



## **End of Project Evaluation**

# **Education and Training for Risk Prevention in Earthquake Areas of Pakistan (ETRP)**

### **Funded by:**

Austrian Development Cooperation (ADC)  
&  
HOPE'87

### **Local Implementing Partners:**

Aga Khan Planning and Building Services, Pakistan (AKPBS,P)

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### **Conducted By:**

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## **Preface:**

In the streets of Gilgit-Baltistan every one knows about the disaster and human suffering due to the Earthquake October 2005 in Kashmir which caused many dead, homeless and wounded. No one knew that the beautiful valley of Kashmir has such a devastating fate. The awareness of people on the causes of such terrible disasters is, now, the responsibility of the development activists through out the world. The responsibility has been realized and taken care of to a greater extent.

The theme of the ETRP project was all about making a safer and decent construction so as to provide comfort, safety and protection. The project has tried to educate people for correcting their priorities by investing in safer and earthquake resistant construction.

I would like to appreciate the project in the first place that it has on one hand envisaged to promote earthquake resistance and safe houses and on the other hand it has endeavored to develop a workforce with necessary skills for such construction. Indeed, it is a well thought out project and it has credit for service to humanity.

I am personally and professionally indebted to many people for the ideas and facts presented here. I am thankful to the entire staff of BACIP program for putting their sincere efforts in such a noble cause. I am grateful to all the stakeholders who have been interviewed by me for this study. It was due to professional discussions with Mr. Karimullah Beg and well coordinated efforts of Mr. Shakeel Sab that I have been able to compile the leanings of the project.

I am also thankful to my friends Mr. Ashfaq Hussain and Mr. Riazuddin for compilation of analysis and results.

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**Acronyms:**

ADA	Austrian Development Agency
ADC	Austrian Development Cooperation
AIOU	Allama Iqbal Open University
AKPBS	Aga Khan Planning & Building Services, Pakistan
BACIP	Building and Construction Improvement Program
DGW	Double Glass Window
EC	European Commission
ETRP	Education and Training for Risk Prevention
HDGI	High Density Galvanized Iron
HOPE'87	Hundreds of Original Projects for Employment
MTC	Mobile Training Centre
NAVTEC	National Vocational & Technical Education Commission
NWFP	North West Frontier Province
ProDoc	Project Document
PSC	Project Steering Committee
RC	Resource Centre
RHW	Roof Hatch Window
SDC	Skill Development Council
TEVTA	Technical Education and Vocational Training Authority
TVTC	Technical and Vocational Training Center
WWF	Water Warming Facility

## **Executive Summary:**

The ETRP project is co-financed by the Austrian Development Cooperation (ADC) and Hundreds of Original Projects for Employment (HOPE'87) and implemented in Gilgit-Baltistan from 1<sup>st</sup> January 2008 to 31<sup>st</sup> December 2009 (24 months). Aga Khan Planning & Building Service, Pakistan (AKPBS,P) was the local partner for implementation of the project. The project goal was to contribute to promote safer habitat in Gilgit-Baltistan formerly Northern Areas of Pakistan. The overall objective of the project is to raise awareness, educate and build capacities of local population to adopt and practice safer construction and reduced earthquake impact risks.

The end of project evaluation was conducted to review the progress towards achieving the project's progress, effectiveness, and financial performance, impact on women, poverty, environment, and crafts-persons current status. The end of project evaluation attempted to involve an appropriate number of all interested stakeholders. The evaluation was undertaken by an independent consultant with the support of the HOPE'87 and AKPBS, P.

1. A first ever Technical and Vocational Training Centre (TVTC) has been established at AKPBS, P Gilgit under ETRP project and that was inaugurated on 30<sup>th</sup> October 2008. So far, 03 short training courses have been conducted thereby training 40 (5.73 percent) crafts-persons of the total trained crafts-persons.
2. During the second half of 2009 TVTC has also been utilized as an information and educational Resource Centre (RC) on temporary basis for creating awareness about earthquake and earthquake resistant construction techniques and safety measures, etc.
3. The project has developed training modules for short tailor made training courses in Masonry (general & earthquake resistant construction), Carpentry (general & earthquake resistant construction), Plumbing, Electrical wiring, Steel Binding, Building Painting (general construction) and Wire Knitting and Stove Making (earthquake resistant and energy-efficient techniques). These training modules have been developed from various training modules and manuals of recognized technical & vocational training courses.
4. During the project life AKPBS was unable to get accreditation from Allama Iqbal Open University (AIOU), and this has been due to difference in the course methodology of TVTC and expensive certification charges of AIOU. However, TVTC's registration with Karakoram International University (KIU) is in the pipeline and an MoU is about to be signed between KIU and the AKPBS, P.
5. Under the ETRP project 697 crafts persons have been trained in the above mentioned trades. Out of the total, 579 crafts persons including 50 female electricians have been trained through 39 training courses under general construction related trades. Whereas 118 crafts persons have been trained on earthquake resistant construction techniques through 11 trainings. There were only 25 dropouts in 50 training. Drop-out rate remained 3%.
6. 50 women trained in electrical wiring and maintenance of electrical appliances under general construction related trades were apart from conventional women related trades. It was encouraging to note that these women were able to fix electrical appliances at their houses as well as in the neighborhoods. These women were trained during 2008.
7. On average there were 11 participants per training in earthquake resistant construction training which was better than the average trainee induction maintained in general construction which was 15.
8. On the whole the project has provided earthquake relation information, education and preventive techniques to 2,502 beneficiaries including school children, teachers and local communities as per Project Document (ProDoc).

9. The average trainee cost at TVTC and Mobile Training Centre (MTC) is recorded as Rs. 11,128/- and Rs. 8,660/- respectively. The average trainee cost at MTC is not inclusive of transportation and residential facility for the project field team.
10. The project has achieved to organize 15 safety drills and at school level thereby imparting knowledge and practices to 1,001 school children (738 being girls). The number of students/children in each training course was 1:67.
11. One-day training on First Aid was organized by AKPBS, P during the last quarter of year on 22<sup>nd</sup> December 2009. The training was attended by 42 teachers (15 being female) from government and private schools. The training material was appreciated and founded relevant and helpful by 90 percent of the sample teachers. According to 70 percent of the teachers suggested increasing the first aid training duration to one week.
12. Out of total 2,502 community members, there were 1,334 local communities (741 being women) were provided awareness through seminars and community dialogues. Out of which 1,088 local communities (men and women) were approached by the project team through awareness raising sessions in 4 seminars at different villages/institutions such as Mohammadabad, Danyore, Aliabad, Nasirabad and KIU. 100 visitors from Karakoram International University (KIU), Ghizer and Gilgit districts also made aware about the project and its objectives.
13. Similarly, in order to raise the awareness on safety measures against earthquakes, an International School Safety Conference was organized in Islamabad, Pakistan in mid May 2008 with the participation of a group of International organizations. The aim of the conference was to encourage policy support and technical backstopping through networking with other organizations with relevant expertise. An official outcome was declared through the Islamabad Declaration on School Safety which called on governments and private stakeholders to develop mechanisms to provide technical, financial and human capacity support for the implementation of School Safety Action Plans.
14. According to local communities, 35 percent were aware of earthquake resistant construction. Although there is no increase in such construction has been observed, however, it seems that people would switch over to new available technique in near future. It has been witnessed that Hot Dipped Galvanized Iron (HDGI) wires is used in the JAMAT KHANA (worship place of Ismaili Sect), due to this it will certainly create lots of awareness and motivation among people to construct their house, institutional buildings and community buildings.
15. The analysis shows that 64 percent of the community respondents are using WWF or stove and 41% are using Roof Hatch Window (RHW) at their houses. This shows increase in the demand of BACIP products which are environment friendly and cost efficient. Building and Construction Improvement Programme (BACIP) products manufacturers' average sale per month in 2008 was less (Rs. 59,632/-) as compared to average sale per month during 2009 (Rs. 87,356/-).
16. According to 64 percent crafts-persons the training duration was insufficient. Out of which, 42 percent preferred duration of the training to be of two months whereas, 29 percent suggested for one month, 21 percent opted for 20 days and 7 percent opted for 3 months training duration.
17. According to 36 percent of the crafts-persons, skills and techniques are being utilized by them for income generation. Out of which, a majority 41 percent and 18 percent practiced or utilized the skills and techniques in February 2010 and January 2010 respectively. This shows that a sizable number of crafts-persons are currently engaged in improving their livelihood. This argument is further strengthened by the fact that more than 70 percent artisans have found increase. The average income of the sample respondents have been increased by 62 percent.

18. More than 64 percent respondents' were of the opinion that BACIP products have been found to be helpful to women especially, in improving their health and saving a lot of their time and money.
19. Final financial report shows that almost 93.35 percent budget was disbursed on the activities specified in approved budget. This report shows that budget has exceeded at Personnel (Salaries) and Other Cost budget heads 108% and 111% respectively. It is acceptable as per the policy which allows 10 percent over or above. Overall the budget expenditure is efficient in comparison to the approved budget.



## **Background:**

Northern Areas of Pakistan (Gilgit-Baltistan) inhabited by around 1.5 million people is a mountainous region and is geographically vulnerable to many kinds of natural hazards. Keeping in view the 2005 Kashmir earthquake, Aga Khan Planning and Building Service, Pakistan with the support of HOPE'87 and Austrian Development Cooperation (ADC) launched a two years project "Education and Training for Risk Prevention in Earthquake Areas of Pakistan (ETRP)" to raise awareness of local people and build the capacities of unskilled and semi-skilled persons of the region in calamity safe construction techniques.



Even knowing the fact that Gilgit - Baltistan (formerly Northern Areas) fall in seismically active zone that can damage the lives and livelihoods of the entire population, the mode of construction and choice of residential areas is not that much different as that of Kashmir. The local communities lack awareness, capacities, usage of safer constructional techniques and land use planning that have a key role in reducing their vulnerability to disasters. In order to address these issues AKPBS,P started implementation of the project in January, 2008 in Gilgit-Baltistan with financial assistance from Austrian Development Cooperation (ADC) and the implementing partner, HOPE'87 – Hundreds of Original Projects for Employment.

### **The project has two components and various activities underneath each:**

1. Training and capacity building of semi-skilled and unskilled persons/crafts-persons in adoption and practice of safer construction to reduce earthquake impacts and risks. The activities under these components were:
  - Activity 1.1: Establishment of one Technical and Vocational Training Centre at Gilgit
  - Activity 1.2: Development of 10 specialized and tailor made training modules
  - Activity 1.3: 26 Training courses in safer construction related skills and trades (Masonry, carpentry, steel reinforcement, plumbing, electrical wiring, steel binding)
  - Activity 1.4: 10 training courses in earthquake resistant construction techniques i.e. wire mesh technology, lighter composite roof beams, etc.
  
2. Awareness raising of communities especially school children in Ghizer and Gilgit districts in combating and surviving disasters, especially earthquakes. The Activities under this component include:
  - Activity 2.1: Setting up of one earthquake education, awareness and resource centre at Gilgit.
  - Activity 2.2: Development of awareness by making risk information, earthquake safety material, hazard information and reference material, and first aid material available
  - Activity 2.3: Offering safety awareness interactive workshops and safety drill training for school children and first aid training for school teachers
  - Activity 2.4: Organizing seminars at local and national level for promotion of safe construction and earthquake resistant technologies, with linking of the trained and skilled crafts-persons with respondent communities/ households.

