the project and main objective of the evaluation is to assess the existing program output, outcomes as well as evaluate the progress of project period and recommend for the future activities. The scope of the evaluation is based on the relevance, effectiveness, efficiency, and impact and sustainability aspect of the project.

The project period was planned initially from 1<sup>st</sup> April, 2014 to 31 March, 2019. But due to major devastating earthquake on May 15, 2015, the field level activities were affected mainly on screening camp, school teacher training which further affected on cataract surgery. The project variation was carried out with understanding and realization of the cause and effect of the project up to 31 March, 2020. The variation was also re-set the output and budget (input) of the project. The second variation was also done in 2019 to address the construction of the building in Bhaktapur which add the additional cost for the consultancy services and overheads.

The finding of the evaluation was assessed about output and outcomes of the project target vs. achievement of different activities. Building construction at Nuwakot is completed and started the services in its own premises. Building Construction in Bhaktapur is on-going due to the delay on decision making process with the Bhaktapur

Municipality. The TIO mid-level training was achieved of targeted 3 to achieved 5 person which is 125 % of the targeted. School Teacher Training was achieved 99 % as per targeted. Cataract Surgery achieved 104 % on target. Eye checkup and treatment at eye camp has achieved 77 % of the target. The achievement is low than the target due to the number of participants in the camp is low attendance while number of camps was conducted. Child eye check up and treatment at school is achieved 99 %. The eye checkup and Treatment at center is found 146 % of the target. The service delivery and quality services provided in the DCECs are major cause to achieve higher. The advocacy activities were carried out and achieved 133 % of the targeted.

The project is relevant according to the National Health Policy, which stated on strategy no. 1.23“ the eye and ear health services should be delivered to the people of all over the country and implemented immediately”. The “Vision 2020” Nepal has planned to establish at least one district eye centre nationally in each District by the year 2015. As an active member of VISION 2020 Nepal under the Ministry of Health, TIO has been playing a leading role in developing an achievable sustainable eye care model by establishing six major components.

The effectiveness of the project has been analysed the effective of the SiB outcomes which has effect of cataract surgery to eliminate blindness. Training to Staffs and School teacher has been performed in the districts which has achieved the 125 % and 99 % of the targeted number. Training has enhanced the capacity of the staffs has been upgrade the efficiency of the working behavior. As per the discussion with the in charge of the DCECs of Nuwakot and Bhaktapur, the training was very intensive and related to the community eye care services. After the training, the in charge is able to coordinate, manage and implement the community eye programmes in the community level. The capacity to handle the community issues and problems is handling effectively. DCECs in-charge is more confident on the operation and management of the eye caters on full capacity.

The visual assessment shows that on an average 80% of the cases were satisfied with their vision after cataract surgery as they are able to do and perform daily task and activities inside the room or in outdoor. It indicates the good quality of cataract surgery and it is very important for long-term sustainability of the eye center/ hospital as well. The visual improvement after the cataract surgery would help to carry out their daily activities and income generating activities. The patient can work, agriculture farming and daily work. They can participate social functions easily and able to deal on social issues. The income generation activities can easily operate after the cataract surgery. Advocacy Programme is effective to create the conducive environment on eye care services in the district which facilitates the center to run the projects smoothly. Tele medicine is started at Nuwakot which is effective to identify the eye diseases, for counseling and treat immediately. The high-level meetings and coordination with the concerned parties and stakeholders was effective for the timely decision on the project

implementation matters and management of the project. The project implementation members have performed high level efforts and activities to complete the projects.

The efficiency of the project has been analysed with the budget vs. expenditure of the project. The budget expenditure is 100 % in all the activities on budget heading which is the high level of efficiency of the project. The impact of the project is short term providing the cataract surgery in the DCECs to the patients. The quality on eye check up and treatment has long term impact on service delivery and good will of the eye center under the TIO management.

The expenditure on building was 100 % of the budget, however, disbursement of 64 % of the budget was made on the 6<sup>th</sup> year (last year). The reason for this maybe that the final MoU was signed only in the last year and the amount was thus spent only on that year.

The impact of service delivery at eye center is timely and also served on evening extra paid clinics and emergency services. This is impacted on the patients for the eye check up and treatment. SiB support for the operation and management of the eye centers has ensured low cost service delivery to the community people. The SiB project was implemented for 5 year and completed successfully.

