

Rainwater Harvesting Resource Center - Utthan, Allahabad, Uttar Pradesh.

Principal Investigator:	Mr. A.R. Shivakumar
Budget:	Rs. 16,90,500/-
Supported by:	DST (DST/TM/WTI/2k10/224/A)
Duration:	18 Months (starting July 11)
Project area:	Utthan, Allahabad, UP.

Introduction

Utthan is the first institution in Uttar Pradesh to establish demonstration modules comprising of more than twenty five techniques / components of Rainwater Harvesting (RWH) and Ground water recharge at one center. The facility demonstrates cost effective and sustainable techno interventions relevant for both urban and rural areas. The display boards with pictorial representation form the guide for all the section of the society to understand simple interventions which can be adopted for effective Rainwater Harvesting and Ground water recharge. The collaboration between the Department of Science and Technology, Government of India, Utthan and the technology provider - Karnataka State Council for Science and technology (KSCST) along with Experts and Resource persons formed the perfect combination to impart training and creating awareness on RWH.

Objectives

- Design, Development and Establishment of Rainwater Harvesting and Ground water recharge Resource Center at Utthan, Allahabad, Uttar Pradesh.
- Imparting training to trainers and resource personal for regional capacity building and skill development.
- Developing a handbook and course material for the training programme and model schemes on RWH for Uttar Pradesh.
- Documentation and Reporting

Methodology

Water availability and the present practices for domestic water source and collection were studied in the context of Uttar Pradesh. A state of the art Resource center has been established at the campus of Utthan, in Allahabad for demonstration and training local people. Support system and resource material are developed with the interaction from the local experts for effective dissemination. The resource center is handed over to the Officers of Utthan for continued and sustainable up keep of the established center.

Training Programme

To develop local skills and to provide technical knowledge for the resource center at Utthan, two training programmes were conducted in the project period.

Technical Sessions

Resource Persons and Experts in the field of Rainwater Harvesting, Ground water recharge and Water management, prepared the course material to present in the training programme which includes following sub themes:

- a) RWH from buildings
- b) RWH from open spaces
- c) RWH for farm sector
- d) Ground water recharge in urban areas
- e) Ground water recharge for farm sector
- f) Preparation of site specific plans
- g) Preparation of estimates
- h) Interventions required for field execution
- i) Monitoring and evaluation of systems

Resource material

- a) RWH Guide
- b) Leaflets and Posters
- c) Dos and Don'ts of RWH
- d) FAQs on RWH
- e) General guidelines for RWH
- f) Typical Drawings and Estimates

Roles and Responsibilities of KSCST and Utthan for Establishing RWH Resource Centre

Department of Science and Technology vide their sanction letter No.DST/TM/WTI/2K10/224/A dt.30/06/2011 had sanctioned a project to establish a Resource centre in a time period of 18 months at Allahabad, Uttar Pradesh.

Two major components of the project:

1. Establishment of resource centre

Following components will be designed, planned and physically executed by KSCST as per the financial and administrative guidelines of KSCST management:

I	Collecting
1	Inclined and Flat Roof
2	Temporary collection facility
II	Channeling
1	Open Gutter
2	Pipes conduits (vertical)
III	Filtering
1	PopUp filter

2	Sand bed filter - masonry tank
3	Plastic barrel (100lts - cylindrical) sand bed filter
4	First flush lock and Sand bed filter
5	Cloth or mesh filter
6	Silt trap
7	Leaf Slide
IV	Storage Structures
1	HDPE tank - 500 liter with support structure
2	Surface tank - Masonry 5000 liter
3	Ferro cement tank - 500 liter (with necessary plumbing and fittings)
4	Underground sump - 5000 liter
5	Metal drum (GI) - 500/ (250 * 2nos) liter with support and plumbing and fittings accessories
6	Earthen pot / Bucket - 25 liters
7	Pond - 50,000 lts (refer relevant drawings for more details)
V	Ground water recharge
1	Surface
2	Soak Pit
3	Check bunds
4	Trench with filter media
5	Infiltration Gallery - 500 Cft
6	Barrel system of infiltration gallery
7	Ground water recharge through open well 3 ft dia 20 ft deep (earthwork excavation and laying of pipe from the proposed sump to the cement ring open well - approx. 180 feet)
8	Ground water recharge through borewell
9	Bore well recharge from open well 3ft dia 20 ft deep(excavating the earth and laying a 50mm pipe about 6 feet below ground level - approx. 90 feet)
VI	Plumbing works (Total length of pipes of varying sizes, interconnecting all the demo units including the plumbing fittings, fixing and laying of pipes & fittings)
VII	Display Boards development and printing - English and Hindi

2. Training and capacity building

Two training programmes will be planned and organized by KSCST representatives / resource persons for identified personnel at Allahabad for capacity building and management of training centre for its future activity.

