

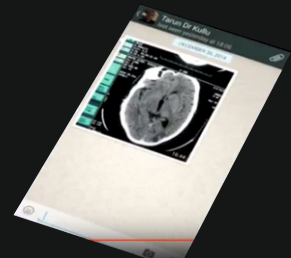
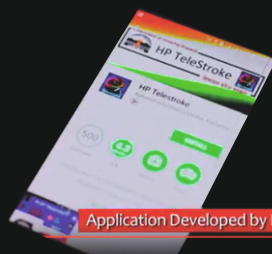


Progressive Himachal Innovative Himachal



PLANNING DEPARTMENT
Yojna Bhawan
HP Secretariat Shimla-171002


HP Telestroke Project
हर सांस कीमती



Progressive Himachal - Innovative Himachal

Promoting Innovations in the State

Himachal Pradesh Government is committed to promote and foster new & innovative ideas at the State level. In the past steps were taken by various departments of State Government which have further paved the way for the promotion of innovative ideas at State level. Some of these innovative ideas are construction of Plastic roads using plastic waste, improving environment by way of reduction of gases/pollution through replacement of ordinary bulbs by CFL/LEDs, use of Embryo Transfer Technology to improve quality of livestock & milk production in the State, Web based GIS Portal by generating digital elevation maps from Satellite imageries to track the entire Hydro Power Scenario in the State and automation of records like automatic mutation, inter-connectivity between revenue & registration records etc. with a view to usher an updated system of land records.

State Innovation Council: Apex Body at State Level

As its commitment to promote and foster new & innovative ideas at State level, **State Innovation Council** was constituted by State Government in 2011 under the Chairpersonship of Chief Secretary, Government of Himachal Pradesh giving representation to major departments, technical institutes & universities of the State as an **apex body** to institutionalize the innovative practices & ideas/efforts by providing a common platform for local talents, competencies, resources & capabilities.

Approach Adopted by State Innovation Council

To pave further the way of innovative ideas, this council has further adopted **two pronged strategy** at State level:

1. State Innovation Fund: Creativity is just generating new ideas and the process of making those ideas a reality with their replicability at an economic cost is what is called innovation. To meet the need of gap-funding for transforming such ideas into reality and also to incentivize already transformed ideas, **State Innovation Fund** was created in 2013-14 with broader objectives as under:

- To fund new initiatives to be taken up by the Government Departments in the State for systemic improvements with a view to promote excellence & creativity in their functioning to improve the service delivery system.
- To provide financial support to transformative changes by identifying and nurturing significant innovative ideas and projects that can contribute to improved quality of life of general public.
- To encourage the departments to try new initiatives by providing financial incentives.

Innovative Ideas funded through State Innovation Fund:

During the last four years, fourteen schemes/projects of various Departments have been funded from State Innovation Fund (SInF). These innovations are:

- 1.1 Manimahesh Yatra Registration Project 2013:** This project aimed at registering of inbound and outbound pilgrims during Manimahesh Yatra in District Chamba to facilitate the district administration with available data on actual number of visitors for better & planned management of pilgrims and to frame better policy and planning in case of any disaster.
- 1.2 Blood Bank Management Information System (BBMIS):** The project aimed at integrating online all activities of Blood Bank units including blood collection, selection of donors, testing and cross matching, maintaining deferral records, blood storage, stock maintenance, employee information, inventory control and e-Service Desk. BBMIS has been implemented in 16 blood banks and 4 blood storage units in the State.

- 1.3 Computerization (automation) of the Department of Information & Public Relation's activities:** To redesign and upgrade the IPR Department website with online Advertisement Management Software and automation of day to day activities by creating a single interface for the department, funds were provided for this project. The website of department has been redesigned/ upgraded and launched by Hon'ble Chief Minister, HP on 4th August, 2015. Other proposed activities under this project are also being completed.
- 1.4 Video Conferencing facilities in Head Office, Zonal Offices & Tribal Circles in HPPWD:** This project aimed at providing video conferencing facilities for effective monitoring of works especially in Tribal Circles as these places remain inaccessible due to tough climatic conditions.
- 1.5 Document Management System of Ration Card Forms:** The project aimed at generating 30 lakh unique records and management of these large number of records through Document Management System (DMS) of Ration Card forms. This project is being implemented through E-Governance Society of Department of Food Civil Supplies and Consumer Affairs.
- 1.6 Digitization of Special section of HPKV University library focused on HP:** This project was approved for digitization of Himachali Books including rare and pictorial books for making them available with open access. It will also improve library information management system which would allow online access to researchers, teachers and students of Himachal.
- 1.7 Online Planning permissions by Town & Country Planning Department:** This project aims at developing Web portal, a robust system of MIS for online Planning permission with a view to ease out applicants from manually applying for Planning permission. It will also provide online registration and licensing to builders and private

professionals. This application has been inaugurated by Hon'ble Chief Minister in January, 2016 and now efforts are being made to implement this project in all field offices.