Sustainability aspect of SiB is analysed on technical, financial and marketing aspects of the DCECs operation. SiB project funding is utilized and TIO contribution is fruitful for operating and managing the cost of the DCECs and upgrading of two DCECs . The DCECs are capable to continue operation of the eye services.

It is concluded that SiB project implementation under the TIO is successful and performed the activities as well as achieve the target as stated in log frame. The upgraded DCECs are able to sustain the center in the future.

## **5.2 Recommendations**

The Fund Management should be provided to DCECs for the operation and management of annual expenses after project. Financial analysis shall be carried out to assess the revenue for DCECs and operational cost for the year. Annual programme and budget should be prepared and fund flow management should be established.

Building construction at Bhaktapur will be completed after two years. The existing hired building should be retained and used for providing eye care services and cataract surgeries.

Eye camp is effective for the identification of cataract cases in the community level. So, TIO should support conducting eye camps in the district with coordination of the Municipality and Rural Municipality Health Units.

The management committee meeting should be arranged on timely basis and discuss the management issues of the DCECs. The annual programme and activities as well as budget should be discussed and finalized by the management committee.

The DCECs should coordinate with local government (Municipality and Rural Municipality) Health Units to include eye related activities in their health program. The local level support for funding eye care activities would be beneficial in coordination with local bodies.

The fees and charges should be revised for the resource generation of the DCECs. The cataract surgery charge is proposed as Rs 2000 at Nuwakot but this is not implemented. For the financial sustainability the charges of cataract surgery should be included on eye services. Hospital should start phaco surgery for patients capable of paying and discourage free surgeries to the patients of Bazar area.

### **5.3 Recommendations on policy**

TIO policy should have focused on resource generation and sustainability of the DCECs after SiB project.

For the cataract charges, there should be a policy that related municipality and rural municipality would pay for the patient belonging to their municipalities.

### **5.4 Recommendations for management**

DCEC Management Committee should be strengthened to play an active role on the extension of eye care services in the district. The committee has a good network with relevant stakeholders that can serve as a means to raise funds and increase patient numbers.

There should be separate toilet for the male and female at Nuwakot DCEC and the waiting place should be extended.

Manpower placement and numbers in the eye center should be planned for the peak time. Additionally, a provision living quarter nearby the DCECs should be considered to operate the emergency services. Capacity building training needs to be provided to the OA and other staffs.

A comprehensive eye camp should be organized in association with local government, NGOs and other groups. The camp should be facilitated with necessary equipment, medicine and have provisions for cataract surgery.

Rural Eye Clinic was started from January, 2020 at Dupcheshor Rural Municipality of Nuwakot district. The DCECs personnel have visited 2 times in a month in the rural clinic for eye check and identification of cataract cases. This is a pilot model of the rural eye clinic which is operated in community in coordination with the Rural Municipality. A social entrepreneur was trained for 3 months and he is assigned to run the clinic and facilitate on eye services. Social Entrepreneur visits the school for the screening of the child and community screening and reported to DCECs. The cataract cases will be identified and cataract surgery will be planned accordingly. The remuneration to the social entrepreneur is from the sales of spectacles, registration fees and some amount from Municipality. This rural clinic modalities is ongoing from 6 month only and also affected from COVID-19 infection and lockdown. Therefore, it is not time to assess the impact of the rural clinic but should be continued and such clinics should be extended to other rural municipalities for expanding the access to eye services.

Health insurance should be made effective in Nuwakot for facilitating the payments made on behalf of the patients.

### **5.5 Human Resources**

The human resources provisioned in the Bhaktapur DCEC, including one ophthalmologist, are working under pressure as the number of OPD and cataract surgery patients are increasing day by day. Thus, the number of technical staffs and administrative staffs should be increased at CECs in Bhaktapur as per the requirement.

A resident should be posted to Nuwakot CEC in rotation throughout the year as this will be important for capacity building of the resident doctor and ophthalmic assistant, and will help attract patients.

### **5.6 Service Delivery**

The service delivery of the DCECs should be made more effective and efficient for the quality eye care services.

