



Disaster Management Community



Poverty

Work and Employment Community



Solution Exchange for the Disaster Management Community

Solution Exchange for the Work and Employment Community

Query: Skills Training for Safe Construction - Examples

Compiled by G. Padmanabhan and Sumeeta Banerji, Resource Persons and Nupur Arora and Arif Hussain, Research Associates
11 June 2007

From Anindya Kumar Sarkar, United Nations Development Programme (UNDP), Bhubaneswar
Posted 25 May 2007

Dear Members,

I am associated with UNDP Shelter Project in Orissa. As part of our work on SDC-UNDP supported Rural Housing Project, we are engaged in different activities aimed at ensuring dissemination of knowledge, information and technology for safer construction.

Most of the construction industry in India is still unorganized, from mason downwards there is hardly any technical knowledge available on safe materials, construction practices and design principles. In rural areas, the situation is even worse as there is complete absence of competent architects or engineers and people are dependent upon the local masons who function as architect-engineer-builder all rolled into one. This often leads to weak and poorly designed structures. Eventually this situation leads to loss of life, property and sources of livelihood in case of a disaster.

Given the low-level of construction skills available with the masons, there is a pressing need to train and orient the masons towards safe material, safe design principles and practices. This will not only lead to

better and safer structures in urban and rural areas but will also ensure better opportunities and remuneration for masons. The unprecedented growth of the construction industry in the recent years, and the increased understanding to promote safe construction have increased the demand for trained masons. It has been observed that capacity building of local masons and the labour force in the construction industry can increase livelihood opportunities. Any type of masons' training helps them to be better employable, increases the daily wage rates or number of days of work in a month, and it adds to the dignity and confidence to handle the tasks. Also, creation of more jobs in construction sector helps in the diversification of the economic base.

According to the Vulnerability Atlas prepared by the Ministry of Urban Development and Poverty Alleviation, 85% of the geographical area of our country is vulnerable to one or multiple disasters. Also 59% of the landmass, home to 65% of country's population, is prone to earthquakes. Most of the casualties during disasters like earthquakes are caused by the collapse of the structures, the main reasons being faulty design, weak construction material and poor construction style.

To enhance the quality of Masons Training Programmes and the process of designing a training module for masons, Orissa Development Technocrats' Forum (ODTF) organized a state level consultation on standardization of course curricula for masons (see details of consultation at <http://www.solutionexchange-un.net.in/emp/cr/res25050702.doc>) where a 12 day module was prepared (see module at link <http://www.solutionexchange-un.net.in/emp/cr/res25050703.xls>).

In order to ensure a broader level discussion and a larger pool of ideas, we are now organizing a National Consultation on Standardizing Masons Course Curricula on Disaster-Resistant Construction Practices on June 8. A note on the upcoming national consultation can be found at <http://www.solutionexchange-un.net.in/emp/cr/res25050701.doc>

We would like to request members of the Solution Exchange Work and Employment Community and Disaster Management Community to give their valuable feedback on the course curricula prepared and share their experiences of similar initiatives. Specifically:

- Has preparation of such a module ever been attempted? If so, where and when? Could members share examples of such modules?
- Do you have any suggestions to improve the attached 12-day module?
- Can you suggest important resource persons/ organizations who can make valuable contributions to the Consultation?

Your inputs will be invaluable in making the training module more practical and effective.

Responses were received, with thanks, from

1. [Digbijoy Bhowmik](#), United Nations Development Programme (UNDP), New Delhi
2. [Surendra N. Tripathi](#), Panchayati Raj and Information Technology, Government of Orissa, Bhubaneswar
3. [Ravi Sinha](#), Indian Institute of Technology, Mumbai
4. [Sanjiv Lewin](#), St. John's Medical College Hospital, Bangalore
5. [Ramesha C.](#), Karnataka State Pollution Control Board, Bangalore
6. [Deepashree Belawadi](#), BP Energy India Pvt. Ltd, Bangalore
7. [Mihir Joshi](#), Sustainable Environment and Ecological Development Society (SEEDS) India, New Delhi
8. [S. J. Amalan](#), Apex Hi-Tech Institute, Bangalore
9. [Surekha Sule](#), National Institute of Rural Development, Hyderabad
10. Sarah Figge, UNDP, New Delhi*

* *Offline Contribution*

Further contributions are welcome!