- 1.8 Digitization of Himachal Pradesh Secretariat Library:** To preserve all important books & administrative records with easy accessibility and availability of record to the end users, a web enabled Documents Archival and Retrieval Information Management System (DMS) is being implemented. Eventually, it will work as a digital library accessible to both internal and external users and enable the Government to reduce manual processes thus increase productivity with the help of new technology.
- 1.9 Online Inventory Application for Medicines/ Semen Straws:** The project aims at developing an online application for Inventory of Medicines and Semen Straws to be used by district medicine pool store, sperm station and semen Banks for efficient maintenance of records. It will monitor & regulate the demand & supply in veterinary institutions with a view to ensure efficient utilization of resources.
- 1.10 First phase of the automation of Allotment & Administrative wing of HIMUDA:** This aims at developing web based system to integrate & centralize various activities of HIMUDA enabling efficient exchange of information between field offices & head office and also to automate its processes with a view to provide better facilities to their clients.
- 1.11 Developing a prototype of continuous garbage collecting mechanism collecting garbage without any intervention or wastage of time:** This project of Structural Engineering Department of NIT Hamirpur aims at manufacturing of continuous garbage collecting mechanism collecting garbage without any intervention or wastage of time having an inbuilt dustbin fitted with polybag for easier garbage disposal. After developing a prototype of said machine in college workshop and correcting errors occurring during its development, trial of said machine will be conducted.

1.12 Development of Modern State-of-the-Art Digital Forensic Facilities in Forensic Science Laboratories in HP of RFSL, Mandi:

The proposal involves developing prototype tools for developing intensity range enhancement & de-noising methods for image and video enhancement, geometric scene analysis through single view metrology and speaker identification & recognition methods, speech enhancement etc. which will directly apply in actual practice of digital forensics.

1.13 Setting up of video conferencing facility at RFSL, NR, Dharamshala:

Project for setting up of video conferencing facility at RFSL-NR, Dharamshala & for acquiring infrastructure for setting up this facility will improve the service delivery system of the Forensic Department through connectivity with different courts of HP and would save precious time of the experts spent in journeys undertaken to depose experts testimonies at different courts across the state.

1.14 Setting-up of Mini Herbal Garden & Acupressure track in Ayurvedic Health Centre, Cheog, District Shimla:

Project aims at setting-up of Mini Herbal Garden in Ayurvedic Health Centre, Cheog with an objective to raise & conserve medicinal plants in the premises of the institute to have a green & environment friendly campus and to set-up an acupressure track in this institute for helping patients in releasing tension, increases circulation, reduces pain and develops spirituality and vibrant health

2. HP State Innovation Award Scheme for recognizing Best Innovations

To identify transformed ideas i.e. innovative projects which were initiated & completed by individuals/ departments/institutes at their own and are further replicable at an economic cost, **State Innovation Award Scheme** has also been started to recognize these efforts and to further motivate others to initiate such processes/practices. This scheme has been started from 2014-15 to provide financial incentives from State Innovation Fund to these innovative ideas. Initially six sectors have been identified for awarding the best innovative practices. One

best innovation of each sector is selected based on award criteria after scrutiny at Sectoral level and is further recommended to State Innovation Council (SInC) for awards at State level.

Award Winning Innovations for 2014-15

2.1.1 Localized Generic para pheromone based bottle trap effective against fruit flies:

Problem Analysis:

Farmers of the State were put to huge economic loss due to attack of fruit flies on crops. Also, frequent use of pesticides & insecticides leaves harmful residues on fruits & vegetables making them unsuitable for human consumption & pollutes environment. Moreover, flies capable of changing hosts make the use of traditional pesticides/insecticides ineffective. Traps available in the market for mass trapping of fruit flies were not effective owing to a variable spectrum of fruit fly species prevailing in the state.

Keeping in view the above problems, Dr. P.K. Mehta, Dr. Pankaj Sood & Dr. C.S Prabhakar of Department of Entomology, CSK, HP KVV, Palampur developed eco-friendly fruit flies traps easily available to the farmers at low cost of less than Rs. 100 per trap for saving their crops without using chemical.



Use of Fruit Fly Bottle Trap in fields

How it is useful to the Farmers:

- Change in farmers' perception & knowledge through identification of species of fruit flies infesting crops and their management.

- Community level management rather than individual management.
- Spread horizontally in about 500 ha & about 40000 traps supplied to the farmers.
- Earning of revenue worth 30 lakhs to the institute from sale of traps.



