

Report of the Two Days Training Programme on “Soak Pit/ Waste Water Recycle Unit” to Junior Engineers and Masons of Rural Development Department, H.P organized by Appropriate Technology Centre, SCST&E, Govt. Polytechnic, Sundernagar on 04-05 July, 2016.

Appropriate Technology Centre, State Council for Science Technology & Environment, H.P, Govt. Polytechnic, Sundernagar organized a two days training to Junior Engineer/Mason of Rural Development Department, H.P from Shimla District of the State on “Soak Pit/ Waste Water Recycle Unit” on 04-05 July, 2016 at Appropriate Technology Centre, Sundernagar.

The participants were registered at the venue of the training programme i.e. Govt. Polytechnic, Sundernagar by Mrs. Neena Sharma, DEO, ATC, Sundernagar on 04-07-2016 from 10 am to 11 am. The two days training was organized as per the technical schedule prepared for organization of the training by the ATC, Sundernagar. The participants were distributed literature alongwith folder, pen, pad and other material.



At the outset of the training programme the participants were welcomed by Sh. Kalit Bhardwaj, STA, ATC, Sundernagar on behalf of the State Council Science, Technology & Environment, H.P. and briefed the Junior Engineer/Masons about the purpose of the two days training programme. He briefed the participants about the uses and benefits of the Soak Pits.

Technical Session-I (04.07.2016)

During the Technical Session-I a lecture was delivered by Sh. Kalit Bhardwaj, STA on Waste Water Recycle Unit. He informed that waste water generated after cleaning of utensils and clothes is called grey water which generally is not used for any purpose and creates pollution to the environment around the houses in both villages as well as in urban areas and become a breeding ground for insects/pests/flies etc. The Appropriate Technology Centre, Sundernagar in order to make use of the so called waste water has started popularizing use of waste water recycled for other domestic use like cleaning of the houses and its premises and for kitchen gardening, toilets etc. The objectives of reuse of waste water are

- To recycle the waste water for other domestic uses namely kitchen gardening, toilets and cleaning of houses/buildings.

- To conserve water and make maximum use of the already available water for use.
- To popularize waste water recycling technology amongst the communities in the State.
- To train manpower for propagation of the waste water technology in the State.



Technical session-II (04.07.2016)

The Technical session-II was started with a lecture by Er. Adit Rana, Lecturer Civil, Govt. Polytechnic Sundernagar on details about solid and waste water management in rural areas. He explained about the solid and liquid waste disposal problem especially in rural areas. Waste is a severe threat to the public health concern and cleanliness. Though, the form of waste (both solid and liquid) generated in rural areas is predominantly organic and biodegradable yet becoming a major problem to the overall sustainability of the ecological balance. In the absence of proper disposal of solid and liquid waste they are leading to vector born diseases such as diarrhea, Malaria, polio, dengue etc. He elaborated types of waste such as Solid waste and Liquid waste. Solid waste is divided in to two categories, Biodegradable and Non –biodegradable. Biodegradable waste is completely decomposed by biological processes either in presence or in absence of air e.g. kitchen waste, animal dung etc. this waste can be converted in to compost. Non–biodegradable waste cannot be decomposed. These are of two types: Recyclable and non–recyclable. Used and unwanted water is called waste water and categorized as black water and Grey water. The management of waste water was elaborated to the participants.



Practical Session –I(04.07.2016)

On 04.07.2016 Practical session was conducted for the participating masons under the supervision of Sh. Tajender Kumar, Master Trainer, State Council for Science Technology and Environment, H.P and Sh. Sarvan Kumar, Mason from Gram Panchayat, Chambi, Tehsil Sundernagar, Distt. Mandi, H.P for preparation of the Soak Pit at the Site selected throughout the day. Various technical aspects involved for construction of the Soak Pit were explained and demonstrated to the participants at the Site.



Technical Session –III (04.07.2016)

Er. Kalit Bhardwaj, Sr. Technical Assistant, ATC, Govt. Polytechnic, Sundernagar delivered lecture to the participants about “Earthquake Resistant Housing Construction in the State. He highlighted the participants about the impact of disaster occurring through earthquakes. He informed the participants that the State of H.P lies in the sensitive zone s of earthquakes and reminded them of the impacts of the disasters accrued during the past in the State and stressed the need for construction of earthquake resistant houses in the State in future by them. He explained and elaborated about the Construction details of Earthquake Resistant Housing, what happens to a building when a earthquake shakes it and how the unnatural pressures exerted upon by incidences of tremors during earthquakes in such situations can be averted / dealt effectively and efficiently by us. With a number of diagrams and examples, he explained them the do’s and don’ts in building Earthquake Resistant Structures about the building Design, Construction and its importance.