[Summary of Responses](#)
[Comparative Experiences](#)
[Related Resources](#)
[Responses in Full](#)

Summary of Responses

Noting the recent growth in the construction industry and improved understanding of the need to promote safe construction practices, the query highlighted the increased demand for trained masons. Responding to a request for examples of **Masons Training Programs**, members made several value suggestions for how to improve the Orissa Development Technocrats' Forum "12-day Training Module" and listed resource persons/organizations to invite to the "National Consultation on Standardizing Masons Course Curricula on Disaster-Resistant Construction Practices," organised by United Nations Development Programme (UNDP), Bhubaneswar. They also proffered ideas on the design of the training programme

Respondents suggested consulting the [Performance Appraisal Certification Scheme](#) (PACS) as a **reference point for certifying master masons**. They also recommended reviewing the [guidelines](#) on improving the seismic safety of non-engineered housing constructions by the National Information Center of Earthquake Engineering and the Directorate General of Employment and Training "[Modular Employable Skills](#)" program, responsible for the training, and certifying of skilled work force under the National Council for Vocational Training.

Sharing an experience from [Gujarat](#), members highlighted the work of the NGO SEEDS has done since the 2001 Bhuj earthquake, training masons in various districts and creating the "SEEDS Mason Association."

Along with mentioning examples of existing programs, respondents provided suggestions on the design and content of a Masons' Training Program.

Design

Members suggested the module targets masons who have different levels of exposure to construction work. The module needs to be divided into stages and offer range of skills and levels, and focus on developing skills that masons do not acquire while working in the construction sector. They also proposed an "upward progression" where those trained could go for higher certification.

Respondents recommended using the "learning by doing" approach, where a master mason demonstrates construction techniques hands-on and "modeling," which involves using simulating models using easily available materials.

Additionally, discussants advised providing incentives to masons to encourage them to participate and finish a complete course, and cautioned that a 12-day training programme would likely be too long for masons, since they earn a daily wages.

Finally, members suggested identifying "Master Trainers" who once trained, can train more masons.

Content

On the issue of content, members recommended segmenting it according to skill level- Core, Basic and Advanced skills. They felt this approach would encourage more women to participate.

Further, respondents opined that a standardized-training curricula for the entire country needs to have a multi-level approach, as earthquake hazards vary according to the area. Therefore, the construction requirements differ and engineering properties of different locally available construction materials need to be included in the module.

Members also felt that an innovative approach towards designing the content must be adapted, such as using audio visuals.

Finally, respondents felt that although the National Rural Employment Guarantee Act (NREGA) does not consider mason training a major activity, adding training to the scheme's activities would prove beneficial and recommended several [organizations](#) they felt could make valuable contributions to the Consultation.

Comparative Experiences

Gujarat

Mason Association for Training and Employment (from [Mihir Joshi](#), *Seeds India*, New Delhi)

SEEDS India organized masons into an association called SEEDS Mason Association (SMA). The association in collaboration with Gujarat State Disaster management Authority (GSDMA) runs certificate program in masonry. The program offers skill based modules, developed by "City and Guilds." Currently the association has almost 1,000 members and the numbers are growing. Read [more](#)

Related Resources

Recommended Organizations

From [Anindya Kumar Sarkar](#), UNDP, New Delhi

UNDP Shelter Project, Bhubaneswar

Orissa Hub, UN House-II, 256, Forest Park, Bhubaneswar 751009 Orissa; Tel: 91-674-2530015/4850/1; anindya.sarkar@undp.org; http://www.archidev.org/mipaa/mission_presentation/undp/Shelter.htm

Project to catalyse and sustain a movement to bring about capacity development of communities and local NGOs involved in relief and rehabilitation.