A campaign for refilling of traps in Hamirpur District

2.1.2 हिमाचल प्रदेश के जिलों के लिए भूकम्प प्रतिरोधी गैर इंजिनियरिंग भवन निर्माण मार्ग निर्देशिका

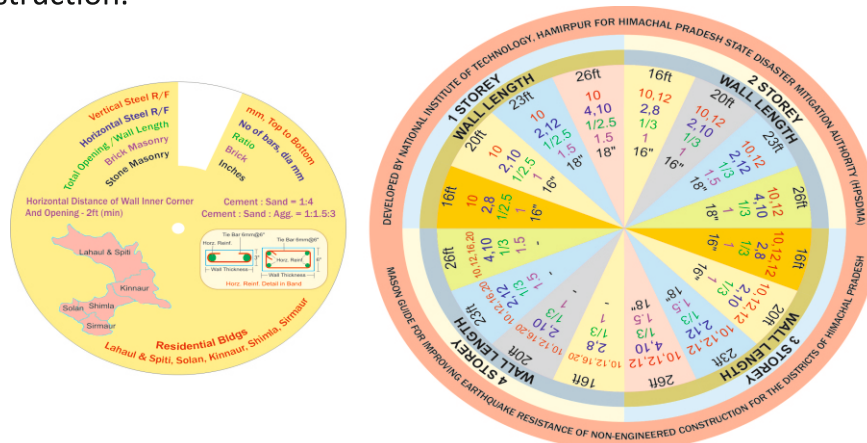
Need for Innovation:

Himachal Pradesh, being highly seismic zone, a need was felt for adopting such practices during construction works which result in safe buildings capable of withstanding earthquakes. Mostly, Codal provisions for construction works are limited to the Engineers only. Skilled/semi skilled workers directly involved in such works are often unaware of these provisions. Moreover, the engineers are not always involved in construction in each and every case.

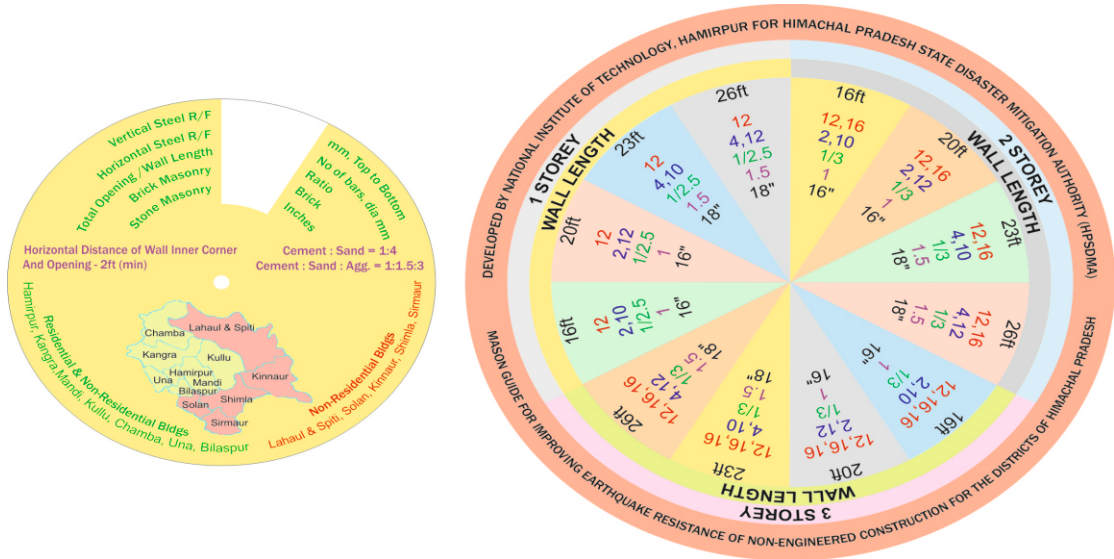
Necessitated by these factors, Dr. Hemant Kumar, Assistant Professor, Department of Civil Engineering of NIT Hamirpur, developed State specific guidelines and tools for earthquake resistant constructions which can be distributed through the hands-on training programmes to masons, carpenters, bar-benders and supervisors. The tool has been developed to suit pocket-size and design converted from English to Hindi so that the mason/supervisor can carry & refer to it easily. Also, this is a highly interactive tool as the measurements are given in feet and inches mostly followed in the field of construction in rural areas as against measurements in metre/millimetre given in the BIS code. The developed tool just needs guidance which is imparted during the training programmes in which these tools are also distributed.

How it is useful to the Construction Workers:

- ✓ Sensitization among the grass root construction workers towards safe construction practices and use of hazard resistant material in the building constructions.
- ✓ As construction practices in the past were overlooked by the owners due to their limited knowledge hence leading to hazardous & lacking construction, referring this innovation leads to efficient construction and thus a safe society.
- ✓ Tool can be used to teach the students at undergraduate level which give them an idea about the focused information required in the field of construction.