Responsibility of KSCST:

- Plan and prepare an executable plan for establishing all the concepts of RWH resource centre as in the Detailed Project Report.
- Identify suitable locations, infrastructure, resource at Utthan, Allahabad in consultation with Utthan management.
- Prepare documents for inviting offers from various contractors for executing the work.
- Provide guidelines to the identified contractor for successful implementation of the project components.
- Supervise the progress of execution and certify correctness of execution.
- Identify enthusiastic personnel at various levels for training and managing the established centre
- Prepare literature in English and submit to Utthan for translation to local language and help Utthan in preparation of dissemination material.
- Conduct one training programme for public, officers, contractors, NGOs etc., for smooth operation of resource centre for the benefit of the society.
- Conduct one training programme for technical staff of Utthan and hand over the assets created to Utthan in the presence of DST-GOI and also provide support for smooth functioning of the RWH resource centre within the project period.

Responsibilities of Utthan:

- Provide suitable land, building and other resources for establishing RWH resource centre at Utthan, Allahabad which is convenient for public to visit and take advantage of the facility.
- Identify two officers to liaison with KSCST and DST officials.
- Identify two technical officers with engineering background to take care of the RWH resource centre during establishment and beyond project period for smooth functioning of the centre.
- Provide local level data on rainfall, weather condition, soil structure, ground water characteristics etc., for establishing the RWH resource centre.
- Extend support to KSCST officers and the identified contractor to build and integrate RWH infrastructure and interventions at RWH resource centre.
- Provide local hospitality at Allahabad for stay during project period to the KSCST and DST scientists and officers.
- Take charge of the assets established in the project and upkeep them for the demonstration and training purposes which will be the DST designated RWH resource centre in Uttar Pradesh state.

Achievements of Project Objectives:

Project Initiation:

On the advice of DST GOI, PI visited Utthan, Allahabad on 26th Aug 2010. The DPR for RWH resource center at Utthan was submitted to DST on 8th October 2010

DST GOI through their sanction order No. DST/TM/WTI/2k10/224/A dated 30.06.2011 the project was sanctioned to KSCST.

Project coordination meeting was organised in the first week of November 2011 at Allahabad. Field survey was conducted during November to locate resource center activities. PI of the project visited Utthan in the first week of November 2011 and during the visit the site requirement for establishing rainwater harvesting resource centre at Utthan in Allahabad were finalised.

The project team worked on the site specific details and prepared the detailed **specifications with drawings for 36 interventions** to be established in the RWH Resource Center.

Tender for execution of the work was floated through KSCST on 10th November 2011 and 4 offers received.

Tender Process for project Execution:

The specifications and the details of interventions were published through newspaper as well as our website for calling tender. Tenders were opened on November 25th at 3 00 PM at KSCST, Bangalore.

The tender process was successfully completed and the work of establishing the components of rainwater harvesting resource centre at Utthan was awarded to:

M/s. Great Bear Promotions, A8, East Wing, Grace Garden Apartment, Hennur Road, Bangalore.

The offer received by M/s Great Bear Promotions was cleared by the technical committee and the finance committee recommended for award of contract to the lowest sealed bidder as per the procedures of Karnataka State Council for Science and Technology.

Work order dated March 30, 2012 Ref. No.4.1/PO/ACCTS/2011-12/1442 was placed to the eligible contracting firm M/s Great Bear Promotions. M/s Great Bear Promotions was given the time schedule of 90 days to establish the centre.

Ms Great Bear Promotions of Bangalore initiated the work of RWH resource center and submitted **work completion letter**. During July 2012, Principal Investigator of the project and one project engineer from KSCST visited Allahabad to assess the progress.