Orissa Development Technocrats' Forum (ODTF), Bhubaneswar

256, Forest Park, Bhubaneswar 751009 Orissa; Tel: 91-674-2595850/1, 2595627; Fax: 91-674-2595254; dtfindia@yahoo.co.in; <http://www.geocities.com/dtfindia/index.htm>

Facilitates an effective rural housing delivery system in Orissa through the "Promotion of Appropriate Construction Technologies and Opportunities for Sustainable Livelihoods"

From [Digbijoy Bhowmik](#), UNDP, New Delhi

National Disaster Management Authority (NDMA), New Delhi

Centaur Hotel, Near IGI Airport, New Delhi 110037; Tel: 25655012; www.ndma.gov.in

Developed a holistic, multi-disaster and technology-driven strategy for disaster management including preparedness and training through collective efforts of the Government and NGOs

Building Materials and Technology Promotion Council (BMTPC), New Delhi

Core 5-A, 1st Floor, India Habitat Centre, Lodi Road, New Delhi 110003; Tel: 91-11-24638096/7; 24651243, 24636759; Fax: 91-11-24642849; info@bmtpc.org; <http://www.bmtpc.org/pacs/pacs.htm>

Develops/operationalise integrated technology development, transfer & investment approach and also implements the "Performance Appraisal Certification Scheme"

Construction Industry Development Council (CIDC), New Delhi

801, Hemkunt Chambers, 89 Nehru Place, New Delhi 110019; Tel: 91-11-26234770, 26451766, 26433709, 26489992, 41617971; Fax: 91-11-26451604; cidc@vsnl.com; www.cidc.in

Planning Commission and Indian Construction Industry initiative offers training and certifications courses for informal sector construction workers, such as safer construction techniques

From [Deepashree Belawadi](#), BP Energy India Pvt. Ltd, Bangalore

GTZ-German Technical Corporation, New Delhi

Contact: Anita Sharma, Senior Technical Advisor, National Vocational Training System, D-108, Anand Niketan, New Delhi 110021; Tel: 91-11-24117268, 24117274; anita.sharma@nvtindia.org; <http://www.gtz.de/en/weltweit/asien-pazifik/indien/9584.htm>

GTZ developed training modules on different aspects of construction, possible source for material on masonry training

Construction Technicians Training Institute (CTTI), National Academy for Construction (NAC), Hyderabad

Contact: Sr. Deputy Director (Training and Placements), NAC Campus, Cyberabad, Kondapur (PO), Hyderabad 500032 Andhra Pradesh; Tel: 91-40-23111915; Fax: 91-40-23111917; ctti_nachyd@yahoo.com; www.nac.edu.in/ctti.html

Imparts training in different trade related to construction, could serve as a focal point for sourcing training material and consultation for the masonry training

From [Mihir Joshi](#), SEEDS India, New Delhi

Sustainable Environment and Ecological Development Society (SEEDS) India, New Delhi

D-11, Panchsheel Enclave, New Delhi 110017; Tel: 91-11-26498371, 41748008; Fax: 91-11-26498372; <http://www.seedsindia.org/SCP.htm>

Working to make communities resilient to disasters, a thematic area is safe construction practices- has experience training masons on disaster resistant construction techniques

City and Guilds, United Kingdom

Customer Relations, 1 Giltspur Street, London EC1A 9DD, United Kingdom; Tel: 44-0-2072942800; Fax: 44-0-2072942405; Click [here](#) to view site

International consulting organization involved in skill based training for various trades including construction, conducted trainings for GSDMA programme

Gujarat State Disaster Management Authority (GSDMA), Gandhinagar

Block No. 11, 5th Floor, Udyog Bhavan, Sector-11, Gandhinagar, Gujarat 382017; Tel: 91-79-23259220/303/246; Fax: 91-79-23259275/302/289; info@gsdma.org; <http://www.gsdma.org/mcp.htm>