Tool for Earthquake resistant constructions



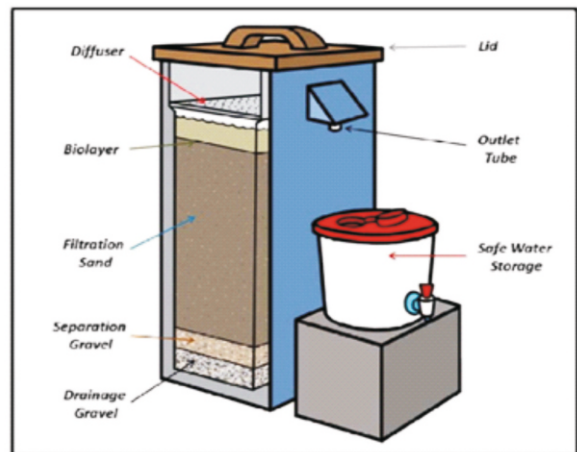
2.1.3 Removal of biological and physical impurities from drinking water through development of Low Cost Bio-Sand Filter

Factors which led to Innovation:

A pre-feasibility study conducted in the reported area of district Sirmour resulted in the conceptualization of said innovation. As per the findings of this study, unavailability of safe drinking water & occurrence of water borne disease was a major concern in majority of villages in this region. Due to badly managed water supply schemes & severe water scarcity (especially for drinking purpose), villagers had to travel long distances for fetching water from far distant natural sources. Most of the natural water sources were open, unprotected & polluted, therefore masses were left for no other option than to consume contaminated water from unprotected sources in which animals drink & defecate. Due to use of such contaminated & polluted water, the occurrence of water borne diseases such as Jaundice, gastro entitles, cholera and diarrhoea etc. were prominent in the region.

Keeping in view the above problems of this specific area, NGO Social Awareness Through Human Involvement (SATHI) developed this innovative technology of water filtration and demonstrated it in 15 remote villages of Pachchad block of Sirmour District. This is an adaptation of the traditional slow sand filter with some modifications & advancements made by SATHI.

The filter tested by various government, research & health institutions and non-governmental agencies across the world found this technology effective in water purification and effective at removing 98% of bacteria, viruses & protozoa, 95% of iron, amoebas, metals and worms, helpful in filtration /purification of contaminated water of natural sources such as rivers, lakes, wells, ponds, hand pumps and rainwater. Once installed, filter lasts for 30 years, producing 84 liters per day of safe drinking water. Total cost of this filter is Rs. 2400-2500 per filter, a onetime expense, which includes manufacturing, delivery and ongoing support.



Benefits of the Innovation:

- ✓ Significant reduction in rate of water borne diseases reported in project region after the adoption of this technology.
- ✓ Access to affordable water purification technology at doorstep and keen interest shown by community in adoption of this simple & cost effective technology.
- ✓ BSF technology of water filtration has reduced the number of diarrhea cases & rate of other water borne diseases
- ✓ Being simple, cost effective & environment friendly, people from other parts of state are also adopting the same.

Award winning Innovations for 2015-16

For the year 2015-16, following five innovations of various sectors were awarded by Hon'ble Chief Minister, HP in State level function held on 15th April, 2017:

2.2.1 High yielding varieties of climate resilient species of commercial crop Harar: Innovation awarded in Agricultural & Horticulture Sector

What led to the Innovation:

Animal conflict being a big challenge needs redressal on priority. Especially, monkeys are now living dangerously close to human habitations and their attack lead to crop losses in states like Himachal Pradesh, Jammu & Kashmir, Uttarakhand, Uttar Pradesh, Maharashtra and Karnataka. Himachal Pradesh alone registers a crop loss of Rs 500 cores every year due to monkeys and other animals. 2301 panchayats of State have been affected by animals and despite ample water and fertile land, farmers in these Panchayats have abandoned their fields because of monkeys. Also due to fast changing climate, agriculture/horticulture is no more a profitable proposition in many parts of the state. Climate resilient commercial crop with early bearing technology and improved varieties, not affected by monkeys were thought to be developed reverting farmers back to farming in such areas.

With this background, high yielding and improved strains/varieties of climate resilient species i.e. Harar (*Terminalia chebula*) by using early bearing technology have been developed by Dr. Kamal Sharma & Dr. Sanjeev Thakur of Dr. YS Parmar University of Horticulture & Forestry, Solan. These are not attacked/damaged by monkeys. The Harar saplings, as usual practice are raised from seeds which bear fruits after 10-12 years. To produce true to type early bearing plants of these strains, grafting/ budding techniques have been standardized. The grafted/budded plants have started bearing fruits at the age of just 3 years. Hence, the pre-fruit bearing period has been tremendously reduced from 10-12 years to just 3 years so that farmers can realize early returns from Harar plantations. Since the crop is climate resilient and not affected by animals, it is growing very well in frost prone and monkey affected areas.

Crops (agricultural and horticultural) grown under traditional farming systems which are affected by animals (monkeys) and climate change (frost) have been/ are being replaced with high yielding strains of Harar by the farmers.



Innovation in Newspaper



IMPROVED HARAR STRAINS



Harar Strains

How it is useful to the Farmers:

- ✓ This is a viable option for farmers from monkey affected areas and frost prone regions.
- ✓ Besides high returns per unit area, Harar has immense potential from carbon sequestration and climate change mitigation point of view.
- ✓ Popularized amongst farmers because of mass multiplication and large scale plantation of these strains in frost affected areas, marginal lands, areas rendered uncultivable due to monkey menace and threats from stray cattle.
- ✓ Development of strains with high active ingredient contents and site specific genotypes.
- ✓ Benefits include immense potential for carbon sequestration & climate change mitigation, development of strains with high active ingredient content, site specific genotypes, good returns at early stages of plant growth, suitable in frost affected areas, marginal lands & areas rendered uncultivated due to monkey menace & threats from stray cattle.
- ✓ So far more than 35,000 grafted/budded plants of these strains have been supplied to the farmers and different research & development organizations.