#### DCECs Nuwakot

- Surgery drop out can be reduced by providing vehicles to the remote areas in order to provide transport access to identified cataract patients for the cataract surgery.
- Sterilization of instrument must be started. in Nuwakot DCEC.
- Lab investigation such as blood sugar test and others should be started in Nuwakot
- Dates for cataract surgery by TIO, should be fixed in the Nuwakot district. The local transportation should be arranged for the patients for reducing the drop out.
- The periodic surgical facilities should be upgraded in the DCECs Nuwakot with expansion of the rooms and carry out 3/4 times in a year.
- Annual Operation Colander should be prepared including the eye camps, cataract surgery and awkwardness campaigns and events.

#### DCEC Bhaktapur

- The existing service delivery from the rented will be continued of the general eye care service, eye treatment, minor surgeries, cataract surgery etc.
- The service will be upgraded and made effective after the completion of the building.
- Annual calendar of the eye camp and cataract surgeries should be prepared and distributed to the community and stakeholders.

### **5.7 Sustainability**

The charges for the eye services need to be revised. The charges of cataract surgery, registration fees and other fees should be revised in order to increase the income of the eye center. This money would be added on the annual income of the center which helps to sustain the DCEC.

TIO should prepare a budgetary planning of the DCECs including annual projected income and expenditure. The support on the budgetary gap may then be granted by the TIO and/or other projects. The support to the DCECs will be on grant basis if necessary.

### **5.8 Lesson Learned**

The final evaluation study was carried out as per the provided ToR and as per the instructions and directions of the Project Management Team. The lesson learned during the study is as follows;

- Eye Health care is highly demanded in the districts for the low cost and effective services which have been delivered by the DCECs in the respective district.
- As per the goodwill of the TIO on eye services, the DCECs services are expected as per the standard of TIO and referral cases to TIO for the complicated cases. TIO goodwill and brand name should be maintained on service delivery of the DCECs.
- This type of project to support on physical infrastructure development, equipment supplied and capacity building of human resources is successful and impact oriented to the eye service delivery.
- The coordination and decision on various matters with local government authorities takes time and more follow up to make decision.
- The exit interview conducted with rural patient is reluctant to answer the questions and they are concentrated on eye treatment and try to escape for the center.
- Final evaluation has to be carried out with availability of full information and analysis of evaluation is independent third party evaluation.

## **5.9 Post Project Priorities**

- Continuity on monitoring of the construction of Bhaktapur DCECs activities of joint construction of proposed Khowapa Hospital.
- The existing quality services of the DCECs should be carried out regularly and service delivery to the eye care services.
- Community eye camps and school screening programme will be organized in coordination with local stakeholders.
- Cataract surgeries will be continued performed in both CECs.

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**Annex 1: Survey Questionnaire and Checklists**

Questionnaire Code No:
------------------------

## Final Evaluation of Seeing is Believing Project

### PATIENT SURVEY QUESTIONNAIRE

**1. GENERAL INFORMATION**

- 1.1 District..... 1.2 Municipality/Rural Municipality .....
- 1.3 Ward No.....
- 1.4 Name of the Settlement/Tole ..... 1.5 House No .....
- 1.6 Distance to reach to Eye Clinic from your house (km) .....1.7 Mode of transportation and time.....
- 

**2. Patient Information**

2.1 Name of Patient .....

- 2.2 Ethnicity: 1. Brahmin  2. Chettri  3. Newar  4. Tamang   
5. Rai  6. Magar  7. Dasnami  8. Gurung   
9. Musalma  10. Tharu  11. Limbu  12. Dalit   
13. Thakuri  14. Sherpa  15. Others

specify).....

2.3 Sex Male  Female  Others

2.4 Age ..... Years

2.5 Number of Family member .....

**2.6 Patient Status**

- a. OPD Patient  b. Cataract Operation   
c. Adult  d. Pediatric

Socio-economic status of the patients.....

2.7 What is your family's major occupation? (multiple answers)

1. Agriculture

- 2. Trade/Business
- 3. Govt./Private Service
- 4. Industries
- 5. Wage/Labour
- 6. Others.....

