

Proceedings of the Half a Day Workshop on “Evolving Strategy for Capacity Building of Masons, Carpenter and Bar Binders at Panchayat Level for Safe Construction in Himachal Pradesh” held on 26th September, 2012 at 2.30 PM at Himachal Institute of Public Administration (HIPA), Fairlawn, Shimla under the Chairmanship of Sh. Dinesh Malhotra, IAS, Director HIPA.

The list of participants is at Annexure – A.

Welcome Address

The workshop started with a welcome note from the State Project Officer (SPO). The SPO welcomed and thanked the Director HIPA and all the participants. Thereafter he informed about the theme of the workshop. He said that the Disaster Management Act, 2005 lays down that the Disaster Management Authorities and the State Governments and its departments shall ensure that constructions are carried out keeping in view the vulnerability of the State to various disasters and training and capacity building programmes are carried out for all the stakeholders. Department of Revenue to the Government of Himachal Pradesh recommends the need of carrying out training and orientation of all the stakeholders in safe construction practices.

2. In this direction the Department of Revenue, Disaster Management Cell (DMC) carried out a study on “Evolving Strategy for Capacity Building of Masons, Carpenter and Bar Binders at Panchayat Level for Safe Construction in Himachal Pradesh” under the GOI-UNDP DRR Programme (2009-12). The report of the study is available at HP SDMA Website: www.hpsdma.nic.in. Further to this a study was also carried out through the NIT Hamirpur to study the current construction practices in Hamirpur district and to suggest State-specific guidelines for safe construction practices in Himachal Pradesh. Under this study the NIT also developed a tool for “masons” on safe construction practices and guide for homeowners. The report of the NIT is also available in the HP SDMA website for easy reference.

3. In order to discuss these reports and also discuss and share the experiences of many agencies such as HP State Council of Science, Technology and Environment, SEEDs India, ACC Limited, UNDP, NIT Hamirpur, etc. which have carried out trainings of Masons, etc. in the state and to chalk out an effective implementation strategy to carry out training and capacity building of mason, carpenters, bar bender, construction supervisors etc. at Panchayat level this workshop has been fixed.

4. The SPO highlighted the key issues which have led to the deterioration in the quality of construction in the State which include the following:-

- Mason literally acts as architect, structural and construction Engineer in the rural areas as there is no availability of qualified personnel for constructions;
- The introduction of new construction material such as cement and steel has led to disconnect between the tradition knowledge in constructions; and
- Non-existence of any formal trainings/learning and certification of masons, carpenters, bar benders and other construction workers leading to compromise in quality and safety.

5. He further shared information about Gujarat and Uttarakhand Models in training and certification of Masons, Carpenters and other construction workers. He also apprised the participants about UNDP training modules and manuals for Master Trainers and Masons on safe construction practices.

6. It was agreed by all the participants that such training to Masons, etc. shall create awareness about safe construction in the State.

Technical Presentations

A. SEEDS India

7. Sh. Parag Talankar, Project Manager, SEEDS India made a presentation on the outcome of the Study titled **“Evolving Strategy for Capacity Building of Masons, Carpenter and Bar Binders at Panchayat Level for Safe Construction in Himachal Pradesh “** conducted under the GOI-UNDP DRR Programme (2009-12). The key findings of the study as highlighted through the presentation are as under:-

- i) Majority of the buildings in HP are made of mud, unburnt bricks, stone wall, etc. which are at high risk, especially in case of earthquake. Poorly designed and constructed RCC structures cause very significant life and property risk. This can be one large vulnerability factor, and a cause for concern in HP given the significant shift to RCC

construction across the state. The poorly designed and constructed RCC structures pose a risk of heavy collapse and this risk is continuously increasing.