2.2.2 Tele-stroke Project: Innovation of Social Development Sector:

Necessity for Innovation:

Stroke has emerged as a second biggest killer of mankind world-wide and even in India more people die of stroke than infectious diseases like tuberculosis. It is estimated from national statistics that H.P. have 15,000 to 20,000 patients of stroke and every year 5000-10,000 new patients suffer stroke. This number is bound to increase with increased life expectancy and ageing of population. After a stroke about 50% patients do not survive beyond 6 months and 25% become dependent for lifetime. The common symptoms of stroke are sudden appearance of deviation of

face, weakness or numbness of limbs, difficulty in speaking, unsteadiness, giddiness and headache.

The simplest way to treat ischemic stroke would be to remove the blockage in brain vessels and drug, which is an injection called recombinant tissue plasminogen activator (tPA), which can dissolve the clot blocking blood vessels (thrombolysis) but can be given only within 4.5 hrs of onset of stroke symptoms.

Therefore, thrombolysis has become the cornerstone of acute ischemic stroke (AIS) therapy, but its widespread use is hindered by a number of obstacles, the most restrictive of which being the narrow therapeutic time window. It is due to this reason that even in countries with best health care settings and favourable neurologist-population ratio, less than 5% ischemic strokes receive thrombolysis.

On this very backdrop, Dr. Sudhir Sharma, Associate Professor, Department of Neurology, IGMC, Shimla under guidance of Stroke Specialist Prof. M.V. Padma from All India Institute of Medical Sciences, New Delhi, has devised a simple way through his Tele-stroke Project to provide first-aid treatment in ischemic stroke even at far off Health Institution of the State by any trained Medical Officer without the help of a specialist by making use of social networks like whatsapp etc.



Innovation involved in Implementing the project:

- For implementation of this project, government hospitals with CT-Scan facility were roped-in. These hospitals were then designated as primary stroke centres.
- Workshops were conducted at various district hospitals. Medical officers in these hospitals were trained in recognizing stroke through these workshops. They were taught reading plain CT-scan head to rule-out hemorrhage even without the help of radiologist and written protocols for thrombolysis in ischemic stroke.
- Blood sugar and ECG were only other investigations to be done apart from CT- head before thrombolysis.
- All the neurologists were made available on phone 24*7 and social networking sites like “Whatsapp etc. were used for transmitting CT-scan images to neurologists for consultation.
- This is the first smartphone based experience of telemedicine in acute stroke care in India.
- With ever improving technology, smartphone based telestroke services may not only be a much cheaper alternative to videoconferencing based telestroke services but also be more portable, equally efficient and with less technical glitches.

2.2.3 Ready to cook spice mix products of R.R. Enterprises: Innovation of Food Processing and Manufacturing Sector:

Background & conceptualization of Idea:

In today's time, there is a change in cooking habits due to hectic lifestyle. People want products that are healthy & convenient to use. Keeping the demand of today's population in mind, R.R. Enterprises has innovated ready-to-cook spices to make cooking easy for the public. R.R. Enterprises has been in the business of manufacturing “Ready-to-Cook Spices” since 2013 as a micro small scale unit located in Kullu, Himachal Pradesh. R.R. Enterprises are engaged in manufacturing and exporting quality range of ready to cook spices.



Benefit of Products:

The benefits of these products which make them different from other products available in the market are as under:

- Ready to cook spice mix means there is no need to add- onion, ginger, garlic, salt or any other spice to make a dish like, Chicken Curry, Rajmah, Dal Makhni etc. (30 different products).
- Saves time, effort, health and money.
- Beneficial for working class population, students, people staying away from home, new cooks & overseas Indian population. People can spend time on productive work rather than on cooking and need not to eat junk food or packed food.
- 100% Natural Spices- no preservatives, artificial colour or flavour.
- Saving the health of the people as they don't have to eat unhealthy food or packed food as you can make fresh food in minutes.
- Employment generation with 85 % of total workforce comprising of women.

2.2.4 UDAAN – Program to address learning gaps by starting a learning enhancement program: Innovation awarded under Academic Sector:

Need for such Initiative:

Studies on education outcomes like Annual Status of Education Report (ASER) show that despite increase in the enrolment and improvement in physical infrastructure, children are still lagging behind in terms of learning achievements. In Himachal Pradesh, children in Standard V who could perform division problems have declined from 63% in 2010 to 46% in 2014. Hence, there is an urgent need to address this alarming situation. Mandi District Administration and DIET Mandi were keen to initiate a program in order to enhance the learning level of children in the primary classes of the district. On this backdrop, a program viz. **UDAAN** was started by DIET Mandi in association with District Administration, Mandi to understand the basic literacy and numeracy levels of the children of Standard 3-5 in the district with a view to address these learning gaps by starting a learning enhancement program for them.