State disaster management authority involved in training masons, in collaboration with various agencies on safer construction techniques, through its mason's skill certification program

Gujarat Council for Vocational Training, Gandhinagar

Directorate of Employment and Training, Dr. Jivraj Mehta Bhavan, Block-1, 3rd Floor, Gandhinagar, Gujarat; Tel: 079-3253431; <http://www.talimrojgar.org/Scripts/ITIInfo.asp?ApplyFor=498&CallCode=1>
Engaged in training of masons and construction workers in collaboration with the consulting firm City and Guilds

Kutch Navnirman Abhiyan, Ahmedabad

105-106 C, Royal Chinmay, Besides Simandhar Towers, Off Judges Bungalows Road, Bodakdev, Vastrapur, Ahmedabad 380015 Gujarat; Tel: 91-79-26854248, 26856685, 26857745; Fax: 91-79-26857443; socjust@icenet.net; <http://www.onlinevolunteers.org/relief/kna.html>
Working in Gujarat on training masons and construction workers on how to build disaster resistant structures

National Centre for People's Action in Disaster Preparedness (NCPDP), Ahmedabad

NCPDP/CEDAP, 103 Antariksh Building, Panjarapol Cross-Roads, Ahmedabad 380015 Gujarat; Tel: 91-79-26308843; mitigation@ncpdpindia.org; http://www.ncpdpindia.org/technology_transfer.htm
Conducts detailed training programs for masons, especially in earthquake affected and prone areas of Gujarat

Organization for Development Education (UNNATI), Ahmedabad

G-1, 200 Azad Society, Ahmedabad 380015 Gujarat; Tel: 079-26746145/33296; Fax: 079-26743752; psu_unnati@unnati.org; <http://www.unnati.org/social-inclusion-empowerment.html>
Multi-state voluntary organization working in Gujarat on mason training and support

National Institute of Rural Development (NIRD), Hyderabad (from [Surekha Sule](#))

Rajendranagar, Hyderabad 500030 Andhra Pradesh; Tel: 91-40-24008448/472/473/466/526; Fax: 91-40-24015277/6500; regr@nird.gov.in; <http://www.nird.org.in/>
NIRD through its rural building centre is trying to popularize local material and traditional building technologies by training construction workers and helping place them

Swayam Shikshan Prayog (SSP), Mumbai (from [Sarah Figge](#), UNDP, New Delhi*)

5th Floor, Bhardawadi Hospital, Bhardawadi Road, Andheri West, Mumbai 400058 Maharashtra; Tel: 91-22-22907586, 26771132; Fax: 91-22-26771132; sspindia@vsnl.net;
<http://www.sspindia.org/Disaster.htm>

After the 2004 Tsunami, under their Disaster Risk Reduction program, SSP trained masons (in Tamil Nadu) in "safe shelter construction" practices and disaster safety measures

Recommended Documentation

From [Digbijoy Bhowmik](#), UNDP, New Delhi

IAEE Guidelines for Earthquake Resistant Non-Engineered Construction

International Association for Earthquake Engineering (IAEE), IIT Kanpur; 2004
http://nicee.org/IAEE_English.php

Reference for designing and planning masonry training focusing on earthquake resistant construction techniques

Low Cost Rural Houses from Local Materials (from [Surekha Sule](#), National Institute of Rural Development, Hyderabad)

By Surekha Sule; India Together; November 29, 2005

<http://www.indiatogether.org/2005/nov/eco-lowcost.htm>

Articles reports on the Rural Building Centre, a NIRD initiative showcasing homes built with local materials and technology which are earthquake resistant.