Establishment of the Center and Handing over for up keeping:

A joint inspection was conducted to check the specifications of all the components of the tendered work for establishing the RWH Resource Center on 14th August 2012. All the 36 components of the center were certified for correctness of installation as per the specifications and the joint inspection report was signed by the representatives of:

1. KSCST, 2. Utthan 3. Great Bear Promotions.

On 14th August 2012, the [Rainwater Harvesting Resource Center established at Jhalwa, Allahabad was handed over to Administrative officer of Utthan](#). The handing over letter was jointly signed by Principal Investigator Mr. A.R. Shivakumar of KSCST and Mr. R.K. Singh, Chief Administrative Officer, Utthan, Allahabad.

[Support system and resource material:](#)

The state of the art RWH Resource Center has been established at the campus of Utthan, in Allahabad for demonstration and training local people. [Support system and resource material have been developed](#) with the interaction from the local experts for effective dissemination.

[Resource materials Developed in the project:](#)

- a) RWH Guide
- b) Leaflets and Posters
- c) Dos and Don'ts of RWH
- d) FAQs on RWH
- e) General guidelines for RWH Typical Drawings and Estimates
- f) Display Boards for outdoor presentation in Hindi

[Training Programme and Skill Developmental:](#)

Two [one day Training Programmes](#) were conducted during August and October 2012. The Training Programmes were organized to build awareness on RWH among stakeholders. Around 60 participants were identified for each of the Training Programmes. The participants from Government Departments, Private Industries, NGOs etc. who can spread the message across the state of UP on Rainwater Harvesting and ground water recharge were invited.

[“Utthan Green Youth Club”](#) was established during September 2012 with the following objectives:

Focus for prompting:

RAIN WATER HARVESTING
Theme Park at Jhalwa, Allahabad
“Water Conservation Practices
Harvesting & Re-use and Recharge”.

First Training Programme on ‘Sustainable Rainwater Harvesting and Ground Water Recharge, Utthan, Allahabad.

13 August 2012

Training Programme on ‘Sustainable Rainwater Harvesting and Ground Water Recharge was organized by two organizations, 1. Karnataka State Council for Science and Technology, Bangalore. 2. UTTHAN - Sustainable Technology and Poverty Alleviation, Allahabad on 13th August 2012 at Shambhunath Institute of Engineering & Technology, Jhalwa, Allahabad.

There were 41 participants in the programme. The training programme focused on rainwater harvesting, ground water recharge in buildings, apartments, office complexes, corporate sectors, companies and various institutions. Open spaces both in urban and rural areas along with watershed management. The training programme was supported by three resource persons from various institutions with 4 technical presentations.

There were two Technical sessions covering the following topics:

1. Introduction to RWH & Water Issues.
2. Design and Plan for RWH Systems.
3. Introduction to RWH Resource Centre – Utthan.
4. Experience Sharing – Kanpur, U.P.

A field visit was organized for the benefit of the participants on Rainwater Harvesting and Ground water recharge at the newly established Rainwater Harvesting Resource Centre, Jhalwa, Allahabad. The field visit provided hands on training and also gave the participants to have first hand experience on various equipments, concepts, technologies as well as products available for rainwater harvesting at different sectors.

The programme was inaugurated on 13th August 2012 represented by the dignitaries, Dr. D.N. Tiwari, President - Utthan, Dr. K.K. Tiwari, Secretary – Utthan, Mr. M.K. Shukla, IFS. Director, Centre for Social Forestry and Eco-rehabilitation and Mr. A.R. Shivakumar, Principle Investigator, KSCST.

Dignitaries and Resource Persons for the Training Programme on 'Sustainable Rainwater Harvesting and Ground Water Recharge' UTTHAN, Allahabad - August 13, 2012

Sl. No.	Name	Field	Designation	Organization
Dignitaries				
1	Dr. D. N. Tiwari	Science and Technology	President	Utthan, Allahabad
2	Mr. M.K. Shukla	Indian Forest Officer	Director	Centre for Social Forestry & Eco-Rehabilitation
3	Mr. A. R. Shivakumar	Science & Technology	Principle Investigator	Karnataka State Council for Science and Technology, Bangalore
4	Dr. K. N. Tiwari		Secretary	Utthan, Allahabad
Resource Persons				
1	Mr. A. R. Shivakumar	Science & Technology	Senior Fellow & Principle Investigator - RWH	Karnataka State Council for Science and Technology, Bangalore
2	R. Navaneeth Kumar	Science & Technology	Project Associate	Karnataka State Council for Science and Technology, Bangalore
3	John Daniel	Rainwater Harvesting Implementation	CEO	Great Bear Promotions
4	Vikas Rohatgi	Rainwater Harvesting Consultant	Manager, Project & Sales	Rainwater Harvester, Kanpur, U. P.