Implementation of Program:

- ✪ Pre-Program (Baseline) Assessment: Training on the entire assessment process was provided by the Pratham team & about 200 trainees were trained by whom each child from Std. 3-5 was assessed on one-on-one basis in targeted schools with a view to know the child & understand what they could do and what they needed to be helped with.
- ✪ On the basis of baseline results, Mandi District Administration in partnership with Pratham Education Foundation started a program named 'UDAAN' to improve the reading, writing and basic arithmetic skills of children and for accelerating & sustaining basic learning for children in grades 3 to 5.
- ✪ Learning camp being a major medium of delivery- program aimed to reach out to all children in grades 3 to 5 in 290 summer closing cluster schools of the district.
- ✪ District Resource Groups (DRG) formed to support training of teachers at block level have been trained on content and assessment by Pratham National Team and have taken the responsibility for teacher training.



- ✳ Facilitated by Pratham, trainings have been organized by DIET Mandi for teacher training on pedagogy, content and assessments. The current program entails two subjects on which training has been provided – Mathematics and Language (Hindi).

Assessment & Monitoring of Program:

- ✳ The District Administration of Mandi, Deptt. of Elementary Education, DIET Mandi and Pratham have continuously monitored the program. There is a team of Pratham Block Coordinators who are responsible for providing academic support to schools.
- ✳ Pratham has designed and developed tools and framework for assessments. Two external assessments (Baseline and Endline) are planned to be conducted with children from grades 3 to 5 by DIET's JBT trainees to assess their learning levels.
- ✳ To ensure that learning level improvements show up their visible effect, level appropriate intervention is given to students of class 3, 4 and 5. This essentially means that children are allowed to learn freely without the need of sitting in their respective classes. The intervention is tested for Language and Math respectively and at least 1 hour is devoted for each of these subjects on daily basis.

Outcomes of Program:

- ↪ After regular visits to intervention schools, the trends showed substantial improvements in the learning levels of children especially those who were at lower learning levels in the beginning.

- ↪ This program through camps developed the spirit of learning in free environment amongst children, irrespective of their age groups.
- ↪ This helped in creating an enabling environment where children could divulge in exchange of ideas and get rid of their inhibitions.
- ↪ The teachers too got opportunity to tackle multi level and multi grade situations in existing primary schools. They are getting exposure to new methods of evaluation which is likely to help them develop in a need based teaching strategy.

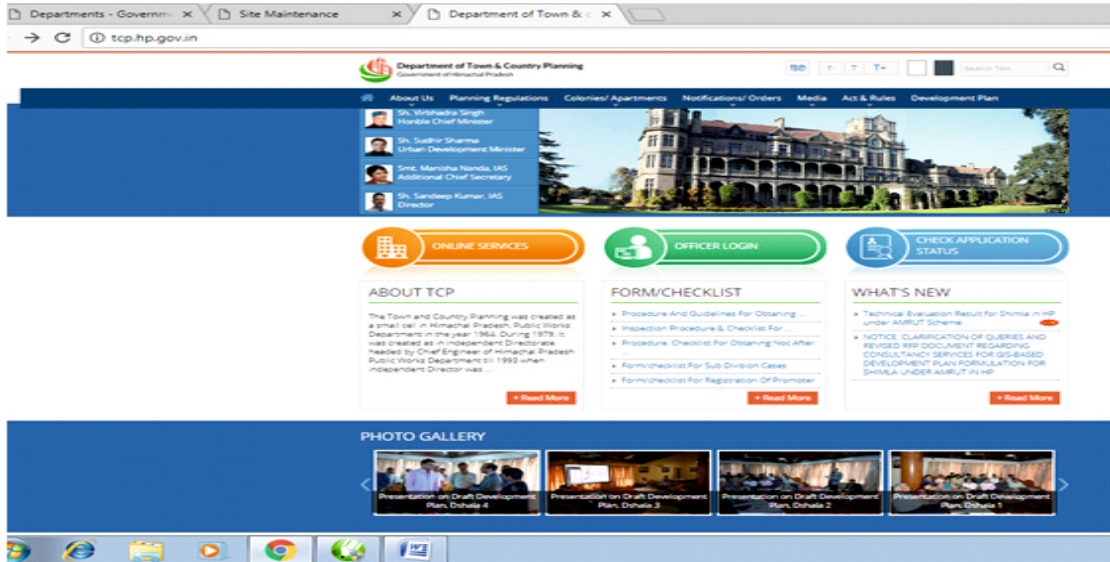
Way Forward:

- ↪ On the backdrop of success of said pilot program, other schools are also to be made part of this process to evolve a comprehensive way ahead for improving the learning levels.
- ↪ Once basic literacy and numeracy skills get transferred to the students the initiatives are to taken to the advanced level.
- ↪ Community participation is to be ensured by engaging parents. This will create a better environment for learning and ensure a better future for children.