**Following are the project's results and its indicators:**

1. Unskilled and Semi-skilled crafts-persons are trained in improved construction skills and seismic resistant technologies and their managerial capacities enhanced.
  - 700 Crafts-persons trained in better construction techniques and seismic resistance technologies through specialized and tailor made training courses of various modules by the second year of the project.
2. Awareness raising, training and education of school children, school teachers, local communities and general population in earthquake safety at home/schools and in earthquake resistant technologies.
  - 1,000 school children made aware and trained in earthquake safety at schools and homes through specialized and tailor made training courses of various modules by the school year of the project.
  - 50 school teachers made aware and trained in earthquake safety at schools and homes through earthquake safety materials, earthquake effect demonstration, awareness seminars, safety drill workshop, and first aid training by the first year of the project.
  - 1,000 local community households' members and general population at large educated and made aware of seismic risks, availability of local skills and technologies, and prevention options and supported by the second year of the project.

**Introduction:**

The main purpose of the end of project evaluation through a consultant is to determine if the project was successful in achieving its intended outputs. And the skills and capacities of the local unskilled and semi-skilled persons in earthquake resistant techniques and practices has been enhanced and built. The awareness level of the communities raised enough to minimize the impact of potential disasters.

**Scope of the Evaluation:**

The evaluation is aimed at assessing the following questions:

1. Find out whether the project has been successful in achieving its intended target results at the end of the project as set in the project document.
2. To determine the effectiveness of the project interventions in developing the skills of artisans in different trades (masonry, carpentry, plumbing etc.)
3. Devise further recommendations based on the field practices and project achievements for future interventions.
4. Must identify any discrepancies in targeted results and activities, if any. Analyze the steering measure by project staff and reasons for discrepancies.
5. Budget efficiency shall also be evaluated against the approved budget and actual spending.
6. One focus area of study would be the follow up/current status of trainees after completing the trainings.
7. Assess relevant aspects influencing the principles of the Austrian Development Cooperation (poverty reduction, democratization and human rights, gender, environment [project document page 17-18, gender and environmental impact questionnaires are to be referred].).
8. Assessment shall in specific focus on:

- Impact of the project on women;
- Impacts of the project on local communities and school going children regarding seismic sensitivity, earthquake and prevention practices;
- Impact of the project on skilled/ unskilled crafts-persons income opportunities.
- Impact of awareness on seismic risk to target population

## **Methodology:**

AKPBS, P proposed the following general methodology for the consultant to plan, conduct and deliver the evaluation study of the project ETRP.



1. Review of project documents, progress reports, field reports, and other studies. All required documents will be provided after signing the final agreement.
2. Discussions and meeting with relevant office and field based project team.
3. Collection of data from approximately 20 trained crafts-persons (Indicator a), 10 manufacturers in 05 villages (manufacturers of earthquake resistant products). In addition to administration of interviews and questionnaires, manufacturers' records may be reviewed for data on levels of production, installation and sales of BACIP Earthquake Resistant techniques and products to measure the impact of the project on incomes from manufacturers.
4. Collection of data from approximately 20 school children (Indicator b) from 5 schools in 5 villages. Interviews with children and their families to assess awareness about earthquake safety at schools and homes.
5. Collection of data from approximately 10 school teachers (Indicator c) from 5 schools in 5 villages. Interviews with teachers and school staff to assess awareness about earthquake safety at schools and homes.
6. Collection of data from approximately 20 households (Indicator d) in 5 villages/communities. Interviews with family heads and women to assess awareness about seismic risks, availability of local skills and technologies, and prevention options and support received subsequently.

## **Deliverables:**

1. Development of consultancy work plan and data collection (qualitative and quantitative) tools.
2. Debriefing of the project team (project steering committee) on the initial study findings.
3. Analysis of data and preparation and submission of draft report of approximately 20 pages (excluding tables and annexure etc.) pages in English, both in hard copy and in electronic format).
4. Preparation and submission of final report in English, incorporating feedback from project team (project steering committee).



## **Review of Secondary Data:**

The project team provided sufficient documentation in order to understand the project and progress that has been made so far. It included bi-annual, annual reports (technical and financial), PSC meeting minutes, training modules, BACIP products brochures, evaluation reports, ProDoc, Operation Plan, and some other relevant material. All these documents were provided during the evaluation study i.e. before and during the field visit in Gilgit.

The secondary data was thoroughly reviewed and evaluation tools were developed. The evaluation tools and some initial deliverables developed were the following:

1. Data Verification Sheet Result 1
2. Data Verification Sheet Result 2
3. Evaluation Frame Work for ETRP Study - (a)
4. Evaluation Framework for ETRP Study - (b)
5. Questionnaire for School Teachers, Crafts-persons (safer construction and earthquake resistant construction), Local Community
6. Interviews with Trainers, students, BACIP Products Manufacturers
7. ETRP Evaluation Itinerary for Field Work in Gilgit

## **Sample Selection:**

<b>S. No.</b>	<b>Stakeholders</b>	<b>Sample</b>
1	Crafts-persons (14 safer & 8 earthquake resistant construction)	22
2	School Teachers	10
3	School Children	25
4	Community	20
5	Manufacturers	9
6	Trainers	6
7	Project Staff	8

As evident from the above table that as per requirement of the evaluation study all the stakeholders were contacted. In order to ensure representation from a diverse group having diverse opinion, all the nearest and far flung areas were visited. Details of names may be referred in the annex. During the field visit from 6<sup>th</sup> – 12<sup>th</sup> February 2010 the entire above mentioned target sample were interviewed through questionnaires and semi-structured interviews in the form of discussions. The questionnaire was both close and open ended. Open ended questions were translated into multiple answers, as reflected in annex – in order to calculate frequency of each option by the respondents.

Questionnaires for crafts-persons of both the construction categories were developed which were a little different from each other. Two (2) women were also interviewed in order to include opinion of both the gender.

Out of 10 school teachers, 4 female teachers were interviewed. Since majority of the schools were closed, finding out the teachers was a difficult task but ultimately managed.

Similarly, 20 local community members were interviewed. The target was only 1,000



community members in both the two districts of Gilgit and Ghizer. Taking 10 villages from each of these districts would have made the target very focused for quality output and visible impact. Nonetheless, I tried to visit the places of activity and conducted interview with the nearby community who at least had the chance of some interaction with the project.



Discussions were carried out with the groups of students who have received safety drill training /session in 15 schools of Gilgit-Baltistan. Students of two of the following schools were contacted at their houses:

Federal Government Model Boys High School, Gilgit	5 students
Diamond Jubilee Model High School Rahimabad –	4 students
Diamond Jubilee Girls high school Singal –	4 students
Diamond Jubilee Middle School Damas –	4 students
CBES School Jutial Cantt Gilgit -	8 students

### **Field Visit:**

Field visits were carried out in the following areas:

1. Danyore, Jutial, Dist. Gilgit
2. Khanabad, Lower Hunza, Dist. Gilgit
3. Singal, Gahkuch, Damas, Dist. Ghizer
4. Taus, Yasin, Dist. Ghizer
5. Chatorkhand, Dist. Ghizer



### **Limitations:**

Following are the limitations of the evaluation study:

- AKPBS is already running a BACIP program under which ETRP project was carried out. The objectives of BACIP program and ETRP project are complimenting each other to a greater extent. Finding out impact/outcome of a part out of the holistic approach becomes very difficult. Therefore, digging out exact findings, in some cases, by virtue of ETRP were very challenging.
- The weather was harsh and it was some time "0" degree centigrade in the field. There has been land sliding and snow fall which have caused road blockage at certain places.
- Schools had been closed and were just opening after winter vacations.
- Long distances, difficult terrain, shorter days and harsh weather made it hard for the evaluator to follow the planned schedule to meet respondents at various project target areas.
- Finding proper stakeholders / beneficiaries especially the local community who participated in awareness workshops or in some way got some benefit was a difficult job due to huge geographical area of implementation and limited target beneficiaries.
- Some of the activities of the project such as earthquake resistant construction were carried out during 2009, therefore, its immediate result was difficult to find out. One has to wait for at least two to three construction seasons.

## **Findings:**

- A first ever Technical and Vocational Training Centre (TVTC) has been established at AKPBS, P Gilgit under ETRP project and that was inaugurated on 30<sup>th</sup> October 2008. So far, 03 short training courses have been conducted thereby training 40 (5.73 percent) crafts-persons of the total trained crafts-persons. The training centre comprised of two (02) rooms and sufficient open area which provides for a training shed.
- After TVTC's construction only 03 short courses have been conducted so far under the supervision of specialized temporary trainers in electrical wiring and plumbing trades. There have been 40 (5.73 percent) crafts-persons trained in TVTC out of the total crafts-persons trained during 2008 - 09 under ETRP. HOPE' 87 & AKPBS, P are implementing another European Commission (EC) funded project and all the proposed training under EC. In which all the trainings are being planned to be conducted at TVTC.
- The TVTC has also been utilized as an information and educational Resource Centre (RC) on temporary basis for creating awareness about earthquake and earthquake resistant construction and safety precautions, etc. According to the project team, the RC was made available for general public at day time to learn more about earthquake safety through print material and counseling. However, a proper record (log registers) to collect visitors' comments would have helped in improving the materials.
- The project has developed training modules for short tailor made training courses in Masonry (general & earthquake resistant construction), Carpentry (general & earthquake resistant construction), Plumbing, Electrical wiring, Steel Binding, Building Painting (general construction) and Wire Knitting and Stove Making (earthquake resistant and energy-efficient techniques). These training modules have been developed from various training modules and manuals of recognized technical & vocational training courses. According to the project staff the specification for training modules were not explicitly mentioned in the ProDoc, therefore, it was tried to derive topics and lesson plans to develop tailor made training course modules from other training modules of recognized technical & vocational training institutes.
- It is also worthwhile to mention that there were no funds available for printing of training modules which is a pre-requisite for any technical and vocational centre. In fact there is no mention of a very important aspect in ProDoc i.e. curriculum which provides underlying principles for development of training modules of skill development training.
- During the project life AKPBS was unable to get accreditation from Allama Iqbal Open University (AIOU), and this has been due to difference in the course methodology of TVTC and expensive certification charges of AIOU. However, TVTC's registration with Karakoram International University (KIU) is in the pipeline and an MoU is about to be signed between KIU and the AKPBS, P .
- On the whole, the ETRP project has succeeded to train 697 artisans. Out of which, 579 crafts-persons (50 being women) have been trained in general/safer construction in 40 trainings, whereas 118 artisans have been trained in earthquake resistant construction in 10 trainings, there were only 25 dropouts in 50 training in ETRP project.
- 50 women trained in electrical wiring and home electrical appliances maintenance under general construction trade apart from conventional women related trades. It was encouraging to note that these women were able to fix electrical appliances at their home as well as in neighborhoods. These women were trained during 2008. This also shows that how the project taken care of the gender equity in the execution.
- Out of 118 crafts-persons trained in earthquake resistant construction trades, 44 crafts-persons were trained in 3 training in Masonry. Similarly, 42 carpenters in 3 trainings, 9 wire-knitters in single training and 23 tin-smiths trained in 4 trainings. The overall ratio of participation in training was high in Masonry as 15 trainees per training. On the whole the average ratio of participation in 118 courses was 11 which is quite satisfactory.