Participants for Training Programme on ‘Sustainable Rainwater Harvesting and Ground Water Recharge’ UTTHAN, Allahabad - August 13, 2012

Sl. No.	Name	Organization	Contact No.
1	Pushpendra Singh	Progressive Farmer, Allahabad	9415889828
2	Akhilesh Singh	Farmer, Allahabad	9005490013
3	Pankaj Singh	Progressive Farmer, Allahabad	9415174106
4	Phool Chand	Agriculture Department, Allahabad	-
5	Udithnarayan	Utthan, Allahabad	9935060181
6	Ramyadav	Utthan, Allahabad	-
7	Simha	Pragathi Sheel Kisan, Allahabad	9598049132
8	Lal Pal	Pragathi Sheel Kisan, Allahabad	9198376060
9	Kamalesh Singh	—	7379784445
10	Amit Sharma	Kumbh 364, Allahabad	8574236494
11	Ranjit Roy	Kumbh 364, Allahabad	9580060314
12	Akhilesh Kumar	Utthan, Allahabad	9455950955
13	I Singh	Jaikisan Krishik Club, Allahabad	9696097172
14	Arjun Singh	Shree Krishna Kisan Club, Allahabad	9335168439
15	Rajpathi Singh	Shree Krishna Kisan Club, Allahabad	9889602471
16	Manoj Singh	Kisan Club, Allahabad	9161686465
17	Deshraj Pal	Utthan Kisan Club, Allahabad	8738810083
18	Rajosingh	Sardarpatel Club, Allahabad	9918746020
19	Lal Babu Singh	Sardarpatel Club, Allahabad	8052986274
20	Vijay Narayan	Utthan, Allahabad	9651002669
21	Deeranyadav	Jaikisan Krishik Club, Allahabad	9005728462
22	Pradeep Singh	Sri Vipara Kisan Club, Allahabad	9989650331
23	Amar Bahadoor Singh	Shree Krishna Kisan Club, Allahabad	9794801131
24	Susheel Kumar Singh	Shree Krishna Kisan Club, Allahabad	9935936725
25	Ramkumar Singh	Shree Krishna Kisan Club, Allahabad	9956527341
26	Manjula Srivatsav	Manjula Samithi, Allahabad	9451054472

27	Surendra Narayan Tiwari		9935389848
28	Raghavendra Singh	Kisan Club, Allahabad	9005474083
29	Dharmendar Singh	Kisan Club, Allahabad	8127833993
30	Jeevendra Singh	Kisan Club, Allahabad	9298838503
31	Dhagu Laal Yadav	Kisan Club, Allahabad	
32	Nithin Tiwari	Jaikisan Krishik Club, Allahabad	8419053968
33	Sabal Singh	Jaikisan Krishik Club, Allahabad	7499118377
34	Dr.Veerendra Kumar	Udayvikas seva Club, Allahabad	9336079818
35	Dr.Anil Singh	Samarpan Samithi, Allahabad	9450586116
36	Vinod	Samarpan Samithi, Allahabad	9616110049
37	Anil Singh Yadav	Sri Krishna Kisan club, Allahabad	9794410379
38	Sughalesh	Sri Krishna Kisan club, Allahabad	
39	Gopal Sengupta	—	9451366586
40	Satyendra Singh	Srijan Samsthan, Allahabad	9918013949
41	R B Pathak	Jaikisan Krishik Club, Allahabad	9792129330



RWH Resource Center Interventions, Utthan, Allahabad



First training programme address by president Dr. D. N. Tiwari

‘Utthan Green Youth Club’ was established during September 2012 with the following objectives:

Focus for prompting:

RAIN WATER HARVESTING
Theme Park at Jhalwa, Allahabad
“Water Conservation Practices
Harvesting & Re-use and Recharge”.

Club Committee:

Dr. K.K. Tiwari
Mr. R.K. Singh
Mr. Mohd. Imran Khan
Ms. Nisha Prajapathi
Ms. Shivali Srivastava
Ms. Jyotsna Srivastava.

1. Memberships: If you are a college student looking to enhance your studies with exposure to the development issues surrounding water in India, then you can apply for membership to Utthan Green Youth Club. Simply fill the form and mention in background field that you are applying for membership.
2. Volunteering: We are looking for the people who are interested in issues concerning water, rainwater storage, recharge of aquifers and the other related topics. We believe everyone can help us spread awareness and share knowledge on water.