2.2.5 e-Services Project of Town & Country Planning Department : Innovation awarded under Govt. Sector:

Background of Project:

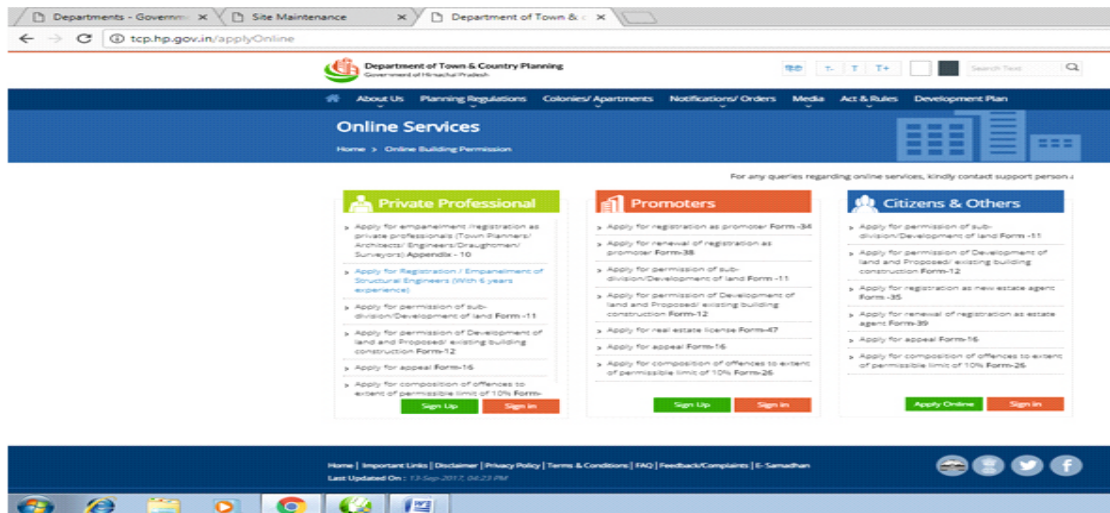
This project was envisaged with a vision to reduce the footfall in the offices by adopting innovative technology of the digitization and online web based C2G and G2C services to all the stakeholders. The objective was to develop a Web portal, a robust system of MIS for online Planning permission with a view to ease-out applicants from manually applying for Planning permission. It has dynamic management system (CMS) with updated information as per the mandate of the Right to Information Act 2005 and e-services modules. The TCP web portal, with facility to provide online planning permission process, was officially launched on 13.01.2016 by the Hon'ble Chief Minister and since then is working smoothly and efficiently. The General users are getting benefit of this facility by applying online.



Screen Shot of Web Portal

Functioning of Project:

The Town and Country Planning Department portal provides a facility to apply online for permission to plan and construct. 24x7 access is offered to all the private professionals (Town Planners, Architects, Engineers, Draughtsmen, Surveyors etc.) to upload their cases. A dashboard has been made available to the



What e-services offer

private professionals which provides a digital store for their online work. The applicants can register and apply online to get Planning Permission alongwith a reference number to know its status. There are two major stakeholders of the application, namely; general users (web portal) and departmental users (Officer Login).

The process to deal all the applications is through online workflow from first level officer up to the sanctioning authority. Every officer/official has been given a timeline to deal the case so that it is disposed of in the light and spirit of Public Services Guarantee Act-2011. System generates alerts about overdue that induce officer/official to take action in time. Online services have eliminated bias of favoritism and no-action. The system of transparency to peep inside working of Department by the superiors and citizens has brought about efficiency and accountability in working.



Capacity Building of stake-holders

TCP web application is experiencing about 600 clicks daily. TCP web portal is also providing information and support to users through SMS/messages and mails and about 6000 messages and mails/month are being sent to users.

Benefits/Utility of Portal for General Public:

- The portal enables the **general users** to get various information regarding different forms, apply online for private professionals' registration, registration of Estate Agents/Promoters, subdivision of land building permission, deviation settlement, No Objection Certificate for basic amenities, view Dashboard for various land related information, Online fee calculator for automated calculation of application fees and other Charges, Upload and download documents and proposed site maps and Pay online application fee etc.
- The General users are getting benefit of this facility by applying online.
- Till date various applications received for registration of Agents, Promoters and Private Professionals, Planning Permission, NOCs, cases and compounding of unauthorized construction etc. are given as per table below:

Sr. No.	TCP Services	Total Applications received till date
1.	Total Registered Private Professionals	1,230
2.	Total registered Estate Agent/Promoters	77
3.	Total received application of Planning Permission cases under :-	12,065
a	Form 11: Subdivision of Land	408
b	Form 12 : Planning Permission	1,991
c	Form 26 : Compounding	356
d	No Objection Certificate	360
e	Feedback and Complaints	168
f	Appendix-1: TCP Amendment Act, 2016	8,762
	Total	13,372

Impact on functioning of Department:

- ☞ System generates alerts about overdue that induce officer/official to take action in time.
- ☞ Online services have eliminated bias of favoritism and no-action.
- ☞ The system of transparency to peep inside working of Department by the superiors and citizens has brought about efficiency and accountability in working.