- Only 01 training in earthquake resistant construction was carried out in 2008 whereas the remaining 10 trainings were held in different quarters during 2009. The preferable division of training may be referred in the recommendation section of this report.
- On average there were 11 participants per training in earthquake resistant construction training, which was better than the average maintained in general construction which was 15.
- It was learnt from the interviews with 4 trainers of Electrical, Masonry, Tin-Smith and Steel Binders that the courses are too much practical and only up to 30 percent theory is taught in these short courses. It is a good combination of theory and practice. It is a common practices at very good technical institutions in Pakistan where theories are backed by a practical session of certain period for every topic.
- The average trainee cost at TVTC and MTC is recorded as Rs. 11,128/- and Rs. 8,660/- respectively. The average trainee cost at MTC is not inclusive of transportation and residential facility for the project field team which means training cost at TVTC is less. According to the project staff, more courses could have been conducted at TVTC if it had a certification/accreditation. Only 3 trainings conducted at TVTC during the project phase due to less demand from the community.
- As per ProDoc, the ETRP project was expected to organize 20 safety drills for school children. Nonetheless, the project has achieved to organize 15 safety drills at school level thereby imparting knowledge and practices to 1,001 school children (738 being girls). An official outcome was declared through the Islamabad Declaration on School Safety which called on governments and private stakeholders to develop mechanisms to provide technical, financial and human capacity support for the implementation of School Safety Action Plans.
- If we take out a ratio of the number of students/children attending one safety drill session then it comes to 1:67 which is too high for school children.
- One-day training on First Aid was organized by AKPBS,P during the last quarter of the year 2009 on 22<sup>nd</sup> December 2009. The training was attended by 42 teachers (15 being female) from government and private schools. The reason that 8 teachers could not show up in the training was some mob agitation and transport strike. The timely availability of funds and school teachers for this activity was cited by the project staff as two reasons for the delay.
- It was encouraging to note that the first aid training materials were appreciated and found relevant and helpful by 90 percent of the respondents. Seventy (70) percent of the total respondents showed confidence in themselves for providing some sort of first aid during any emergency situation to people.
- According to 70 percent of the respondents, first aid training duration was not sufficient to learn and apply safety and security precautions at the time of any accident. A majority of teachers, more than 70 percent, suggested increase in the first aid training duration to one week at the most.
- On the whole the project has provided earthquake related information, education and preventive techniques to 2,502 beneficiaries including school children, teachers and local communities.
- Of the above beneficiaries, in 2009, there were 1,334 local communities (763 being women) who were provided awareness through seminars and community dialogues. 1,088 local communities (men and women) were approached by the project team through 04 awareness creation session in different villages/institutes such as Mohammadabad Danyore, Aliabad, Nasirabad and KIU. In 3 seminars 146 people (45 being women) provided awareness on the subject matter. 125 participants (national & international) were also provided awareness in School Safety Conference in the year 2008. It also includes 100 visitors from KIU and other regions of Gilgit-Baltistan at Resource Center (RC) at AKPBS,P.

- Awareness on safer/general and earthquake resistant construction has been found average among school teachers. There was uneven level of knowledge among the respondents. 24 percent respondents termed the strong the foundation of a building the safer it becomes, whereas only 12 percent termed safe constructions is the planned construction. Lighter roof, frame structure, RCC roof, soil quality, material and latest techniques were selected as options for definition of safe construction each by 6 percent of the respondents.
- Similarly, 44 percent responses showed lack of knowledge and awareness about earthquake resistant construction. Whereas 6 percent responses each revealed that light roof, quality material, strong foundation, cooling and warming facility, latest techniques, safe building structure, distance of buildings and RCC ceilings were the ways to ensure earthquake resistant construction.
- As per respondents in the local community 35 percent were aware of earthquake resistant construction. It seems that in near future they may start utilizing such construction techniques. It has been witnessed that HDGI wire are being used in the private houses, community buildings, institutional buildings and in the JAMAT KHANA (worship place of Ismaili Sect) and this will certainly create great awareness and motivation among people to construct their houses.
- According to 42 percent of the respondents among local communities, walls with HDGI wire are earthquake resistant and can prevent casualties.
- The analysis shows that 64 percent of the community respondents are using Water Warming Facility (WWF) or stove and 41% are using Roof Hatch Window (RHW) at their houses.
- BACIP products manufacturers' average sale per month in 2008 was less as compared to average sale per month during 2009. The averages calculated on the basis of feedback received from 09 manufacturers, the sale of BACIP products have increased from an average Rs. 59,632/- to Rs. 87,356/- per month.
- According to 64 percent crafts-persons the training duration was insufficient. Out of which, 42 percent preferred 2 months' training, 29 percent opted for one month, 21 percent for 20 days and 7 percent for 3 months' training duration.
- According to 36 percent crafts-persons skills and techniques learnt during the training have been utilized regularly. Out of that, a majority 41 percent and 18 percent have practiced or utilized the skills and techniques in February 2010 and January 2010 respectively.
- The income of crafts-persons has increased by an average of 62 percent. As per respondents' opinion, 87 percent are those whose income has increased up to 100 percent, whereas, 7 percent respondents each was falling into two bands of increased income i.e. from 100 to 200 and 201 to 250 percent.
- More than 64 percent respondents opined that the BACIP products are helpful to women particularly, as these products are helping in improving their health and saving a lot of their time and money.
- Final financial report shows that almost 93.35 percent budget was disbursed on the activities specified in approved budget. This report shows that budget has exceeded at Personnel (Salaries) and Other Cost budget heads 108% and 111% respectively. It is acceptable as per the policy which allows 10 percent over or above.
- Expenditure under materials budget head alone was recorded as 65.5 percent only, however, together with equipment head the overall expenditure under both these heads is 80.6 percent.



## **Recommendations:**

### **Project Design:**

- As per project design, the target area comprised of two districts i.e. Gilgit and Ghizer. In such a big area the targets are very small to create any visible outcome and impact. Training of 700 crafts-persons was sufficient enough; however, targets from community, school children and teachers were not sufficient in terms of creating a visible change. Therefore, for community awareness, safety drills and first aid there should have been a specified area for a pilot project.
- The ProDoc has not included a very important aspect i.e. curriculum approved by the government. The curriculum, on one hand provides a base for development of training modules for tailor-made skill development training and on the other hand ownership from the government. The project budget should have provided financial allocations for printing of training modules/manual which is a pre-requisite of trainings at any technical and vocational centre. Similarly, no salaries were allocated for the proposed permanent trainers for TVTC in the project.

### **Project Execution:**

- Plan of Operation should have been realistic – close to ground realities - and followed in letter and spirit because, it is also a monitoring and performance measurement tool. Rigorous project implementation on the basis of well thought out operational plan helps in easy execution and financial control of a project.
- The project target area was very diverse as compared to the outputs such as no. of community members for awareness raising, school children and teachers. The project could have done better by selecting few villages instead of whole districts during the pilot phase of ETRP project. During an up-scaled project more new villages could be included for a visible change and impact.
- Activities and budget should have been equally distributed among quarters in order to avoid burden on other activities and budget lines.
- Periodic monitoring and training follow-up may be carried to ensure training outcome and impact.

### **Technical Vocational Training Center (TVTC):**

- TVTC may be strengthened with the passage of time with a qualified faculty, curriculum, training manuals/modules, equipments, certification/accreditation, first aid kits, uniform, helmet, boots, gloves, glasses, etc.
- Other places, where the certification for AKPBS,P's training programme could be obtained are, National Vocational & Technical Education Commission (NAVTEC), Skill Development Council (SDC), Technical Education and Vocational Training Authority (TEVTA), Ministry of Production and Ministry of Labour, Manpower and Oversees Pakistanis (MLMOP), etc.
- The project should have introduced some long courses as well in TVTC on the basis of its advance training modules. It would have helped the project to pre test their modules as well as training methodology.

### **Crafts-Persons Training:**

- Training of crafts-persons for 20 days in short courses followed by hands-on training in a short term apprenticeship with contractors in relevant trade. And then certificate accreditation from a recognized institute to make them eligible for advance course in 3-phase wiring, industrial wiring, panel board for load distribution, relay, etc. Similar practice for other trades can be replicated.
- I strongly suggest that selection of candidates for any skills development program should be done on the basis of a complete check list of questions which pertains to the knowledge of psychological behavior and basic instinctive ability towards skills learning.

The check list would primarily be helpful in identifying the right person for right skill. Following are the major components of such checklist:

1. Basic personnel Information
  2. Behavioral response and basic instinct behind learning Skills
  3. Job Related Aptitude
  4. Behavioral response toward adoptability of new environment
  5. Psychological interaction and response to basic human coordination (team work)
  6. Control on emotions
- Earthquake resistant training was the most critical and important activity which should have been carried out with utmost care and focus in order to observe the community perspective to make the training more productive and useful.
  - I would like to add that practical knowledge is indeed very important to be imparted to the crafts-persons but the theoretical base strengthens the concept at the same time. For example, the aspects that are covered by an architect while designing a building should also be learnt by a mason because he is the person who will give the map a practical shape. Therefore, a harmony between a designer and a mason is very much important.
  - A total of 50 skills development trainings were divided into two halves during 2008 and 09. It was indeed a very good distribution. But it would have been better to have conducted half of the general and earthquake resistant construction training i.e. 20 and 5 training respectively in 2008 and the remaining in 2009. It helps in course correction.

#### **First Aid Training:**

- The printed material on disasters, emergency and first aid was very much appreciated by the respondents; however, it may be developed in Urdu for clear understanding. Instead of making a temporary RC, there should have been RC corners at government departments, schools, colleges and universities where many people come on daily basis.
- According to 70 percent of the school teachers the First Aid training duration was not sufficient; therefore, it may be increased to one week. In an up-scaled phase of similar kind of project, the duration of First Aid training may be increased up to one week (preferably 3 to 5 days) and should be arranged during vacations for school teachers.
- To ensure maximum and active participation a residential training to small groups of up to 15 teachers is suggested. In case of non-residential training the venue should not be more than 30 minutes drive from the participants' location.
- In order to reduce the cost of first aid training, a group of highly motivated teachers can be provided a Training of Trainers (ToT) who can be made responsible for cascading first aid training to other teachers as well as school children. Refresher first aid training may be carried out on quarterly or bi-annual basis for teachers and students.

#### **Safety drills:**

- There should be practical exercises in the safety drills for students as they learn more quickly from practical exercises than lectures. If they learn well then one can expect them to cascade the same learning to other children at home or in neighborhood.
- It is preferable If all the students are provided chance to be a part of such drills. However, it can increase the cost of the activity, therefore, a group of teachers and students may be trained to cascade the training to other children in the school at regular intervals.
- As we know that a recommended strength of a classroom of children is maximum 40 so that each child gets equal attention, focus, chance of group work activity, etc. Children are not that good at learning from lecture. They are good at learning by practice and through audio and visual aids.

### **Creating awareness among community:**

- The awareness and education material may be made easier by developing them in Urdu language and with more pictorial display in it.
- All the information material on safer construction, earthquake resistant construction, etc. may be made available in schools, colleges, Government departments, public places, etc. for mass awareness.
- Print and electronic media may also be used for the awareness and education of people on earthquake resistant construction.
- A temporary RC was established where almost 100 people turned up to get benefit from it. However, no record has been maintained. There should have been a visitor log register maintained for the sake of record keeping of visitor's names and their comments about the RC.
- The awareness raising materials may be made simple, clear and visible. For example, the charts are very complex and some time difficult to understand at first glance. Therefore, these posters or other material should be made easier to be understood at a single glance and bigger fonts may be used to be readable from a distance of 15 to 20 feet.
- Well structured and planned awareness raising sessions should have been organized on quarterly or bi-annual basis in all over the project target area instead of only few places in district Gilgit.