The clubs activity as a chapter of responsibility:

- a) Maintenance and upkeep of the RWH Resource Centre.
- b) Campaign and built awareness about RWH programme.
- c) Create green entrepreneur.
- d) Use creative & promoting art as vehicle of mass communication to promote water conservation clean practice.
- e) In corporate innovation and creative idea to add value to the focus area.
- f) Plan, coordinate and manage visitors to the theme park in a planned manner, considering the expected increase in footprint, through a permanent helpdesk.
- g) The helpdesk can run on a ‘earn while you learn’ basis.

Key Collaborative Organization:

KSCST (Karnataka State Council for Science and Technology, IISc, Bangalore)
Great Bear Promotions, Bangalore

Students Operational Team:

Himanshu Sharma, Siddhartha Sharma, Prashant Dwivedi.

Members of Utthan Green Youth Club



Interaction with students by A. R. Shivakumar, PI of the Project, KSCST

Second Training Programme on ‘Sustainable Rainwater Harvesting and Ground Water Recharge, Utthan, Allahabad at National Conference on Water Management for Food Security.

27th October 2012

Abstract:

Training Programme on ‘Sustainable Rainwater Harvesting and Ground Water Recharge was organized on 27th October 2012 at Shambhunath Institute of Engineering & Technology, Jhalwa, Allahabad in co-ordination with National Conference on Water Management for Food Security (October 27th and 28th).

There were 33 participants in the programme. The training programme focused on rainwater harvesting, ground water recharge in buildings, apartments, office complexes, corporate sectors, companies and various institutions. Open spaces both in urban and rural areas along with. The training programme was supported by three resource persons from various institutions with 4 technical presentations.

There were two Technical sessions covering the following topics:

1. Introduction to RWH & Water Issues.
2. Design and Plan for RWH Systems.
3. Introduction to RWH Resource Centre – Utthan.
4. Experience Sharing – Kanpur, U.P.

A field visit was organized for the benefit of the participants on Rainwater Harvesting and Ground water recharge training programme and also for the delegates of National workshop on water management for food security at the Rainwater Harvesting Resource Centre, Jhalwa, Allahabad. The field visit provided hands on training and also gave the participants to have first hand experience on various equipments, concepts, technologies as well as products available for rainwater harvesting at different sectors.

The programme was inaugurated on 27th October 2012 represented by dignitaries, Dr. D.N. Tiwari, President - Utthan, Dr. K.K. Tiwari, Secretary – Utthan, Prof. Brij Gopal, Global Expert on Water Management, Prof. P.K. Mishra, Ex Vice Chancellor, University of Allahabad, Prof Mata Prasad Pandey, Vice Chancellor, Birsa Agriculture University, Ranchi, Jharkand, Prof. A. K. Singh, Agriculture University, Gwalior, Madhya Pradesh and Mr. A.R. Shivakumar, Principle Investigator, KSCST.

Dignitaries and Resource Persons for the Training Programme on 'Sustainable Rainwater Harvesting and Ground Water Recharge' UTTHAN, Allahabad - October 27, 2012

Sl.No.	Name	Field	Designation	Organization
Dignitaries				
1	Dr. D. N. Tiwari	Science and Technology	President	Utthan, Allahabad
2	Prof. Brij Gopal	Science and Technology		Global Expert on Water Management
3	Prof. R. P. Mishra	Agriculture	Ex-Vice Chancellor	University of Allahabad
4	Prof. Mata Prasad Pandey	Agriculture	Vice Chancellor	Birsa Agriculture University, Ranchi, Jharkhand
5	Prof. A. K. Singh	Agriculture	Vice Chancellor	Agriculture University, Gwalior, Madhya Pradesh
6	Mr. A. R. Shivakumar	Science & Technology	Senior Fellow & Principle Investigator - RWH	Karnataka State Council for Science and Technology, Bangalore
7	Dr. K. N. Tiwari		Secretary	Utthan, Allahabad
Resource Persons				
1	Mr. A. R. Shivakumar	Science & Technology	Senior Fellow & Principle Investigator - RWH	Karnataka State Council for Science and Technology, Bangalore
2	R. Navaneeth Kumar	Science & Technology	Project Associate - RWH	Karnataka State Council for Science and Technology, Bangalore
3	Vikas Rohatgi	Rainwater Harvesting implementation		