- ii) Factors affecting the quality of construction in HP include non-availability of skilled construction workers for construction, reconstruction and retrofitting. Due to shortage of skilled workers there is serious adverse impact on the quality of construction, leading to an overall degradation of the built environment in the state.
- iii) Poor use of construction material and quality and absence of ductile detailing of existing building is a problem area worth consideration. Absence of durability design and lowly maintained buildings pose a high hazard to the building stock.
- iv) On the other hand, a variety of traditional construction techniques exist in various parts of the state and though limited use of these techniques is made in the State, they are significant since they have been tested for seismic safety over the time. The masons in the State are also most familiar with these techniques and have been known to attempt replication of these techniques in modern structures.
- v) Due to lack of any formal training of construction workers the quality of construction is suffering and it is also difficult to use new materials and techniques of construction.
- vi) Emerging Needs of Masons and others construction workers training:-
 - Training course should be simple and comprehensive
 - It should be a fair mix of practical hands on training and formal
 - Certification and recognition is essential
 - Linkage with work- training with a robust system of apprenticeship
 - Building a cadre of Master Trainers
 - Mobilization should be done at Panchayat Level
- vii) Recommendations of the report:-
 - A state level institution should anchor the trainings of all the construction workers.
 - The institution should maintain GIS data base of skilled and trained personnel and share the information with potential employers.
 - The institution should outreach to the trained workers with the market information, potential livelihood opportunities, etc.
 - Capacity Building can be achieved in public-private-partnership mode – govt. have extensive network of training institutions, can provide certificate and cadre of trained resource persons. Private sector and NGOs may be mandated to carry out programme onsite of functional area of existing govt. institutions. Agencies can undertake training on agreed contents and structure and style of teaching. Local Panchayats and CBOs may be invited to support mobilisation of eligible and willing youth level entry course.

B. NIT Hamirpur

8. Dr. Hemant Vinayak, Assistant Professor, NIT Hamirpur, presented the outcome of the Study conducted by the institute on the current construction practices in Hamirpur district and to suggest State-specific guidelines for safe construction practices in Himachal Pradesh. Some of the key findings on the constructions at Hamirpur district are as under:-

- i. It is not possible to exactly quantify which irregularities are prominent and which are not. Although qualitatively most of the irregularities which need attention include stiff irregularity, mass irregularity, vertical geometry irregularity, staircase connectivity to building, bracing in roof construction, dampness, opening from corners, seismic bands at different levels.
- ii. Out of place offset were not a prominent feature in masonry construction but are of concern in RCC construction.
- iii. It has been seen that the distance between door and window opening is less than 2 feet are of major concern in case of schools which have large window opening due to higher light requirement.
- iv. All irregularities did not exist in all building as expected.
- v. All building details could not be determined because of privacy by owners, non-exposure and non-approachability of particular structural component.

9. Dr. Vinayak also explained the Masons' Guide Tool and Homeowners guide to the participants and rationale behind them.

C. ACC Limited

10. Sh. Joydeep Mukherjee, Director and Sh. Brijesh Chauksi, Chief Manager from ACC Limited shared the details of facilities made available by the company for education, awareness and training of Construction Engineers, Architects, Masons and homeowners. Director ACC Limited said that the company has long experience in this field and they would like to join hands with the State Government to take the capacity building agenda forward in a collaborative way. The ACC Help Centres have facilities such as tutorials for home buildings, well stocked libraries and panel of experts to answer the queries. ACC aims at building structure safe, strong and durable and therefore conducting various Skill Development Programmes for Masons, Contractors', Customers', Architects/Engineers' and Sarpanchs/pradhans regularly. The ACC resource pool comprises the following:-

- **114 qualified Civil Engineers** – working full time for providing Technical Support to customer and training
- **450 off-role Technical persons.**
- **39 ACC Help Vans** for on site service
- **7 "Ashwamedh"** service
- **10 ACC Help Centers**

Address by Director HIPA

11. Director HIPA commended the focused presentation made by the SEEDS, NIT and the ACC. He appreciated the initiatives of the ACC but emphasized that the company need to focus on the visibility of the activities being carried out by it in the State. Ninety one percent of the population resides in rural areas in the State and rural construction should be our concern which usually takes place without the assistance and supervision of technically qualified personnel. Legal process to ensure safe construction practices is very important and this should not be lost sight of when finalizing the strategy. He suggested that the departments of PWD and I & PH can be requested to put a condition in the tender document that the contractor must ensure engaging only trained and certified workforce/masons in departmental works in future. Training, development and dissemination of awareness material is very important to build atmosphere for interventions by the State and corporate sector can join hands with the Govt. in this area.