### **Financial Review:**

- It is suggested to have further financial review from donor agency and implementing partner's Internal / External Auditors to get a clear picture of over and below spending in few lines.
- Further, it is suggested to hold mid-term financial review of the project in order to raise amendments to the Sub Grant Agreement so as to adjust budget as per expenditure rate. For example, if expenditure is exceeding to 110 percent or above in a budget line, then by increasing the budget in the same line will bring budget and expenditure to 100 percent, and if there is under spending like 50 percent in a budget line then the reduction in line will bring it to 100 percent.

## Analysis of Evaluation Questions:

### Project Progress as per ProDoc:

#### Establishment of TVTC:

Under ETRP project, AKPBS'P has achieved establishment of a Technical and Vocational Training Centre (TVTC) in its premises at Gilgit. The TVTC was inaugurated on 30<sup>th</sup> October 2008. The training centre consists of two (02) rooms and sufficient open area which provides for a training shed. The TVTC is being utilized for short training courses in trades such as plumbing, electrician, masonry, carpentry, HDGI wire knitting, tin-smith and steel binding. The construction time for TVTC as per ProDoc was three months (minimum construction time period), however, it took 10 months to complete after the project's inception i.e. January 2008. The point is that during a 2 years project phase, for how many months TVTC was available for holding training. The purpose for establishing a TVTC was not only to provide a foundation for future utilization but also to train crafts-persons on specified modules during the project life i.e. January 2008 to December 2009.



According to the project team, provision of skill development training through AKBPS,P's Mobile Training Centre (MTC) was much successful as there not many applicants had turned up when advertised in the Radio and local news paper for training in TVTC, Gilgit. Therefore, after TVTC's inauguration only 3 trainings could take place in 15 months time by December 2009. AKPBS,P is negotiating with Karakoram International University (KIU) the possibility of utilizing the premises for some benefits. AKPBS,P has been trying to sustain TVTC by charging a training fee of Rs. 500/- per trainee for a short course. There have been 40 (5.73 percent) crafts-persons trained in TVTC out of the total 697 crafts-persons trained during 2008 and 09.



Table 1: Training conducted in TVTC since its inception

Training dates	Trades		Total Participants
	Electrical	Plumbing	
25/10/2008 to 20/11/2008	16	15	31
10/02/2009 to 05/03/2009		9	9
<b>Total</b>	<b>16</b>	<b>24</b>	<b>40</b>

The trainers were not permanent staff of TVTC and only hired on part time basis for conducting training. One of the reasons for not hiring permanent trainers was small number of trainings conducted at TVTC and secondly there was no provision of monthly salaries for these trainers. Nonetheless, it is very important for a training center to have its permanent faculty.

The TVTC has also been utilized as an information and educational Resource Centre (RC) on temporary basis for creating awareness about earthquake, safety and earthquake resistant construction among local community. The RC was made available for general public during the day to drop by and learn more about earthquake safety through print material. There was no record available to confirm the number of people who showed up at the RC during the project duration.



The training program of AKPBS, P was to be registered with Allama Iqbal Open University (AIOU), nevertheless, this accreditation could not be attained due to difference in the course structure of TVTC and expensive certification charges of AIOU.

### **Development of Specialized and Tailor-made Training Modules:**

The project has developed training modules for short tailor made training courses in Masonry (general & earthquake resistant construction), Carpentry (general & earthquake resistant construction), Plumbing, Electrical wiring, Steel Binding, Building Painting (general construction) and Wire Knitting and Stove Making (earthquake resistant and energy-efficient techniques). Following training modules have been developed from various training modules and manuals of recognized technical & vocational training courses:

1. Masonry (General construction)
2. Carpentry (General construction)
3. Plumbing (General construction)
4. Electrical wiring (General construction)
5. Steel Binding (General construction)
6. Building Painting (General construction)
7. Masonry (Earthquake Resistant)
8. Carpentry (Earthquake Resistant)
9. HDGI Wire Knitting (Earthquake Resistant)
10. Tim-Smith / Stove Making / WWF (Energy Efficient)



The training module is, usually, a complete set of teaching guideline, learning material and daily schedule with all relevant exercises. Training modules are also derived from a curriculum of technical education institutions. The training outlines developed under ETRP talks about

daily topics of short courses. A sample training module for reference on website [www.basin.info/publications/skat/Construction\\_Training\\_Manual.pdf](http://www.basin.info/publications/skat/Construction_Training_Manual.pdf) can be viewed which is an example of how a training module can be. The training modules (annex G) however lack that standard which a normal module should have.

There was a provision of hiring the expertise of a technical person as consultant as indicated in budget line number 1.6.3 (final financial report), however, the resource went unspent and specialized training modules, of a certain standard maintained by technical education training authorities in Pakistan, could not be developed and hence could not be accredited by some relevant authority. This is also worth-mentioning that there were no funds available for printing of training modules/manual which is a pre-requisite for any technical and vocational centre. These modules help trainers to prepare lesson plans for any tailor-made skill development short course. In fact there is no mention, in ProDoc, of a very important aspect i.e. curriculum which should be a base for development of training modules of skill development training.

Another very important thing associated with TVTC is the certification / accreditation of training modules and training courses from approved and accepted authorities such as government institutions, ministries, technical education board, etc. An effort was made by AKPBS,P in this regard, however, the certification of the courses offered at TVTC, Gilgit through AIOU was unsuccessful due to the following factors:

1. The courses offered by BACIP are of very short duration i.e. 3 weeks at the maximum whereas AIOU recommends a course of 10 months at least with a training class on every weekend.
2. AIOU charges Rs. 3,200/- currently which is eight times greater than it was in the past. Therefore, trainees don't afford to pay for such certificate from AIOU and only rely on the certificate provided by AKPBS,P.
3. The duration of the courses is quite long; therefore, chances of dropout of trainees are high.

Other places, where the certification for AKPBS,P's short training courses could be attained, are National Vocational & Technical Education Commission (NAVTEC), Skill Development Council (SDC), Technical Education and Vocational Training Authority (TEVTA), Ministry of Production and Ministry of Labour, Manpower and Overseas Pakistanis (MLMOP), etc.

There are many successful models such as Government Technical Education Center, Peshawar, NWFP, TEVTA Punjab, PVTC Punjab, etc. who are conducting short and long term training and providing certification to the trainee who finds decent jobs in the market.



### **Training Courses in Safer Construction related Skills and Trades:**

Safer or general construction is referred to a construction which is planned and engineered in its nature and could protect human beings from severe weather and provide safety of life to a greater extent. The trades that are involved in this part of the project are mainly construction related, for example, masonry, carpentry, steel reinforcement, plumbing, electrical wiring, steel binding, etc.

AKPBS,P through the ETRP project has achieved to train 697 crafts-persons, out of which 579 (50 being women) crafts-persons have been trained in general/safer construction in 39 training, whereas 118 artisans have been trained in earthquake resistant construction in 11 training.

There has been 50 training conducted under result 1 of the project i.e. 25 during the year 2008 and the same during 2009. It was a sensible move contrary to the planned number of training as per ProDoc i.e. a total of 36 training during project life (26 training in general construction and 10 in earthquake resistant training).

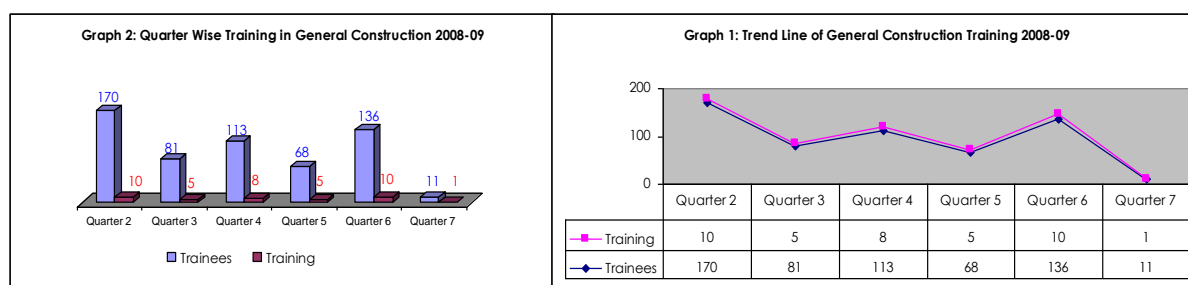
Table 2: Crafts-persons trained during 2008 and 2009 in General Construction

Trades	2008			2009			Total		Ratio
	Male	Female	Training	Male	Female	Training	Trainees	Training	
Masonry	29	0	2	67	0	4	96	6	16
Carpentry	38	0	3	61	0	5	99	8	12
Plumbing	66	0	5	25	0	2	91	7	13
Electrical	121	50	9	0	0	0	171	9	19
Steel Binding	0	0	0	22	0	2	22	2	11
Building paint	60	0	4	40	0	3	100	7	14
<b>Total</b>	<b>314</b>	<b>50</b>	<b>23</b>	<b>215</b>	<b>0</b>	<b>16</b>	<b>579</b>	<b>39</b>	<b>15</b>

According to the table above, there have been 96 crafts-persons trained in 6 training in Masonry. Similarly, 99 carpenters in 8 training, 91 plumbers in 7 training, 171 electricians in 9 training, 22 steel binders in 2 training and 100 building painters trained in 7 training. The overall ratio of participation in training was high in Electrical Wiring as 19 trainees per training. On average there were 15 participants per training in general construction training.

Table 3: Implementation rate of training in general construction during 2008-09

Quarters	Male	Female	Trainees	Training
Apr – Jun 08 (qtr 2)	126	44	170	10
Jul-Sep 08 (qtr 3)	75	6	81	5
Oct – Dec 08 (qtr 4)	113	0	113	8
Jan – Mar 09 (qtr 5)	68	0	68	5
Apr – Jun 09 (qtr 6)	136	0	136	10
Jul – Sep 09 (qtr 7)	11	0	11	1
<b>Total</b>	<b>529</b>	<b>50</b>	<b>579</b>	<b>39</b>



According to the above table, there has not been very consistent rate of implementation of training in each quarter of 2008 and 2009. It shows that during some quarters the implementation was burdened enough by carrying out up to 10 trainings at the maximum

thereby training 170 crafts-persons, whereas in some cases only 1 and 5 trainings were also conducted in a quarter. A total of 39 trainings in general construction carried out in 6 out of total 8 quarters. It would have been a better option to have conducted 7 trainings in each quarter so that the burden on the project resource could have been evenly handled. As the ETRP project has been contributed by the efforts of BACIP program staff, therefore, delegation of resource becomes very much difficult in that case. Equal rate of implementation by quarters also helps in maintaining the financial balance as per approved budget.

The quarter wise analysis also reveals very interesting facts that female participation was ensured only during the initial phase of the project i.e. during the 1<sup>st</sup> quarter and partly during the 2<sup>nd</sup> quarter of 2008. The project should have decided once for all that it would like to ensure female participation in some trade if not in each, and in every quarter during the whole project life. However, it is to be noted that training of female was not a target as per the ProDoc.