Other Innovative Proposals which could not get recognition but are of worth mentioning:

Besides above mentioned innovations which were either funded from HP State Innovation Fund or were recognized through HP State Innovation Award Scheme during the past two years, there are many more new ideas which could not find place amongst recognized/awarded innovations due to some shortcomings but are worth mentioning. These initiatives/ideas are:

- ☞ **Cost effective multipurpose tiller-cum-puddler:** The equipment devised by Sh. Parma Ram Chaudhary of Village Chhatter, PO Jughahan, Tehsil Sunder Nager, District Mandi resulted in higher efficiency in ploughing, ridge & channel making and weed scraping operations in spaced crops. It can be efficiently operated using kerosene oil after initial ignition with petrol. This equipment uses 50 ml petrol and 1 litre kerosene per hour covering 3 bigha area for puddling, 1 bigha for ploughing, 2bigha for ridging & channel marking and 1 bigha for weed scraping operations.
- ☞ **Pen to fill OMR in single click:** In OMR sheets generally used in competitive examinations, students are required to fill the circles/oval shaped blank spaces. Ordinary pen consumes lot of time to accurately fill the circles/oval shaped blank spaces corresponding to the correct answer. This pen developed by Sh. Anirudh Thakur, Village Majithai, PO Badehari, Tehsil & District Shimla enables students to fill the blank space in a single click thereby saving the time of the students during the examination.
- ☞ **Reactor for conversion of waste plastic to Household LPG:** This reactor developed by Dr. Deepak Pant, Associate Professor, Central University, Dharamshala, District Kangra mitigates all the environmental issues related to its management. Average household consumption of plastic is approximately 120g a day from the proposed reactor & it is possible to produce 100g LPG in a day, suitable to meet the requirement to an average family.
- ☞ **Ultra low cost digital carton box making machine:** Manual machine costs about 20 lakh but its production speed is very low. This innovation of Sh. Anirudh Thakur, Village Majithai, PO Badehari, Tehsil & District Shimla is only of Rs. 10 lakh and is a digital machine with a production speed of 10 thousand boxes per day (10 hour).
- ☞ **Design and Fabrication of Indirect Mode Solar Food Dryer for the conditions of Hamirpur:** This dryer developed by students of Mechanical

Engineering Department of National Institute of Technology, Hamirpur under the mentorship of Dr Varun Assistant professor, is capable of dehydrating fruits and vegetables for 24 hours each day and can meet the requirements of both industrials and cottage workers.

- ☞ **End threaded intramedullary positive profile screw ended self-tapping pin:** A cost effective novel field compatible innovation for management of long bone fractures in animals and birds has been developed by Dr. Adarsh Kumar and his team of Department of Veterinary Surgery & Radiology, Dr GC Negi College of Veterinary & Animal Sciences, CSK Himachal Pradesh Krishi Vishva Vidyalya, Palampur.
- ☞ **A value chain on seabuckthorn:** This research of Prof. Virendra Singh of Department of Biology & Environmental Sciences, CSK Krishi Vishvavidyalaya Palampur results in improvement of production and collection of seabuckthorn berries on marginal/forest lands, fine –tuning the technologies for development of specific seabuckthorn foods, veterinary and nutraceutical products, to utilize seabuckthorn waste to develop animal feed alongwith developing entrepreneurship and appropriate strategies to promote and popularize seabuckthorn for commercialization through value-addition and branding seabuckthorn as health food.
- ☞ **Development of Apple Corer & Mechanical Seed Extractor for separation of Apple Seeds:** Dr. Devina Vaidya and his team of Dr YS Parmar University of Horticulture and Forestry, Nauni, Solan focused on developing mechanical apple seeds extraction machine (Apple corer and seed extractor) on the basis of optimum dimensions of apple fruit and cores, evaluation of generation potentiality of apple seed extracted by using mechanical seed extractor, Pilot scale testing of mechanical seed extractor in apple orchards/apple processing plant.
- ☞ **Microbial Bio-Composting (MBC) Technique for Solid Waste Management (SWM):** This is user-friendly microbial bio-composting technology devised by Dr. Jagdish Chandra Kuniyal, Scientist-F & Dr. Harinder Kumar Thakur, Senior Research Fellow (Former) G.B. Pant Institute of Himalayan Environment and Development Himachal Unit, Mohal-Kullu District Kullu to manage ever increasing biodegradable solid waste in the urban locations and to promote organic farming using this bio-compost in rural locations.

Funding the Innovative Ideas:

To transform innovative ideas into reality, financial support to meet out the need of gap-funding is being provided to State Government Departments by the State Innovation Council from State Innovation Fund.

HP State Innovation Awards:

For recognizing best innovations at State level HP State Innovation Awards are given annually. Any individual/department/institute can send his/her/its innovation for State Innovation Award. Best innovations in six categories are awarded with individual cash and a fixed amount is given to concerned Department/Institute/Organization for promoting & replicating innovative ideas and practices.

For more Details :

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