Views of Other Participants

12. The views expressed by different participants have been summarized as under:-
- i. Mr. Arun Handa, MRH Associates Tata Tiscon said that they have 25-30 presence points in Himachal Pradesh and are keen to join hands in awareness generation and capacity building of construction workers for safe construction practices in the State. In this regard they have developed awareness material and documentaries which can be used during training and awareness programmes. Earlier too they had collaborated under the UNDP Programme for training of masons in Jalandhar City. He also agreed to share the IEC resources with the DMC.
 - ii. Joint Director Technical Education said that the Department has the capability and mandate to conduct training and certification programmes for the masons, carpenters, bar benders and other construction workers through their network of Polytechnics and ITIs in the State. That the Corporate Sector can join hands with the department in skill development initiatives for the construction workers. The department can conduct short term training programmes as per requirement. Through the Modular Employable Skills (MES) under Skill Development Initiative Scheme (SDIS) of the Ministry of Labour and Employment, GOI, training and certification of construction workers can be done. The ITIs in the State can be equipped as Resource Centres for which the Corporate Sector and leverage its resources. The pace for the resource centres can be made available in the ITIs and Corporate Sector can help in build resource capacity in terms of training of manpower, resource material and knowhow, etc. That the Corporate Sector can provide its trainers and also support livelihood of workers under training.
 - iii. Dr. RK Sood, Prof and Head (DM), HIPA said that the Corporate Sector can chip in with the Technical Education Department and adopt ITIs for taking up training and capacity building efforts which have been well spread out in the State for the purpose. The

- Corporate Sector can also help the Govt. in setting up District Resource Centres for education, and dissemination of know-how for safe construction practices.
- iv. Sh. Rajeev Sood, BDO Kandaghat said that the hands on training of masons etc. can be done in the ongoing RDD schemes and their wages for that period can also be met out the scheme funds.
 - v. Mr. Kalit Bhardwaj, Sr. Technical Assistant, HP State Council for Science, Technology and Environment shared the experiences of the Council gained through the training centre at Sundernagar. The departments take care of the wages of construction workers during the training and such trainings are generally organized at the local level. More stress is given to the hands on and practical part of it. The council will share its training module with the Technical Education Department.

Discussion and Way Forward

I. Conduct of Trainings

13. The issue was discussed at length. It was observed that the training, education and awareness issues require to be dealt at three levels i. e.
 - a) Training of Trainers and sensitization of policy and planning makers;
 - b) Training and Capacity Building of Engineers, Architects and supervisory technical persons; and
 - c) Training and capacity building of masons, carpenters, bar benders and other skilled workers involved in construction activities.
14. In the deliberations the following was recommended unanimously:-
 - i) The training of trainers and sensitization of policy and planning personnel shall be coordinated by the DMC and HIPA. Modules for training/sensitization programme for this purpose will be developed by HIPA in consultation with NIT, NIDM, NDMA and UNDP.
 - ii) The Technical Education Department shall work out modalities for the conduct of trainings through Polytechnics and ITIs, prepare training modules and manuals and certification procedures and share the same with the DMC, Department of Revenue. The NIT Hamirpur will assist the department in this regards. The Department will take into consideration the existing training material prepared by various agencies across the State and the country.
 - iii) The committee suggested that in order to develop quality and competent engineering skills NIT Hamirpur shall coordinate and provide training programmes to Engineers and Architects. DMC will provide necessary support to NIT Hamirpur.
 - iv) The committee deliberated on the issue of providing trainings to masons and all other workers involved in construction activities both in Govt. and private sector. Considering the importance and magnitude of the issue the committee suggested

that this process is required to be institutionalized in the department of Technical Education. It was, therefore, suggested that the civil Engineering wings/departments in the 90 ITIs and 35 Polytechnics located in the State of Himachal Pradesh shall be developed/declared as nodal departments for providing trainings and capacity building of masons. The Technical Education department will work out mechanism for providing certificates through evaluation process.

- v) The DMC shall work out a policy intervention vide which it can be made compulsory to engage only trained persons in construction activities in future.

II. Role of NGOs and Corporate Sector

15. The Committee recognized the contribution and role of corporate sector in supplementing the efforts of Govt. especially in developing training nodes in ITIs and polytechnics. The efforts made by ACC Limited in organizing sensitizing programmes for Masons were laudable. But the committee suggested that the coordinated efforts can produce the desired impact and hence suggested that only corporate sector may consider the following:-

- a. Adopt certain number of ITIs and support them in providing quality training programmes to all.
- b. Support livelihood subsistence concerns of trainees during the period they are under training and are not engaged in paid employment.
- c. Provide support in developing help centres at district level.

III. The Role of State Council for Science Technology and Environment.

16. The State Council for Science Technology and Environment shall have the primary responsibility of demonstration and adaptation of Disaster Management Techniques and Technologies in construction which is suitable for the State of Himachal Pradesh. For this purpose it shall coordinate with all other technical institution in the State as well as at the National level.