According to the graph above, implementation rate by quarters during 2008-09 has been explained to understand as to how sudden shifts in the number of trainings occurred in the implementation of training from one quarter to another.

### **Training Courses in Earthquake Resistant Construction Techniques:**

Gilgit-Baltistan is a seismically active zone, and there is a potential threat of a big earthquake, therefore, heavy, unsecured roofs and disjointed walls/roofs are a potential death trap. The local community lacks information awareness and access to safer construction skills, techniques, and tools, earthquake resistant designs, construction and maintenance of school buildings, and critical awareness of preventive measures and responses. It is for this reason that a training component was added to ETRP project so that a working capital sufficiently skilled in earthquake resistant techniques is available for promotion of earthquake resistant construction.



According to the table below, there have been 44 crafts-persons trained in 3 training in Masonry. Similarly, 42 carpenters in 3 training, 9 wire-knitters in single training and 23 tin-smiths trained in 3 training. The overall ratio of participation in training was high in Masonry as 15 trainees per training. On average there were 11 participants per training in earthquake resistant construction training which is good as compared to average maintained in general construction which was 15. One of the reasons for this low average per training is that there has not been significant demand for wire knitting, the reason being that the trade is new and the demand/scope will raise gradually and the impact of the same could be seen after two to three construction seasons.



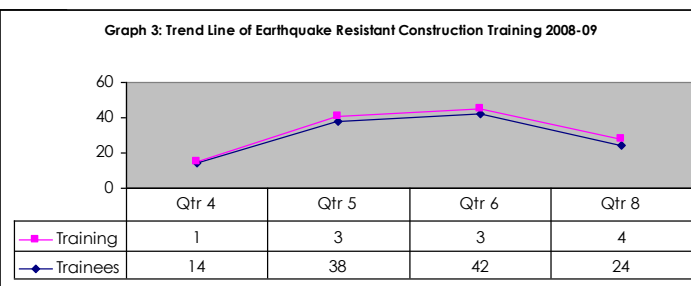
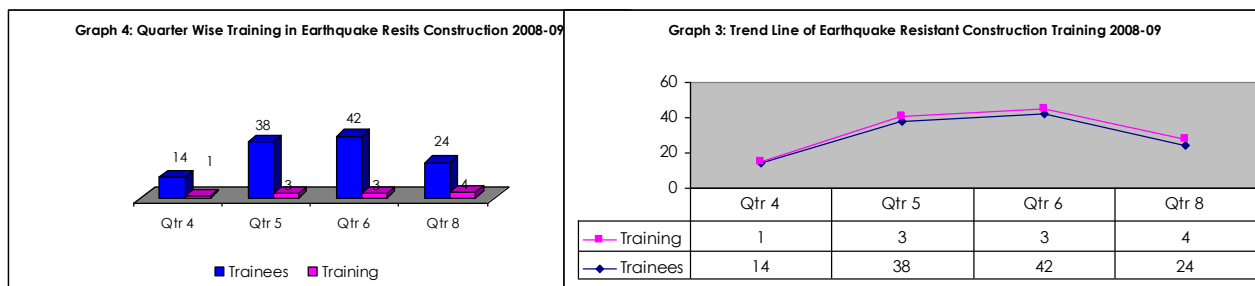
Table 4: Crafts-persons trained during 2008 and 2009 in earthquake resistant Construction

Trades	2008			2009			Total		Ratio
	Male	Female	Training	Male	Female	Training	Trainees	Training	
Masonry	14	0	1	30	0	2	44	3	15
Carpentry	0	0	0	42	0	3	42	3	14
Wire-knitting	0	0	0	9	0	1	9	1	9
Tin-smith	0	0	0	23	0	4	23	4	6
<b>Total</b>	<b>14</b>	<b>0</b>	<b>1</b>	<b>99</b>	<b>0</b>	<b>9</b>	<b>118</b>	<b>11</b>	<b>11</b>

Table 5: Implementation rate of training in general construction during 2008-09

Quarters	Male	Female	Trainees	Training
Oct – Dec 08 (qtr 4)	14	0	14	1
Jan – Mar 09 (qtr 5)	38	0	38	3
Apr – Jun 09 (qtr 6)	42	0	42	3
Oct – Dec 09 (qtr 8)	24	0	24	4
<b>Total</b>	<b>118</b>	<b>0</b>	<b>118</b>	<b>11</b>

According to table 5, there has been inconsistent rate of implementation of training in various quarters of 2009. There has been only single trainings conducted in the last quarter of year 2008 and 10 trainings conducted in the year 2009. The division of 50 trainings was such that these have been conducted evenly i.e. 25 each during 2008 and 2009. However, earthquake resistant training was the most critical and important activity which should have been carried out in both the years i.e. 5 each in 2008 and 2009 so that community perspective could have monitored to make the training more productive and useful.



**Setting Up of One Earthquake Education, Awareness And Resource Centre At Gilgit:**

A temporary earthquake education, awareness and resource center at Gilgit has been established in the premises of AKPBS,P office. As per the annual reports of the project since 100 people (students from KIU mostly) turned up to get benefit from it, however, no record has been maintained. Visitors' comments book should have been maintained to have gathered instant feed back of the stakeholders.

I would suggest printing sufficient copies of these materials and displaying it on the notice boards of every government and private school, public offices, etc. so that many people could get benefit from it.

**Development of Risk Information, Earthquake Safety Material and First Aid Material:**

The ETRP project has developed and mostly adapted earthquake related information and educational materials. As Earthquake Reconstruction & Rehabilitation Authority (ERRA) has already been doing quite substantial work, therefore, adapting already available material and translating them would be an excellent job. I have only seen these materials in the RC at

AKPBS,P and felt that some necessary modification would make them even better. For example, the charts are very complex and some time difficult to understand at first glance. Therefore, these posters or other material should, therefore, be made easier to be understood clearly even from a distance of 10 to 15 feet. As per the project staff some of the materials have also been adapted from UN-Habitat which was very helpful too.



During interviews with school teachers were asked whether the information and education material was sufficiently helpful or not. Most of the respondents proclaimed that these were good and of immense help to them. However, it was suggested to develop first aid material in Urdu language for easy understanding.

### **Offering Safety Awareness Interactive Activities:**

Under safety and awareness, there have been 3 different activities carried out such as:

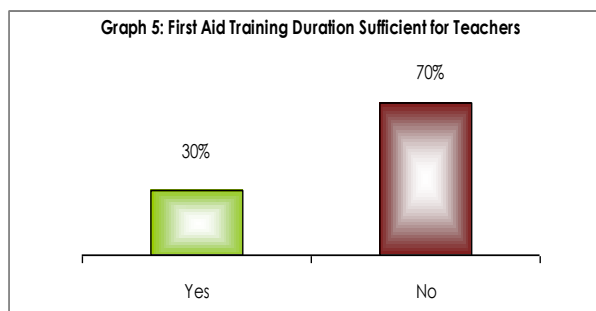
1. Safety drill for school children
2. First aid training for school teachers
3. Awareness raising on earthquake resistance and preventive aspects

On the whole the project has provided earthquake related information, education and preventive techniques to 2,502 beneficiaries including school children, teachers and local communities.

### **Safety Drill for School Children:**

As per ProDoc the ETRP project was expected to organize 20 safety drills for school children. Nonetheless, the project has achieved to organize 15 safety drills at school level thereby imparting knowledge and practices to 1,001 school children (738 being girls).

According to school children the sessions were very interesting and they have learnt a lot. They have also shared that the methodology of the training was also fine but with inclusion of more practical exercises these sessions can be made more fruitful. If we take out a ratio of the number of students/children attending one safety drill session then it comes to 1:67 which is a high one. As we know that a recommended strength of a classroom of children is up to 40 maximum so that each child gets equal attention, focus, chance of group work activity, etc. Children are not that good at learning from lecture. They are good at learning by practice and through audio and visual aids.

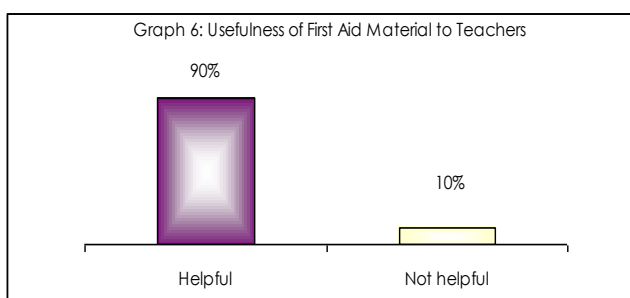


### First Aid Training of Teachers:

One-day training on First Aid was organized by AKPBS,P during the last quarter of year 2009 on 22<sup>nd</sup> December 2009. The training was attended by 42 teachers (15 being female) from government and private schools. As per the ProDoc, 5 trainings on First Aid were to be organized, however, only one could be organized in Gilgit at a central place where teachers from government and private schools of Gilgit and Ghizer districts. The reason that 8 teachers could not show up in the training was because of some mob agitation and transport strike. The project could have achieved its targets more efficiently and effectively by rigorously following its implementation plan. Two reasons cited by the project staff are non-availability of funds and teachers for this activity, caused delay.

Although accommodation facility was offered to all these participating teachers, even then they traveled on the same day of the training due to which some could not make it in time. As the teachers had to go back to very distant places on the same day after the training, therefore, the first aid training session was concluded at 2 pm. Although the community is receptive to change but still it is a conservative area and accommodation facility for women outside their houses is a problem.

It was encouraging to note that the training material was appreciated and found relevant and helpful by 90 percent of the respondents. However, it was suggested to make these materials in Urdu instead of English for clear understanding and dissemination of emergency related important information to other people. Ninety (90) percent of respondents could recapitulate the training contents while referring back to training carried out almost a month back. Seventy (70) percent of the total respondents were of the opinion that they might be able to provide some sort of first aid during any emergency situation to people.



According to 70 percent of the respondents the training duration was not sufficient to learn and apply the measures for safety and security at the time of any accident. A majority of teachers, more than 70 percent, suggested increasing the first aid training duration to one week at the most.

### Community Awareness Raising on Earthquake and Preventive Aspects:

In the year 2008 no awareness raising seminar could be carried out for local communities. In 2009, there were 1,334 local communities (743 being women) were provided awareness through seminars and community dialogues. Out of the total, 1,088 local communities (men and women) were reached at by the project team through awareness raising session in 4 seminars in different villages/institutes such as Mohammadabad Danyore, Aliabad, Nasirabad and KIU. Apart from these 3 seminars, during community meetings 146 people have also been provided with awareness on earthquake related knowledge and information. In order to raise the awareness on safety measures against earthquakes, an International School Safety Conference was organized in Islamabad, Pakistan in mid May 2008 with the participation of a group of International



organizations. The aim of the conference was to encourage policy support and technical backstopping through networking with other organizations with relevant expertise.

An official outcome was declared through the Islamabad Declaration on School Safety which called on governments and private stakeholders to develop mechanisms to provide technical, financial and human capacity support for the implementation of School Safety Action Plans. The Islamabad Declaration also set forth practical recommendations for civil society and private organizations to act as critical partners in the implementation of the action plans.