From [Mihir Joshi](#), SEEDS India, New Delhi

Home Owner's Guide to Earthquake Safety

Gujarat State Disaster Management Authority; March 2003

<http://www.gsdma.org/pdf/home-owners-guide-eng.pdf> (Size: 1.4 MB)

Guidelines contain a section on "Building a New House," outlining how to choose building professionals, what structural systems to use and the relevant building codes to consider

A People's Guide to Building Damages and Disaster Safe Construction

Organization for Development Education (UNNATI); 2006

<http://www.unnati.org/pdfs/manuals/unnatibook.PDF> (Size: 5.5 MB)

Simple guide (using photos and illustrations) for how to construct buildings in order to prevent and mitigate the main types of damage caused by natural disasters

Risk Reduction through Disaster Risk Reduction through Disaster Recovery in India

By Mihir Joshi; ESW international conference Austin Texas, SEEDS India

<http://www.engr.utexas.edu/esw/conference/Joshi.pdf> (Size: 1.96 MB)

Presentation outlines work by SEEDs to reduce risks, including a mason-training program in Port Blair that used models, hands on training and classroom settings to education masons

Man of Marbles: Story of Shankar (from [Sarah Figge](#), UNDP, New Delhi*)

One Year After Tsunami, Tsunami Update-6, Disaster Watch; December 26, 2005

http://www.disasterwatch.net/Best%20Practices/SSP.htm?id=south_asia_tsunami

Article on Swayam Shikshan Prayog training over 150 masons in disaster safety in Nagapattinam, to meet housing demand after the disaster and contribute to safer dwelling places in the future

Recommended Portals and Information Bases

Directorate General of Employment and Training (DG-E&T), Ministry of Labour and Employment, Government of India (from [S. J. Amalan](#), Directorate General of Employment & Training, New Delhi)

<http://dget.gov.in>

Site has information on various DG-E&T schemes aimed at providing vocational training for unemployed youth including training for masons and construction workers on safe construction

Related Past Consolidated Replies

[Redesigning GoI's Urban Employment/Livelihoods Program](#) from **Alkesh Sharma and Ashok Malhotra, New Delhi (Advice)**. (Size: 178 KB) Work and Employment Community. Issued 25 May 2007

Provides advice on redesigning the Government of India's urban self-employment programme, SJSRY, specifically on aspects of self-employment and employability

[Skill Formation in Unorganized Sector](#), from **Jeemol Unni, National Commission for Enterprises in the Unorganized Sector, New Delhi (Experiences)** (Size: 241 KB). Work and Employment Community. Issued 8 November 2005

Examples and experiences reflecting approaches to training and skill formation, including types of skill sets required and flagging key issues in training and skill transfer schemes

[Evaluation of the Support to Training and Employment Programme \(STEP\)](#), from **Ratna M. Sudarshan, Institute of Social Studies Trust, New Delhi (Experiences)** (Size: 105 KB). Work and Employment Community. Issued 27 November 2006

Captures actual impact on women of skill training through the STEP Programme based on members' experiences and provides recommendations to redesign the programme

[Skill Development and Vocational Education for Sustainable Livelihoods](#), from Pooja Gianchandani, Confederation of Indian Industry (CII), Gurgaon (Experiences; Referrals) (Size: 168 KB). Work and Employment Community. Issued 29 December 2006

Provides case studies, success stories, approaches on skill development and vocational education for sustainable livelihoods and refers relevant documents and organizations

[Employment and Training of Women in Technical Fields](#), from Sangeetha Purushothaman, Best Practices Foundation, Bangalore (Advice; Experiences) (Size: 376 KB) Work and Employment Community. Issued 24 February 2007

Gives advice on strategies to encourage industries to hire women in "non-traditional" jobs and lists successful experiences enrolling more women in technical training

* Offline Contribution

Responses in Full

[Digbijoy Bhowmik](#), United Nations Development Programme (UNDP), New Delhi

I recall that a couple of days ago, there was a news article in a National daily about the National Disaster Management Authority (NDMA) making structural safety certification a compulsory prerequisite for availing a loan to buy property in urban areas. While how far this will be adhered to remains uncertain, preliminary efforts of compliance would certainly mean exposing some of the good construction practices (such as tying reinforcement rods correctly, spacing MS stirrups properly) to some of the masons who have worked in urban areas.