Participants for Training Programme on ‘Sustainable Rainwater Harvesting and Ground Water Recharge’ UTTHAN, Allahabad - Oct 27, 2012

Sl. No.	Name	Organization	Contact No.
1	Udit Narayan Shukla	Utthan, Allahabad	9935060181
2	Girdhaari Lal	RASEP, Allahabad	9935063099
3	Sanjay Kumar	BUSEP, Allahabad	9696277465
4	Vijay Narayan Shukla	Utthan, Allahabad	9307577794
5	Raj Bahaddur		9792129330
6	Satyendra Singh	Srijan Sansthan	9918013479
7	Phool Chandra	Utthan, Allahabad	
8	S. Narayan Thripathi		9935389848
9	Suraj Kumar		9335325063
10	Kunal Shukhla	Vishnu Bhagwan Public School, Allahabad	8307118104
11	M. Mishra	Vishnu Bhagwan Public School, Allahabad	9305838641
12	Siddhartha Sharma	S.I.E.T., Allahabad	9616966560
13	Gaurav Agarwal	S.I.E.T., Allahabad	9696275493
14	Abhishek Shukla	S.I.E.T., Allahabad	9415452254
15	Satish Kumar Yadav	S.I.E.T., Allahabad	7860770099
16	Smita Sahu	K. G. Samiti, Allahabad	9335128767
17	Sabita Nishad	K. G. Samiti, Allahabad	9026580561
18	Rajkumar Sahu	K. G. Samiti, Allahabad	9198858197
19	G. L. Tiwari	RASEP, Allahabad	8808415056
20	Nikhil Kumar	S.I.E.T., Allahabad	9026578981
21	Sachin Singh	S.I.E.T., Allahabad	9807655392
22	Shailesh Yadav	S.I.E.T., Allahabad	9415147950
23	Ambesh A.	Vishnu Bhagwan Public School, Allahabad	9335932634
24	Hari Om Upadhyay	Vishnu Bhagwan Public School, Allahabad	9721085415
25	C. P. Dwivedi	Vishnu Bhagwan Public School,	9307931533

26	Manjula Srivastava	Manjula Mahila Kalyan Samithi, Allahabad	9451054472
27	Virendra Kumar	Uday Vikas Sewa Samiti, Allahabad	9336079818
28	Ajay Kumar Tiwari	Bio Tech	7398785277
29	Umanath Singh	S.I.E.T., Allahabad	9389146141
30	Raj Kumar	K. G. Samiti, Allahabad	9936947171
31	Abhay Raj Patel	K. G. Samiti, Allahabad	9935275808
32	Siddhartha Sharma	Gram Chetana Foundation, Allahabad	9651002669
33	Saurabh	Gram Chetana Foundation, Allahabad	