2.8 Major sources of family income?

- i) Agriculture
- ii) Business
- iii) Services
- iv) Remittances
- v) Others

2.9 Food Sufficiency from own agriculture production

S.N.	Months	Sufficiency (Tick)
1	Less than 3 month	
2	3-6 months	
3	6-9 month	
4	9-12 month	
5	More than 12 months (Surplus)	

2.10 Do you have Health Insurance

- Yes  No

3. Eye Services

3.1 How do you know about the eye care services ?

- a) Eye Camp
- b) Neighbor/Friends
- c) School Teacher
- d) Student
- e) IEC Materials
- f) Promotional Media (Radio/FM)

3.2 Reasons for visiting Eye Center

- a) General Check up
- b) Eye Treatment
- c) Cataract Operation
- d) Post treatment Follow up
- e) Post operation Follow up
- f) others

- 3.3 Visiting Eye Center (frequency)
  - a) First Visit
  - b) Second visit
  - c) Third visit
  - d) More than third visit (Regular)

4. Service Delivery

- 4.1 Appointment with Medical Staff
  - a) Easy as and when
  - b) Takes time
  - c) Long que
  - d) Days to revisit
  - e) Others

4.2 Check up and Treatment

- a) Timely
- b) Time consumed
- c) Immediate after registration
- d) others

4.3 Cataract Operation

- a) Operated on time
- b) Time bound schedule
- c) Operation date is long
- e) Others

4.5 Follow up services

- a) Good and timely
- b) time taken
- c) others

4.6 Post Surgical Status

4.6.1 Visual Condition of the patient

Vision	s.n.	Assessment tools	Visual condition				
			Excellent	Good	Fair	Poor	Very poor
Near vision assessment  (Near Vision)	1	Read news paper					
	2	Read the labels					
	3	Read prices					
	4	Do the top-up (recharge card)					
Middle range vision	5	Recognize the people					
	6	See the steps					



- b.
- c.
- 5.1.2 Reasons for Disaffection

- a.
- b.
- c.

5.2 Patient's Satisfaction level about Medical Staffs

Highly Satisfied=5, Satisfied=4 Moderately satisfied=3, Dissatisfied=2,  
HighlyDissatisfied = 1

5.2.1 Reasons for the Satisfaction

- a.
- b.
- c.

5.2.2 Reasons for Disaffection

- a.
- b.
- c.

5.3 Satisfaction of the Cataract Operation

Highly Satisfied=5, Satisfied=4 Moderately satisfied=3, Dissatisfied=2, Highly  
Dissatisfied = 1

5.3.1 Reasons for the Satisfaction

- a.
- b.
- c.

5.3.2 Reasons for Disaffection

- a.
- b.
- c.

6. Cost of Services

6.1 How much cost you spent for eye check up and treatment

- a) Registration NRs. ....
- b) Lab. cost NRs. ....
- c) Specatal NRs.....
- d) Medicine NRs.....

6.2 Are you ready to pay the Registration fees and other cost

Yes  No

If No, what would be the reasons

- a)
- b)
- c)

6.3 Is there Fee of Cost on services

Yes  No

6.4 Did the cost paid by Insurance

Yes  No

6.5 Cost of Cataract Operation

NRs.

6.6 Are these cost satisfy and affordable for treatment in the Services of Eye Center

Yes No

If No, what are the reasons

- 1.....
- 2.....
- 3.....

6.7 Hospital stay time (hours) from entering into the hospital and leaving the hospital for

- a. General check up .....
- b. F/U after surgery .....
- c. F/U after treatment .....
- d. Cataract surgery.....

6.8 Patient's suggestion to improve :

- a. medical staff's behavior
- b.house keeping
- c.hospital stay in OPD
- d.Ward, optical services etc

Thank You

**Annex 2: Photographs**



**Photo 1: Waiting benches at Nuwakot center**



**Photo -2: Main Enter gate of Nuwakot Center**



**Photo 3 : Toilet and garden at Nuwakot center**



**Photo 4: Enter gate of Nuwakot center**



Photo 5: Proposed sketch layout of Khowapa Hospital



Photo 6: Photograph after meeting with Mayor, Deputy Mayer and In charge, Bhaktapur



**Photo 7: Meeting with Management Committee Members at Red Cross in Nuwakot**



**Photo 8: KII with Municipality Health Coordinator at Nuwakot**



**Photo 9: Ophthalmic Operating Microscope**



**Photo 10: Catutry**



**Photo 11: Keratometer**



**Photo 11: A/B scan**



**Photo 12: Phaco Machine**



**Photo 13: Delivery of Spectacles to patient**



**Photo 14: Post Cataract Surgery Patient waiting for Interview**



**Photo 14: Study Team Observing the Machines at Bhaktapur**



**Photo 15: Discussion with Pre operating Room**