I would not be surprised if you find certain workers in your prospective trainee mason pool who has worked in urban areas before, like in Delhi where in Indira Gandhi International (IGI) stadium the tensigrity roof had a whole team of workers from Orissa to hoist it. Would such a situation warrant the consideration of an incremental programme, which is adaptively targeted at masons who have had varying levels of exposure to construction? I would recommend looking for such workers with prior exposure in urban areas to be picked up for training as Master trainers, who could then pass on their knowledge on site, and through interaction with masons who work with them. I must mention here that peer-to-peer learning goes somewhat longer in disseminating a construction practice than a point-disseminated discourse, such as a classroom.

You might also want to see the Performance Appraisal Certification Scheme (PACS) <http://www.bmtpc.org/pacs/pacs.htm> as a reference point for certifying Master masons. While building tenements is still not considered a prime activity in rural areas under the NREGA, one may suppose that value addition to masons may change the perspective to an extent. To know about the Work Status Report of NREGA during 2006-2007 click <http://nrega.nic.in/states/mprworkpmo.asp?fin=2006-2007>

Sometimes, adopting local knowledge and systems of measurement (fingerbreadths instead of cms/ inches) go a long way in building rapport and communication with the local construction workforce than a purely technical and 'IS certified' approach. The same approach applies to maps, plans, detail schematics and other methods of communicating design safety. A number of building centres and labour/ mason consortia have established their own brand equity and methods that are tried and tested, and any mode of upgrading the same must be routed through the known route. In essence, the dissemination would be

a sugar-coated, skimmed and interactive variant of what we learn at architecture and civil engineering schools. Try explaining moment distribution this way!

A suggestion worth considering would be the inclusion of learning-by-doing model, and modeling itself in the first place. While the former entails demonstrating construction techniques by master masons on a hands-on basis, the latter involves simulating models using easily available materials such as mud, straw, wood splinters and similar materials, to know how structures work. This also makes learning a lot more fun and interactive. And strange as it may sound, this is one activity that is not identified as 'male dominated' either - women have been known to participate just as keenly, and this approach actually helps more in helping households understand their own tenements.

Some months ago, a Consolidated Reply was posted on 'design of Panchayat Buildings' in the Decentralization forum. One of the resources referred there was guidelines to non-engineered earthquake resistant construction. Please refer them here: http://www.nicee.org/IAEE_English.php. I'd suggest getting some rural communications specialists to help transcode it into something interactive and appealing to masons.

Also, on this forum, a query was posted on redesigning Government of India's urban livelihoods and skill development programme, the Swarna Jayanti Shehri Rozgar Yojna. In the Consolidated reply posted on 25 May 2007, one of the resources cited that could be used was Construction Industry Development Council (CIDC). This has been set up jointly by Planning Commission, Government of India and the Indian Construction Industry, and offers training and certifications courses for informal sector construction workers. Contact Details are 801, Hemkunt Chambers, 89 Nehru Place, New Delhi 110019; Tel: 91-11-26234770, 26451766, 26433709, 26489992, 41617971; Fax: 91-11-26451604; cidc@vsnl.com; www.cidc.in.

[Surendra N. Tripathi](#), Panchayati Raj and Information Technology, Government of Orissa, Bhubaneswar

I have seen some earthquake resistant houses promoted by United Nations Development Programme (UNDP) in Orissa and found them of very good quality. I do think that this effort of UNDP Bhubaneswar needs proper appreciation at national level.

[Ravi Sinha](#), Indian Institute of Technology, Mumbai

UNDP Orissa has presented excellent work in Orissa. The standardization of training curriculum for Orissa is also a very welcome step.

There is just one point of caution. The earthquake hazard is different in different parts of the country, which is reflected in the construction requirements for disaster resistance. Standardised training curricula for the entire country will therefore require multi-level curricula. It will also need to consider the engineering properties of the different locally available construction materials. I hope that your proposed national consultation will consider these factors.