Technical Session –IV (05.07.2016)

Ar. Gopal Sharma, Head of Department (Architecture) Govt. Polytechnic, Sundernagar during the Technical Session-IV on 05.07.2016 delivered a lecture on latest trends and practices in construction and Rainwater Harvesting Technologies. He highlighted the advantages of latest housing construction technologies and use of machines in construction. He elaborated the various aspects related to the cost effective construction like stone filled block, rat trap bond, frameless door and windows and ferro cement technology to the participants. Locally available material should be used. He informed the participants that many countries have less water sources, whereas India is having abundant source of water in the form of rivers, ponds, lakes, wells and Khaitri etc. The main source of water is through rain/snow. Rainwater in the form of rain / snow can be stored in rainwater harvesting tanks / ponds / reservoirs and can be used for drinking purpose by filtering and for irrigation agriculture / horticulture fields during the lean periods by the farming communities. He gave presentation about a Rain Water Harvesting technology to the participants. Different aspects related to construction of rainwater harvesting structures were elaborated to the participants by the Resource Person for their thorough understanding the basics connected with the theoretical and practical aspects related with rainwater harvesting technology.



Technical Session –V

Er. Kalit Bhardwaj, Sr. Technical Assistant, ATC, Govt. Polytechnic, Sundernagar delivered lecture on “Solar Passive Housing/Building Construction” to the participants. He highlighted the advantages of solar passive housing construction in the hilly State not only in H.P but all over the north eastern and western states of the country for comfortable living throughout the year. He elaborated the various aspects related to the construction detail of Solar passive housing/buildings namely orientation of Building, Sun path Planning of Building, Trombe Wall, Solar Wall, Sky Lights for Winter Solar Gain, Solarium, Sun Space, Insulation in False Ceiling, Cross Ventilation etc. to the participants.



A visit of the participants was made at the Demonstration Centre where various technologies namely Sun Space, Solar Passive Housing Technology, Tunnel type Green House, Trombe Wall, Hand Maize Sheller and Solar Dryer etc. were demonstrated to the participants by Sh.Tajender Kumar, Master Trainer ATC, Sundernagar. He briefly explained about the basics and intricacies involved in the use of such technologies for comfortable living in the houses round the year in construction application of these components from design preparation to construction of new buildings/houses and already built houses by adding solar passive features.



Practical Session –II





A feedback session was conducted at the closing session and Proforma was distributed amongst the participants.

Closing ceremony was organized at the end of the training on 05.07.2016. Ar. Gopal. Sharma, HOD, Architecture, Govt. Polytechnic, Sundernagar, District Mandi, H.P was the Chief Guest at the closing session. Addressing the participants Ar. Gopal Sharma emphasized at the need for construction of Soak pit/ Waste Water Recycle Unit at every house/building in both rural and urban areas of the State. He distributed the Certificates to the participating Junior Engineers and Masons of Rural Departments.



LIST OF MASON OF TWO DAYS TRAINING PROGRAMME ON “SOAK PITS/WASTE WATER RECYCLE UNIT ” AT ATC, SUNDERNAGAR ON 04-05 JULY, 2016.

S. No.	Name of Participant	Father Name	Address
1.	Sh. Dinesh Kumar	Sh. Vikram Lal	VPO Mandal Panchayat Mandal Block & Tehsil Jubbal Distt. Shimla
2.	Sh. Mohan Singh	Sh. Sainj Ram	VPO Masali Panchayat Masali Block Chhohara Tehsil Chirgaon Distt. Shimla
3.	Sh. Anil Kumar	Sh. Dhanna Ram	VPO Shilla Panchayat Shilla Block & Tehsil Chopal Distt. Shimla
4.	Sh. Nek Ram	Sh. Kundu Ram	VPO Pahal Panchayat Pahal Block Basantpur Tehsil Sunni Distt. Shimla
5.	Sh. Krishan Chand	Sh. Shive Ram Sharma	Vill. Sari P.O. Anji Brahmna Panchayat Thadi Block Mashobara Tehsil and Distt. Shimla

LIST OF JUNIOR ENGINEER OF TWO DAYS TRAINING PROGRAMME ON “SOAK PITS/WASTE WATER RECYCLE UNIT” AT ATC, SUNDERNAGAR ON 04-05 JULY, 2016.