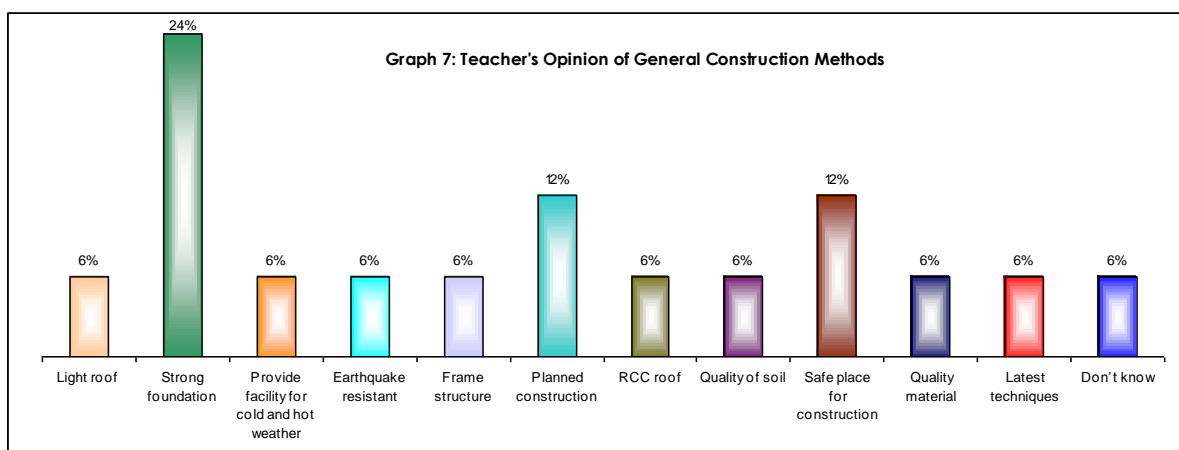
Table 6: Beneficiaries in three different activities related earthquake awareness and safety

Beneficiaries of Awareness raising	2008			2009			Grand Total		
	Trainees		Training / Sessions	Trainees		Training / Sessions	Trainees		Training / Sessions
	M / B	F / G		M / B	F / G		M / B	F / G	
School Children	0	197	4	263	541	11	263	738	15
First Aid Training	0	0	0	26	16	1	26	16	1
Communities in sessions	0	0	0	392	696	4	392	696	4
In seminars	101	45	3				101	45	3
KIU visitors at RC				78	22	1	78	22	1
School Safety Conference	80	45	1	0	0	0	80	45	1
<b>Total</b>	<b>181</b>	<b>287</b>	<b>8</b>	<b>759</b>	<b>1275</b>	<b>17</b>	<b>940</b>	<b>1,562</b>	<b>25</b>

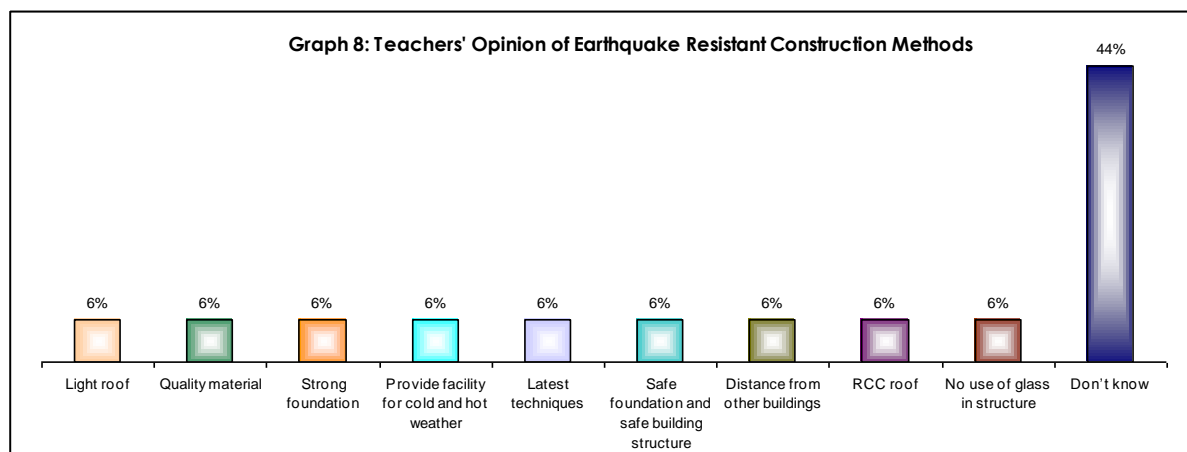
The project has organized awareness raising seminars on earthquake and the resistant construction for prevention of loses each in Ghakuch and Gupis. The project target area was very diverse and therefore, reaching every person or a larger part of it was near to impossible with available scope of activities. The project could have done better by selecting few villages instead of districts during the pilot phase of ETRP project and the villages can be increased during an up-scaled project phase.

As teachers are the educated representatives of the community, therefore, they have also been asked questions related to safer and earthquake resistant constructions.

According to 24 percent of the respondents the strong foundation of a building are safe construction. 12 percent respondents each opted that planned construction and selection of safe place for construction are necessary to carry out safer construction. Lighter roof, frame structure, RCC roof, soil quality, material and latest techniques were selected as options for definition of safe construction each by 6 percent respondents.



Similarly, 44 percent responses showed lack of knowledge and awareness about earthquake resistant construction. As per remaining 56 percent responses, 6 percent responses each revealed that light roof, quality material, strong foundation, cooling and warming facility, latest techniques, safe building structure, distance of buildings and RCC ceilings are the ways to ensure earthquake resistant construction.



The responses for safer/general construction and earthquake resistant construction show level of knowledge and awareness among the respondents, which is indeed low. The awareness level of community in general and school teacher in particular is needed to be raised in order to promote earthquake resistant construction on massive scale.

**BACIP Products' Demand among Community:**

During the field visit a total of 9 manufacturers could be interviewed. The table above reveals that there has been an increase in the monthly income of manufacturers and hence we can easily conclude that the sale of BACIP products has increased. However, it is important to note that the use of water warming facility or WWF stove (locally known as as Bukhari) is very high and therefore, the sale of stove is increasing compared to the last year. The demand and sale of stove only appears in winter season.

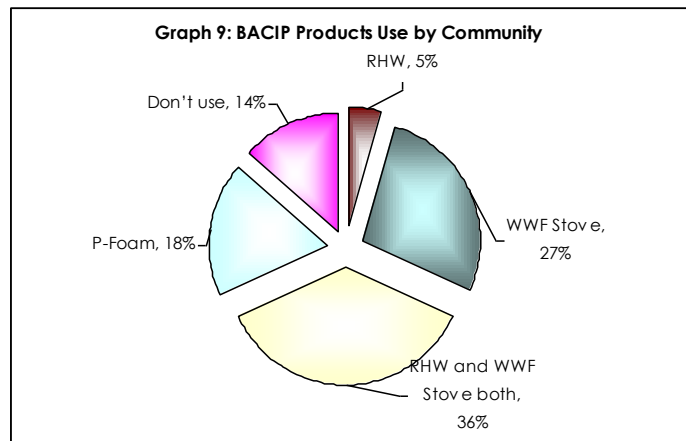


Table 7: Increase in Sale as per BACIP Products manufacturers

Manufacturer Name	Trade	Unit Price Per item	↑ Sale per month in PKR	
			2008	2009
Khush Lali	Carpenter	RHW 2150X22 / yr	3,500	4,500
Sharif	Stove	3800 / stove	293,333	440,000
Jaafar Khan	Carpenter	RHW 3600X5/m	-	18,000
Manzoor Wali Khan	Stove	3800 / stove	15,000	38,000
Ali Madad Khan	Stove	3900/stove	23,725	31,200
Dildar Shah	Carpenter	RHW 3200X10/m	30,000	50,000
		DGW 1800X10/m		
Syed Salamat Shah	HDGI Wire	350/kg	6,500	14,500
Shali Khan	Stove	4200/stove	105,000	175,000
Ayub Nabi	HDGI Wire	350/kgX43	0	15,000
<b>Average</b>			<b>59,632</b>	<b>87,356</b>

According to table 7, the sale per month in 2008 was less as compared to the sale per month during 2009. The averages calculated on the basis of feedback received from 09 manufacturers, the sale of BACIP products have increased from an average Rs. 59,632 to Rs. 87,356 per month.

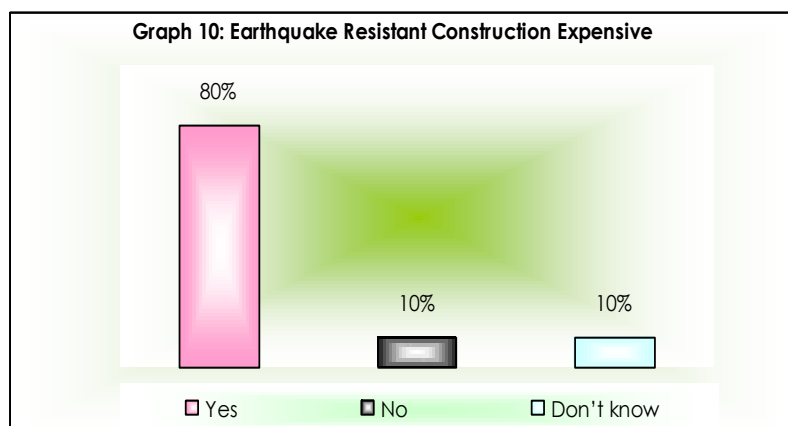
The table reveals that the sale of BACIP stove or WWF has a great deal of demand. The same argument has been reinforced in the graph below. The usage of WWF Stove is 64 percent and RHW 41 percent among the sample respondents. People have also developed some myths about WWF Stove. For example, it continuously takes away all the energy to heat the water in the drum while putting very little effect on the cold inside the room. They also say that water in the drum can't be changed due to Mesh Wire Pipes attached to it firmly, due to which the warm water produces a bad smell. The manufacturers are trying to instruct that this water may only be used to wash clothes, utensils and for taking bath.



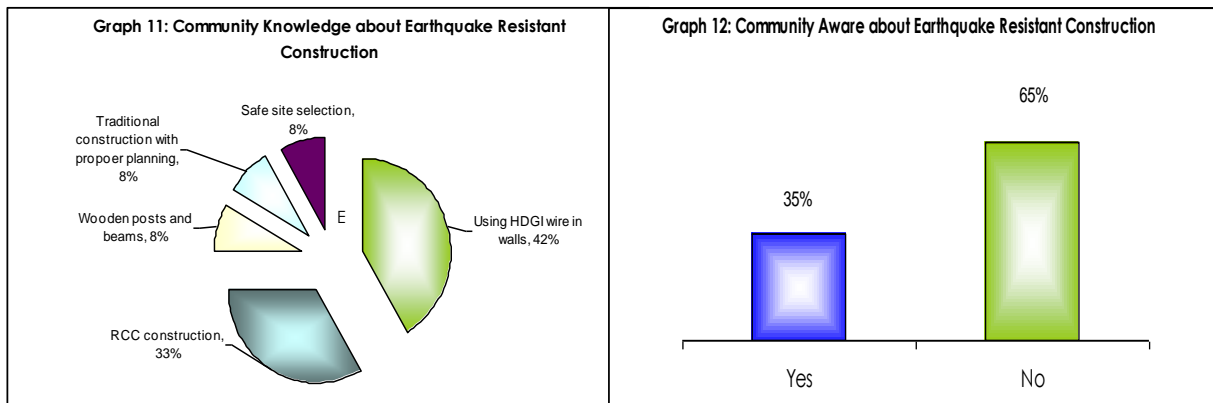
According to the response gathered from the local community regarding usage of BACIP products or techniques, 36 percent of the respondents are using both RHW and WWF whereas 27 percent respondents who are using only BACIP product i.e. WWF and 5 percent are using RHW at their houses. After analyzing the graph, it shows that 64 percent of the respondents are using WWF and 41% are using RHW at their houses.