[Sanjiv Lewin](#), St. John's Medical College Hospital, Bangalore

Please excuse my input being rather far from being an expert on masonry, but I was happy to see your rather interesting training. It is similar to what I do for care providers presently in Paediatric HIV Care and Treatment and Disaster Management in the past.

I was wondering if your training could incorporate participants forming teams and actually going through the steps of planning and implementing a building project with the regular scenarios and resource constraints to add a sense of realism to the exercise. This could also be a method to evaluate the participants to truly make the effort an appropriate competency based training.

Ramesha C., Karnataka State Pollution Control Board, Bangalore

All cement companies do have some sort of workshops to masons to push their products. This is usually followed by gift distribution to make sure that these people will recommend the cement brand to their clients. I feel this expertise of cement companies and practical difficulties in organising such training may be considered in preparing a module.

12 days is too long for masons who earn daily wages and being absent to work means loss of wages. This needs to be considered and may be trained on holidays in the form of movies instead of lectures. I feel it is also essential to provide them some benefits, in order to keep them interested.

Deepashree Belawadi, BP Energy India Pvt. Ltd, Bangalore

Please have a look at the following institutions; they have developed modular training programmes on various vocational skills including Masonry.

1. **GTZ - German Technical Corporation:** GTZ has developed good training modules, one may find out if they have it on Masonry.

Contact Details:

Anita Sharma, Senior Technical Advisor,
National Vocational Training System
D-108, Anand Niketan, New Delhi - 110021
Tel: 011 24117268/7274
anita.sharma@nvtindia.org

2. NAC - National Academy for Construction's **Construction Technicians Training Institute (CTTI)** is also known to have good programmes in construction trade.

Contact Details:

Sr. Deputy Director (Training and Placements)
Construction Technicians Training Institute
NAC Campus, Cyberabad
Kondapur (PO)
Hyderabad – 500 032
Tel: 040-23111 915 / 916 Ext: 2017 / 2010; 92473-76513
Fax: 040-23111 997
E-mail: ctti_nachyd@yahoo.com
Website: www.nac.edu.in; <http://www.nac.edu.in/ctti.html>

3. **CIDC - Construction Industry Development Council (CIDC):** CIDC has developed Modular Employable Skills training programme modules in collaboration with National Council for Vocational Training (NCVT) including Masonry.

Contact Details:

Mr. Bhavani Prasad,

Senior Advisor, CIDC

Tel: 080-36966373, +919350827684, he was involved in the development of the modules along with Mr. Amalan from NCVT (Bangalore).

cidc.blr@gmail.com

Mihir Joshi, Sustainable Environment and Ecological Development Society (SEEDS) India, New Delhi

I am associated with SEEDS India & work with SMR (Structural Mitigation Response) team. We are basically looking after all the technical aspects of safe construction in various areas where we have projects on natural disaster risk reduction. Here in SEEDS one of our main focus is on Mason training & we are promoting it in areas where we have our presence.

We have taken up masons training programme in a big way in various districts of Gujarat & its ongoing since the 2001 Bhuj earthquake. We have created an association of masons called 'SEEDS Mason Association (SMA)'. Right now, we have almost 1000 masons under this association in Gujarat. Gujarat State Disaster Management Authority (GSDMA) has come up with a certification programme of masons in Gujarat. They have developed skill-based modules for masons working in Gujarat. This skill based module programme was developed by UK based consultants called City & Guilds who are involved in this kind of skill-based programmes for various professions. The programme is divided in three major skills:

1. Core skill
2. Basic skill &
3. Advance skill.

These skills are subdivided in to different skills e.g. under Core skill they have divided into Safety Skill, Maths Skill & Drawing Skill. You can have more information about the same from www.gsdma.org. GSDMA has engaged a government agency called Gujarat Council of Vocational Training (GCVT) who are involved in taking examinations they have been trained by City & guilds people from UK. SEEDS is involved in training of masons based on this curriculum. You can also look into our website www.seedsindia.org for the programme or contact us for the curriculum of mason training programme.