Address by A. R. Shivakumar, PI of the Project, KSCST

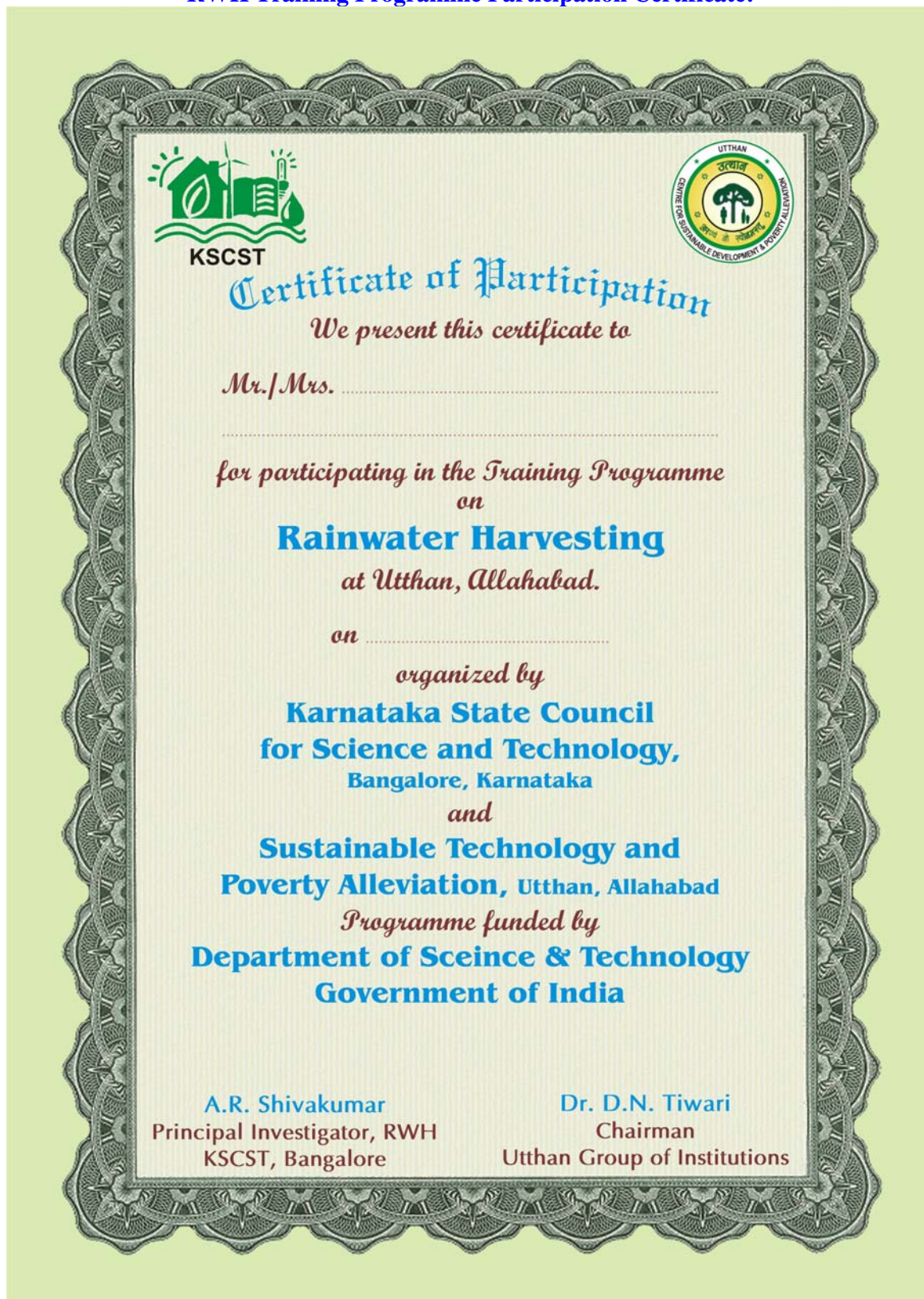
List of all the objectives of the projects which are successfully achieved:

- Design, Development and Establishment of Rainwater Harvesting and Ground water recharge Resource Center at Utthan, Allahabad, Uttar Pradesh.
- Imparting training to trainers and resource personal for regional capacity building and skill development
- Developing a handbook and course material for the training programme and model schemes on RWH for Uttar Pradesh.
- Documentation and Reporting
- Display Boards development and printing - English and Hindi

Components of RWH resource centre at Utthan, UP.	
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10	Plumbing works (Total length of pipes of varying sizes, interconnecting all the demo units including the plumbing fittings, fixing and laying of pipes & fittings)
11	Display Boards development and printing - English and Hindi

RWH Training Programme Participation Certificate:



Acknowledgement

The financial assistance was provided by the Department of Science & Technology, Government of India New Delhi to implement this project “Rainwater Harvesting Resource Center - Utthan, Allahabad, Uttar Pradesh”.

I sincerely thank Secretary KSCST Prof M.S. Mohan Kumar and Executive Secretary Dr M. Prithviraj for their continued support and guidance, from conceptualization of the project to successful implementation, and constant encouragement provided at various levels for successful completion of the programme.

My special thanks are to Dr. Sanjay Bajpai, and Mr. Vineet Saini, DST GOI for their encouragement and support.

This Project has the unique distinction of having several organisations involved in implementing the project within and outside the state of Karnataka. Utthan Foundation and Shambunath Institute of Engineering and Technology Allahabad played the key role in providing the infrastructure for the resource center and also maintaining the center for the public cause. The tireless team of Ms Great Bear Promotions of Bangalore skilfully translated the concepts in to reality in the field. My sincere thanks are due to them.

This programme is the result of collective efforts of KSCST, RWH Team at KSCST, Utthan, GBP, DST GOI, SIET and many institutions and individuals who had the spirit to respect water conservation and rainwater harvesting. I acknowledge the commitment and cooperation of each and every one who made this programme a success.

My earnest thanks to KSCST for providing this opportunity and to all my colleagues at KSCST for their support in implementing this Programme.

A. R. Shivakumar

Principal Investigator