IV. Role of department of Rural Development.

17. The department of Rural Development shall undertake the following:

- i. Registration and listing of all masons to be trained/trained in the State. The department shall prepare a database in GIS environment and shall coordinate with department of Science, Technology and Environment for this purpose. The database of Masons prepared by ACC Limited will also be used for this purpose as ACC Limited has assured to share the same with DMC.
- ii. To Work out a scheme for including Disaster Management trainings as part of ongoing programmes being implemented by department of Rural Development.

V. Role of NGOs

18. The NGOs shall provide the necessary link between the Govt. agencies and the beneficiaries. The NGOs shall primarily be responsible for mobilizing the masons for training programmes to be conducted in the IITs and Polytechnics.

Vote of Thanks

19. At the end Dr. RK Sood thanked the Director HIPA and all participants for attending the workshop and taking active part in the discussion. He hoped that the decision taken in the workshop will be implemented by all concerned in a time bound manner.

Sd/-
Additional Chief Secretary (Revenue) to the
Government of Himachal Pradesh.

Endorsement No. Rev(DMC)(B)11-6/2009-III

Dated: 16th October, 2012

Copy forwarded for information and immediate necessary action and report to:

1. All the Heads of Departments in the State.
2. All the participants.

Sd/-
Additional Secretary (Revenue) to the
Government of Himachal Pradesh.

Annexure - A

Attendance Sheet

Sr. No.	Name	Designation	Organization	Email & cell No.
1.	Rupan Sehgal	State Project Engineer	Sarva Shiksha Abhiyan	vkisehgal@gmail.com 9816042065
2.	Kalit Bhardwaj	Sr. Tech. Assistant	State Council for Science Technology and Environment	kalitsnr@yahoo.co.in 9418640137
3.	Narchlum Gupta	XEN RDD Shimla	Rural Dev. Shimla	9418505201
4.	KC Mestana	A.E RDD	Rural Dev. Shimla	9418107965
5.	KC Rana	SE (Civil)	HPSEB Ltd	9418001799
6.	Chaman Lal	AE (E)	HPSEB	9418458208
7.	AK Ahuja	J.D. (TE)	DTE Sundernagar	9418009507
8.	KK Gupta	SE	IPH	9418020774
9.	SP Seth	DE	CCI Raban	98574929995
10.	MK Sharma	HOD Civil Engg.	Govt. Polytechnic Sundernagar	mks1955@rediffmail.com 9418003400
11.	Arun Handa		MRH Associates TATA Tiscon	mrhtatatiscon@gmail.com 94141-16089
12.	Er. Ajay Soni	A.E HPPWD Shimla	HPPWD	soniajay1967@yahoo.co.in 9418462543
13.	Er. Prem Awasti	JE HPPWD	HPPWD	premawasti@gmail.com 9816201499
14.	Vijay Kashyap	A.E	IPH	eespiph@gmail.com
15.	Sumit Sood	Paktnog	TATA Tiscon	divashimla@gmail.com
16.	Bihari Lal	Mason HPPWD Shimla	HPPWD	
17.	Dr. Hemant Vinayak	Assistant Professor	NIT Hamirpur	hemant.vinayak@gmail.com 9418075886
18.	D.C. Rana	State Project Officer	UNDP	dcrana04@yahoo.co.in 9418184700
19.	Arun Nainta	Chief Manager	ACC Limited	arun.nainta@acclimited.com
20.	Rajeev Sood	BDO	Dev. Block Kandaghat	9418031154
21.	Brijesh Chauksi	Chief Manager	ACC Limited	brijeshkumar.chauksi@acclimited.com
22.	Sudeep Chatterjee		ACC Limited	sudeep.chatterjee@acclimited.com
23.	Joydeep	Director	ACC Limited	joydeep.mukherjee@acclimited.com

Proceedings of Workshop held on 26.9.2012 at HIPA to work out a strategy for Training & Capacity Building of Masons, Carpenters, Bar-benders etc.

	Mukherjee			
24.	Dr. RK Sood	Prof. HIPA	HIPA	9418464024
25.	Parag Talankar	Project manager	SEEDS	parag@seedsindia.com
26.	Anish Kundel	Area Incharge	ACC Limited	Anish.kundel@acclimited.com
27.	V.S Kamal	DMC	Rev. Deptt HP Sectt.	9418020129
28.	Navneet Yadav	Capacity Building and Training Associate	UNDP DRR Programme	9816678898
29.	VS Kanwar	Sr. Asstt	DM Cell HP Sectt.	9459226550