Based on our past experience we feel that the Mason Training Programme should focus on the skills which masons do not acquire while working in construction sector. One of the problems we faced particularly in urban area is that all the masons are not willing to learn all the skills as they have specialized in one skill only so in that matter if we can think of advance training in that skill only then interest of masons will be more for training. Duration of training programme is also very important they cannot come for more then 3-4 days as they are working on daily wages. We have been giving training to them during night so they can also go to work & at the same time focus on training programme.

One of the major thing we did during our training programme is that we haven't paid any money for attending training programme because then their focus will be diverted for that we can link them with other stockholders in construction industry who demands quality work. We have been able to do that with some cement companies & some big contractors.

For consultation you can contact some of the NGOs which I know worked in Gujarat for mason training programme, they are: Kutch Navnirman Abhiyan, National Centre for Peoples'- Action in Disaster Preparedness (NCPDP) and Unnati.

S. J. Amalan, Apex Hi-tech Institute, Bangalore

I am working in Directorate General of Employment and Training (DGET), Ministry of Labour & Employment, Government of India, and we at DGET are responsible for the training and certifying of skilled manpower under National Council for Vocational Training (NCVT) in the country.

In today's scenario, it is important to recognize skills and nurture them to reach internationally comparable standards. For which a framework for various sectors has been evolved under the title "Modular Employable Skills" of DGET with NCVT certification. However, construction skills are under preparation for entry-level skills and will be available shortly. This will be certified under NCVT.

Referring to the skill of "Mason", what we now need is the entry level skills with a vision or road map for upward progression of the skilled person to Industrial Training Institutes (ITI)-graduation/higher levels of skill and further to Diploma and so on. Unless made socially acceptable it would be futile to evolve the Mason's Skill to higher levels of acceptability. And likewise other entry level skills in the Construction Sector like Wood-working/Carpentry Skills, Steel working Skills, Form Working skills, etc. We are working on this skill training modules.

The Construction Industry and others should be involved in the image building of its Skilled Workers in the interest of a broader development of the Construction sector and their inputs are imperative.

[Surekha Sule](#), National Institute of Rural Development, Hyderabad

I work with the National Institute of Rural Development (NIRD), Hyderabad where we have a Rural Building Centre. Here 14 typologies of regional houses with local material, local traditional building technology are on display. All these have earthquake resistant feature. NIRD is trying to promote these traditional constructions reinforcing the technologies.

For training construction workers on such technology, you may get in touch with Dr Mani from NIRD at manibn@rediffmail.com.

National Academy of Construction at Hyderabad also trains construction workers and facilitates their placement. You may get in touch with Brig Swaminathan Mohan .His phone numbers are 098497 57983/ 23112082 (D)

I wrote on NIRD's Rural Building Centre in www.indiatogether.org that may please be referred at <http://www.indiatogether.org/2005/nov/eco-lowcost.htm>

Besides this has potential for generating rural employment. Batches of rural youth can be trained as masons, plumbers etc for such construction.

Many thanks to all who contributed to this query!

If you have further information to share on this topic, please send it to Solution Exchange for the Disaster Management Community in India at se-drm@solutionexchange-un.net.in or Solution Exchange for the Work and Employment Community in India se-emp@solutionexchange-un.net.in with the subject heading "Re: [se-drm] [se-emp] Query: Skills Training for Safe Construction – Examples. Additional Reply"

Disclaimer: *In posting messages or incorporating these messages into synthesized responses, the UN accepts no responsibility for their veracity or authenticity. Members intending to use or transmit the information contained in these messages should be aware that they are relying on their own judgment.*



Copyrighted under Creative Commons License "[Attribution-NonCommercial-ShareAlike 2.5](https://creativecommons.org/licenses/by-nc-sa/2.5/)".
Re-users of this material must cite as their source Solution Exchange as well as the item's recommender, if relevant, and must share any derivative work with the Solution Exchange Community.



Solution Exchange is a UN initiative for development practitioners in India. For more information please visit www.solutionexchange-un.net.in