There has been little increase has been noticed in the sale of RHW and DGW. The reason may be that people have changed the way houses used to be built earlier. They simply prefer a light roof of GI sheet and a light frame of wood beneath it. Therefore, the demand for RHW is not that much high. Similarly, DGW is not preferred by people while constructing a new house.

It has been observed that one can easily see RHWs over top of houses in Taus village of Yasin valley unlike other places where I could hardly find any. It is for this reason Mr. Dildar Shah, the Carpenter, finds a sufficient demand to make 10 RHWs and the same number of DGWs in a month. The weather remains very cold due to heavy snowfall in this place which is certainly causing a considerable demand of warming facilities of BACIP.



It was observed that people are not making their houses as per earthquake resistant techniques in District Ghizer. Although people know about earthquake and its effects but they don't expect any bigger disaster similar to what happened in Kashmir. Over the years many efforts have been carried out by AKPBS,P along with other organizations such as FOCUS to promote awareness on the issue in this area.



The community has not yet started constructing their houses on BACIP techniques mainly because this may increase the cost of construction which is clear from the graph number 10. At the moment people have not constructed their houses so far on the new technique, however, with the availability of relevant material and trained human resource, people may start building their houses seismic resistant in near future. As per respondents from the local community 35 percent were aware about earthquake resistant construction. The use of HDGI wires was only witnessed in the construction of JAMAT KHANA (worship place of Ismaili Sect), it will certainly create a lot of awareness and motivation among people to construct their house on the same way as their sacred places have been constructed.

The graph 11 shows level of awareness of local community about earthquake resistant construction. According to 42 percent of the respondents, walls with HDGI wires are earthquake resistant. These various versions show that more awareness on such construction is needed so that it becomes a customary practice.

**Seminars at Local and National Level:**

The project had to organize 6 seminars at local and national level for promotion of safe construction and earthquake resistant technologies, with linking of the trained and skilled crafts-persons with respondent's communities/households. Only 1 international conference on School Safety was organized by AKPBS,P on May 14<sup>th</sup> – 16<sup>th</sup> 2008 in Islamabad, Pakistan. In this conference 6 students, one school teacher and 4 community members participated from Punial and Ishkoman valley of Gilgit-Baltistan former Northern Areas.

Apart from the above national level workshop, the project has been able to organize 4 awareness raising sessions in different villages/institutes such as Mohammadabad Danyore, Aliabad, Nasirabad and KIU and thereby educating 1,088 local community members.



### Effectiveness of the Project Interventions in Developing the Skills of Artisans in different trades:

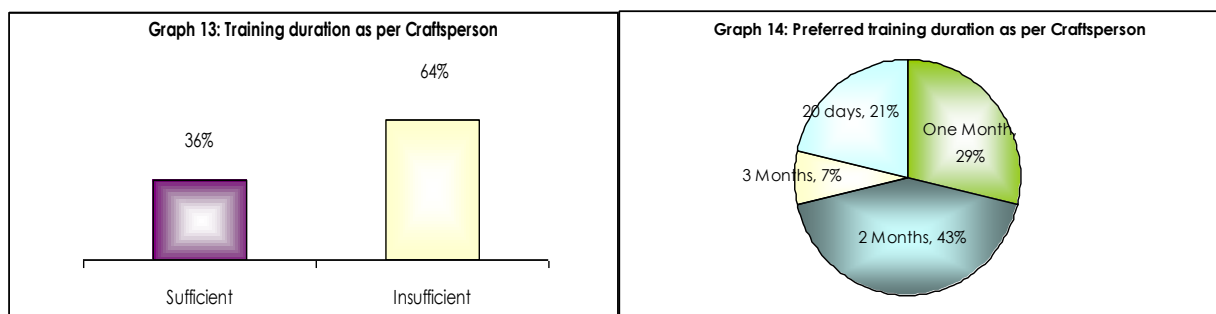
The first and the foremost thing for an effective intervention in skill development is a well organized training methodology. As discussed in the earlier section of the report about training modules, this is to add further that practical knowledge is indeed very important to be imparted to the crafts-persons but the theoretical base strengthens the concept of crafts-persons. For example, the aspects that are covered by an architect while designing a building should also be known to a mason because he is the person who will translate the map of a house on the ground in a physical shape. Therefore, a harmony between a designer and a mason is very much important. There are some aspects which have also played some effective role in making the skill development of artisan.

#### Course Duration:

The artisans have been trained basically in two construction categories i.e. general construction and earthquake resistant construction. The earthquake resistant construction is only different in Masonry, Carpentry and Wire Knitting as both involve certain techniques which are not usually taught or practices under general construction. Training in various trades was of different duration as explained in the table below. It is worthwhile to discuss that the number of training days, which were actually 20 days as per training modules, however, the training duration has reduced to 10 days.

S. No.	Trades	Duration
1	Masons (General construction)	10 days
2	Carpenters (General construction)	10 days
3	Masons (BACIP Techniques)	10 days
4	Carpenters (BACIP Techniques)	10 days
5	Plumbers	20 days
6	Electrical wiring	20 days
7	Steel Fixers/Binders	10 days
8	Building Painters	15 days
9	Wire Knitters	10 days
10	Stove Makers / Tin-Smith	10 days

According to 64 percent crafts-persons the training duration was insufficient. As per the artisans, un-skilled trainees have learnt most of the required skills, even though they haven't got enough time to practice it under the supervision of their trainer. Out of 64 percent respondents who said that the training duration was insufficient, 42 percent preferred 2 months training, 29 percent opted for one month training, 21 percent opted for 20 days and 7 percent opted for 3 months training duration. It has been shared by the trainers that already skilled crafts-persons don't require extra days for training, however the unskilled people require certain amount of extra days. The reason is that the courses are too much practical and only up to 30 percent theoretical as opined by the trainers during interview.





**Crafts-Persons' Selection Criteria:**

Following is the project's criteria for selection of crafts-persons:

Trade	Age	Qualification	Experience
Masonry	25-40 yrs	Primary level	5 yrs in masonry
Carpentry	25-40 yrs	Primary level	5 yrs in carpentry
Plumbing	18-25 yrs	Middle level	NA
Basic Electrician	18-30 yrs	Metric level	NA
Building Painter	18-30 yrs	Primary level	NA
Steel Binder	18-30 yrs	Primary level	NA
Wire Knitter	18-30 yrs	Primary level	NA
Tin-Smith (stove maker)	18-30 yrs	Primary level	NA

Apart from the above criteria the project team has also been interviewing the candidates at the time of selection. During these interviews the project team tried to find the aptitude of the candidates as well. This has never been a difficult job to find interest of a semi-skilled person but in case of an unskilled person finding the interest and aptitude may be cumbersome. The following table reveals the number of semi and un-skilled crafts-persons who received training.

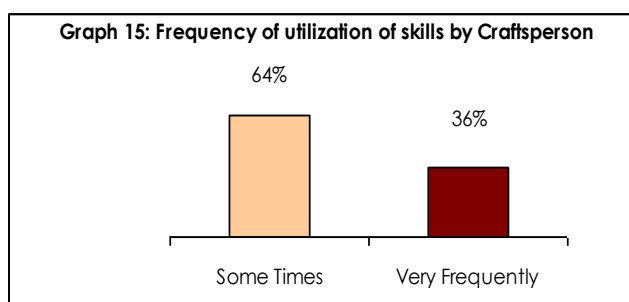
S. No.	Trade	Semi-skilled	Un-skilled	Dropouts
1	Masonry	140	0	0
2	Carpenter	141	0	0
3	Plumber	8	83	9
4	Building Painter	15	85	7
5	Steel Binder	16	6	0
6	Tin-smiths	21	2	0
7	Wire Knitters	5	4	0
8	Electricians	58	113	9
	<b>Total</b>	<b>404</b>	<b>293</b>	<b>25</b>

After establishment of TVTC at Gilgit, it needs to be strengthened even further with a qualified faculty, curriculum, training modules, equipments, first aid kits, uniform (helmet, boots, gloves, glasses, etc.) and code of conduct. I strongly suggest that selection of candidates for any skill development program should be done on the basis of a complete check list of questions which pertains to the knowledge of psychological behavior and basic instinctive ability towards skills learning. The check list would primarily be helpful in identifying the right person for the right skill. Following are the major components of such checklist:

1. Basic personnel Information
2. Behavioral response and basic Instinct toward learning Skills
3. Job Related Aptitude
4. Behavioral response toward adoptability of new environment
5. Psychological interaction and response to basic human coordination (team work)
6. Control on emotions

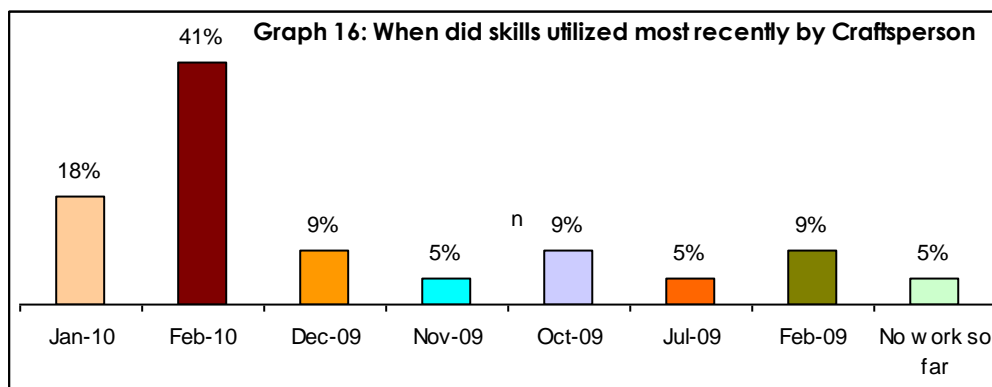
**Training Techniques Utilization:**

Sixty four (64) percent crafts-persons opined that they have been utilizing the techniques learnt during the training rarely whereas according to 36 percent these skills and techniques have been utilized regularly. The reasons for rarely utilizing the



techniques and practices are lack of demand from the community, lack of a certain type of wood preferred by carpenters and people which is expensive. The training on earthquake resistant construction has mostly delivered during 2009 after which the winter has started and work is on a halt.

The graph 16 shows break-up of 36 percent respondents who said that they are regularly utilizing the skills learnt during the training. The majority 41 percent said that in February 2010 they have applied the learnt skill, whereas 18 percent applied these skills in January 2010. The impact of training can be determined by one of the indicators when these training learning were recently utilized. So it's very evident that trainees have been practicing those skills for their livelihood development.