S. No.	Name of the Participant	Designation	Address
1.	Sh. Amar Nath	TA	Block Development Office, Development Block Chhohara Tehsil Chirgaon Distt. Shimla
2.	Sh. Yash Pal	TA	Block Development Office, Development Block Narkanda Tehsil Kumarsen Distt. Shimla
3.	Sh. Sahil Shyam	TA	Block Development Office, Development Block Nankhari Tehsil rampur Distt. Shimla
4.	Sh. Suresh Kumar	JE	Block Development Office, Development Block Chopal Tehsil Chopal Distt. Shimla
5.	Sh. Kailash Primta	JE	Block Development Office, Development Block Jubbal Kotkhai Tehsil Jubbal Kotkhai Distt. Shimla
6.	Sh. Deepak Verma	JE	Block Development Office, Development Block Basantpur Tehsil Sunni Distt. Shimla
7.	Sh. Sanjay Bhardwaj	JE	Block Development Office, Development Block Mashobara Tehsil Shimlai Distt. Shimla

**TRAINING ON “DOMESTIC WASTE WATER RECYCLING UNITS”
TO THE ENGINEERS/TAs. ON 04-05, JULY 2016.**

SPONSORED BY **HP RURAL DEVELOPMENT DEPARTMENT,**

VENUE **APPROPRIATE TECHNOLOGY CENTRE,
SUNDERNAGAR, DISTT. MANDI.**

ORGANISED BY **APPROPRIATE TECHNOLOGY CENTRE,
STATE COUNCIL FOR SC., TECH. & ENVIRONMENT,
GOVT. POLYTECHNIC, SUNDERNAGAR.**

PARTICIPANTS : 7 NO.

TECHNICAL PROGRAMME (Engineers)

DAY 1		
10:00- 10:30	Registration	Smt. Neena Sharma.
10:30- 11:15	Inaugural session	Welcome and introduction.
11:15- 11:30	Tea break	
11:30- 13:30	Waste water recycling units. Concept, benefits and Guidelines.	Er. Kalit Bhardwaj, ATC Sundernagar.
13:30- 14:00	Lunch break	
14:00- 16:00	Details about solid and waste management in Rural areas.	Er. Adit Rana, Lecturer, Govt. Poly. Sundernagar.
16:00- 16:15	Tea break	
16:15- 17:15	Earthquake Resistant housing and Quality control in rural hill construction.	Er. Kalit Bhardwaj, ATC Sundernagar.
DAY 2		
10:00- 12:00	Latest trends & practices in construction and Rain-Water Harvesting Technology.	Ar. Gopal Sharma, HOD Architecture.
12:00- 12:15	Tea break	
12:15- 13:30	Field visit to Rain water harvesting tank site at Haripur, Sundernagar.	Ar. Gopal Sharma, HOD Architecture.
13:30- 14:00	Lunch break	
14:00- 16:00	Solar Passive Housing Technology and Cost Effective Construction.	Er. Kalit Bhardwaj, ATC Sundernagar.
16:00- 16:15	Tea break	
16:15- 16:45	Visit to Demonstration Centre and ferro-cement construction.	Sh. Tajender Kumar, ATC Sundernagar.
16:45- 17:00	Feed Back from Participants. Closing ceremony.	

**TRAINING ON “DOMESTIC WASTE WATER RECYCLING UNITS”
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SUNDERNAGAR, DISTT. MANDI.

ORGANISED BY: APPROPRIATE TECHNOLOGY CENTRE,
STATE COUNCIL FOR SC., TECH. & ENVIRONMENT,
GOVT. POLYTECHNIC, SUNDERNAGAR.

PARTICIPANTS : 5 NO.

TECHNICAL PROGRAMME (MASONS)

DAY 1		
10:00- 10:30	Registration	Smt. Neena Sharma.
10:30- 11:15	Inaugural session	Welcome and introduction.
11:15- 11:30	Tea break	
11:30- 13:30	Waste water recycling units. Concept, benefits and Guidelines.	Er. Kalit Bhardwaj, ATC Sundernagar.
13:30- 14:00	Lunch break	
14:00- 15:30	Construction of Waste water recycling units.	Sh. Sarban Kumar. Master Mason.
15:30- 15:45	Tea break	
15:45- 17:15	Construction of Waste water recycling units.	Sh. Tajender Kumar, MT
DAY 2		
10:00- 11:30	Details about solid and waste management in Rural area.	Er. Kalit Bhardwaj, ATC Sundernagar.
11:30- 11:45	Tea break	
11:45- 13:30	Construction of Waste water recycling units.	Sh. Tajender Kumar, MT
13:30- 14:00	Lunch break	
14:00- 15:30	Construction of Waste water recycling units.	Sh. Tajender Kumar, MT
15:30- 15:45	Tea break	
15:45- 16:45	Visit to Demonstration Centre and ferro-cement construction.	Sh. Tajender Kumar, Master Trainer.
16:00- 17:00	Feed Back TA/DA from Participants. Closing ceremony.	Smt. Neena Sharma.