#### Training Cost:

Trades	Cost per Trainee	
	TVTC	MTC
Masonry	10,590	7,560
Carpentry	14,590	9,560
Plumbing	10,640	9,660
Electrician	8,690	7,860
<b>Average Cost</b>	<b>11,128</b>	<b>8,660</b>

According to the above table, average trainee cost have been calculated both at TVTC and MTC in four skills development trades only, i.e. Masonry, Carpentry, Plumbing and Electrical work. The average trainee cost at TVTC and MTC is recorded as Rs. 11,128/- and Rs. 8,660/- respectively. The trainee cost at both the training venues have mainly encompassed the following expenditures:

- Material for hands-on training
- Reference material & stationery (manuals, flip charts, markers etc.)
- Tool-kits for training
- Master Trainer's cost
- Trainees Stipend
- Tool-kit for trainees
- BACIP Supervision e.g., (dialogues, selection of trainees and supervision of training)

The average trainee cost at MTC is not inclusive of cost of transportation and residential facility for the project field team. If we add even a minimum tentative amount of transportation and residential facility then it may exceed per trainee cost at TVTC. During the project duration, after construction of TVTC, 40 (5 percent) crafts-persons have been trained in 3 trainings.

There should have been more trainings conducted at TVTC during the project phase for the sake of establishing its reputation and acceptance among relevant stakeholders. By the end of project, TVTC would have been sustained, operational and would have had most of its prerequisites ready. According to the project staff the demand for mobile training was huge and once the certification/accreditation of TVTC is achieved then they would be able to attract people for residential training at this central place.

### **Evaluation of project's budget efficiency against approved budget and spending:**

Project Period: January 2008 to December 2009 (2 Years)  
Approved Budget: 142,000 (which includes 12,909 (10%) Indirect Cost)  
Final Expenditure: 132,564 (93.35%)  
Remaining: 9,436 (6.65%)

Final financial report shows that almost 93.35 percent budget was disbursed on the activities specified in approved budget. This report shows that budget has exceeded at Personnel (Salaries) and Other Cost budget heads 108% and 111% respectively. It is acceptable as per the policy which allows 10 percent over or above.

Expenditure under materials budget head alone was recorded as 65.5 percent only, however, together with equipment head the overall expenditure under both these heads is 80.6 percent.

Expenditure / implementation rate in main project activities lines show variation of spending. Nevertheless, overall the budget expenditure is efficient with regard to the approved budget.

### **Project Relevance with ADC principles:**

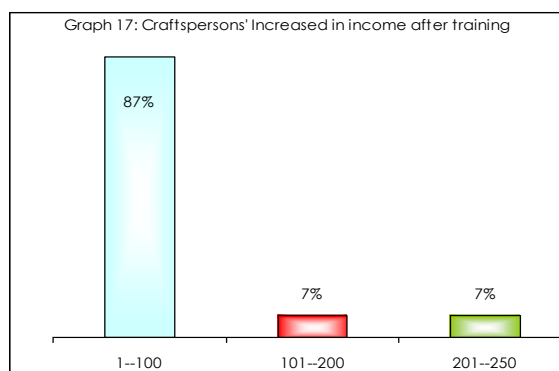
ETRP project was designed on the principles of gender equity, environmental protection, and youth empowerment for improved livelihood and better living environment for all. These were the underlying guiding principles for all the project activities.

I shared with my family the objectives of safety drill at the dinner table. The matter was discussed at length while we were taking our meal. Everybody appreciated my knowledge on the matter. This encouraged me to instruct the carpenter, who was busy with renovation work at our house, to fix the doors to open outside the room. He agreed and my family showed their pleasure to what I suggested.

Naheeda, Class VII, CBES School Jutial, Gilgit

The project has endeavored to raise awareness of school children, teachers and community regarding earthquake danger and required change in life style to minimize the suffering due to such disasters. The project has achieved to train a substantial number of human capital in order to help promote construction of safe and earthquake resistant houses to reduce pressure on environment by bringing use of wood down to a considerable extent in their latest techniques.

There have been 50 female trained in Electrical wiring. This was the only trade, probably, where women can utilize the skills in helping themselves and their neighborhoods. This trade does not involve women to get involved in more laborious job rather they are feeling self sufficient after being trained.



The income of these artisans has increased by an average of 62 percent. According to the respondents' opinion, 87 percent are those whose income has increased up to 100 percent, whereas, 7 percent respondents each fall into two bands of increased income i.e. from 100 to 200 and 201 to 250 percent. It has certainly improved the livelihood of the people and has generated a good economic activity.

Provision of skills to people on BACIP techniques through training have not only increased the working capital but also provided sufficient relief to women, children and men to enjoy decent living facility. More than 64 percent respondents opined that the BACIP products are helpful to women especially, as these products are helping in improving their health and saving a lot of their time and money.

School children have been provided safety drills through which preventive measures were imparted. During interviews with respondents, it has come into notice that these children have cascaded the learning with other friends as well as their family members.

### **Assessment of project's impact on:**

#### **Women:**

Out of the total 2502, more than 1,500 women and girls have participated in school safety drill, earthquake awareness and first aid training. Similarly, out of 697, 50 women have been trained in electrician courses.

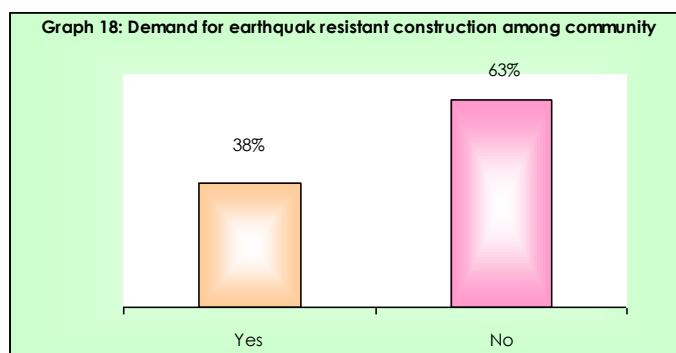
The 50 women trained in electrical trade have not started generating income as yet; however, they are capable of fixing electrical appliances at their house as well as in their neighborhood. They don't charge money for that as it is not a custom to ask for remuneration ble of any service rendered. However, it exhibits a friendly gesture among community which no doubt improve relationship among them. One of the girls interviewed also shared that she has applied for Electric Meter Reader position.

Women have participated in the project in a big number and hence benefited directly or indirectly. The output of the project reveals that women have participated in almost all the activities; therefore, in the long run they will find awareness and training very fruitful for them as well as for their family.

Impact on women, however, can't be measured right after the completion of the project. Another reason that impact of ETRP can't be measured is that AKPBS,P has also been carrying out the same activities for the last so many years. Also the ETRP project was not focused in a particular area and scattered through out Gilgit and Ghizer districts. It is suggested that for finding out the impact a pilot project should always have a specific focus area so that activity may be carried out with desired result in letter and spirit.

### **Community and School Children Awareness on Earthquake and Prevention:**

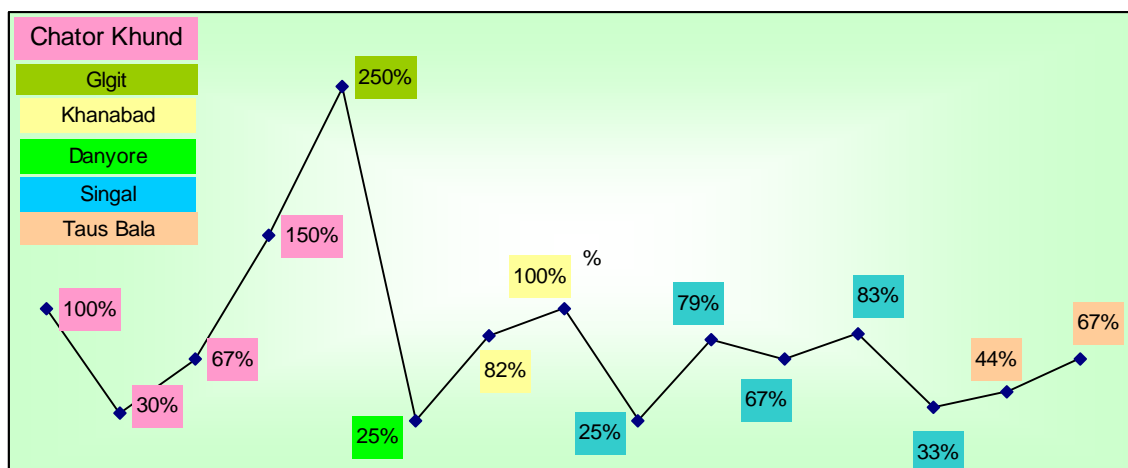
After the interviews with school children, it has been clearly revealed that children have learnt quite a substantial part of what they were taught. They have also shared the learning with their friends as well as with family members. It has helped them to become mentally ready for any sort of worse situation. But there is still one big concern that in most of the schools only children in higher



classes have been trained in safety drills. The learning cascaded to other children in the school had not learnt in the same way as the former group. In any disaster situation panic from any of the non-trained people can create panic even in the ranks of trained students. One most important thing which can be rectified in future projects is that the safety drills for children should be practical exercise and be held on regular basis so that students are ever ready to handle any disaster situation without any panic.

During the field visit it has been learnt that hardly any of the stakeholder has constructed his/her house on earthquake resistant techniques. Almost half of the respondents who were interviewed turned down any possibility of severe earthquake just like occurred in Kashmir. Most of the people think that the new technique of earthquake resistant construction is expensive and only rich people can afford it. The only area where the knowledge of the people regarding such techniques and BACIP products was found to a satisfactory level was village Taus and Panyal District Ghizer.

The income of the crafts persons have, however, improved and shown significant increase. The following graph shows an average increase in the income of crafts-persons interviewed in 6 different villages such as Chator Khand, Gilgit, Khanabad, Danyore, Singal and Taus.



#### Awareness of Target Population on Seismic Risks:

As discussed in the earlier chapter of the report that awareness due to ETRP project was difficult to measure as AKPBS,P was already working in the same area on this subject with other organizations. Therefore, general awareness was there among the community, however, specific awareness i.e. earthquake resistant construction, preventive measures on the subject were yet to raise. As the area of project intervention was not a small specific area, therefore, one cannot expect awareness level of each individual in the Gilgit and Ghizer district to be the same.

The school children who participated in the safety drills were aware of the earthquake and preventive measures. The exercise was done only once for them in their schools but this activity should have been made part of quarterly activity. As the senior children in higher classes have participated in the drill and the children in the lower grades have not yet learnt it, therefore, a regular safety drill exercise would help them remember the lesson and keep cascading it to other.

The school teachers were also not very familiar with earthquake resistant construction; however, their majority was aware of the earthquake and could explain it with considerable ease.

Similarly the crafts-persons had only knowledge of their skill area but were not able to discuss the earthquake in detail.

Impact on target population at this point of time when only 2 months have passed after the project is very difficult. Construction of houses on new patterns and techniques require a lot of courage, time, money and motivation. Down the line after two years at least some people may construct their houses on earthquake resistant techniques. At this moment there was no house built on this technique, the reason again may be it is expensive. The ETRP project impact will be quite huge among target population once earthquake resistant construction become their first priority which unfortunately NOT at present.

### Current Status of the Crafts-persons - Skilled / unskilled crafts-persons income opportunities:

According to the graph below the income of almost all the skilled and semi skilled crafts-persons have increased from the lowest 25 percent to a maximum of 250 percent. There are 40 percent unskilled candidates who participated in the training under ETRP project. Almost all the skilled crafts-persons (60 percent) are already working in their own professional trades and a very small number of crafts-persons who received training in two different trades under ETRP are finding income opportunities from any one of the two. According to the respondents 15 revealed that they have earned an increased in income, 2 women have not yet started any job, 2 have found employment for the first time and one couldn't come across any increase in her income after the training. It shows that there is a greater possibility for these crafts-persons to get employed or business opportunity in the development work of infrastructure in their area.

