

# Punjab State

## Diffusion of ICT Solutions for Sustainable Growth

Edited by MOHAN DAS VISWAM

Charting change from the cutting edge of knowledge, pursuing the frontiers of research to ever-widening horizons, NIC Punjab State has built a reputation as a leading state by implementing various eGovernance projects. The State of Punjab is moving ahead with its ambitious 'Digital Punjab' dream through the implementation of automated systems of key sectors. Furthered by SSO, the road ahead is enablement to deliver a plethora of applications through creating a single designated platform. To make the delivery of all services including DBT to the citizens, the state is making all efforts for the deployment of diverse ICT solutions.



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Originally called Sapta Sindhu, the Vedic land of the seven rivers flowing into the sea. Later Sanskrit name given for the region, as mentioned in the Ramayana and Mahabharata was Panchanada which means "Land of the Five Rivers", and was translated to Persian as Punjab after the Muslim conquests. The word Punjab is a compound of the Persian words panj (five) and ab (waters).

### ICT Initiatives in Punjab

NIC Punjab State Centre has been instrumental in design, development and implementation of e-Governance solutions, which has resulted in digital transformation in the state at all levels.

During the pandemic times, unprecedented demand has been triggered for digital solutions like eOffice, networking, Web Hosting etc. Besides providing round the clock IT support to state and district administration during fight against Corona NIC Punjab State also developed and implemented various major applications like IFMS, iHRMS, RCMSPB, eCounseling, eAbkari, PAROS etc.

Following are some of the digital solutions in various sectors

### National Generic Document Registration Systems (NGDRS) <http://igrpunjab.gov.in>

Punjab is the first state in the country to implement this ambitious project of DoLR, covering 174 sub-registrar offices. The system has been migrated to State Data Centre. Till date more than 18 lakhs documents of 37 types of articles have been registered. It has integration with SHCIL, Bank and Land Record System. It offers facility to book appointments by payment of requisite fee. The information of registered deeds is passed to land record system for mutations.

### eOffice <https://eofficeportal.punjab.gov.in>

eOffice has implemented in 60 Departments, 104+ Directorates and field offices, 110 Boards and corporations and field offices, 22 Districts including all SDMs, Tehsil offices (Total 1086 offices), 4 Universities, 26 Engineering Colleges and 119 it is with more than 60,000 users on-boarded. Also, eOffice has been implemented in CBIC for 5 states and then replicated PAN India for 50,000 Users.

During the lockdown, Training sessions on eOffice were conducted for users which were attended by more than 40K+ employees. A YouTube channel has been launched for onsite training having 1.35 lakh views with 15000 watch hours.

8 eOffice instances are running and one shifted to SSO. Awarded with CSI Nihilent, Skotch, Digi Gov, eLets etc.

“  
NIC Punjab is key partner in providing ICT solutions in the state for effective delivery of services through G2G, G2C, G2E channels. It has played a pivotal role in supporting various departments in the districts as well as at state level for automating their processes for bringing efficiency in their functioning.  
During the COVID 19 Pandemic situation, continuity of services was ensured with specialized digital solutions such as Video-conferencing, eOffice, networking. With onboarding of new initiatives like Service-Plus, Single Sign On (SSO) etc., we hope to improve the user experience further.  
I extend my best wishes to the entire team of NIC Punjab for future projects.”

**VINI MAHAJAN, IAS**  
Chief Secretary  
Government of Punjab

### iHRMS (Integrated Human Resource Management System) <https://hrms.punjab.gov.in>

It attempts to provide better services in the form of employee service record, salary, GPF, GIS, Leave, Income tax information, property returns, Annual Confidential Progress, Posting, promotion, arrears management etc. besides integration with IFMS, it also caters employees posted in PSUs, Boards and corporations, Medical Institutions comprised of 33,000 plus offices for 3.60 lakh employees. 24\*7 Vani Chatbot availability ensures common queries replies in an automated manner.

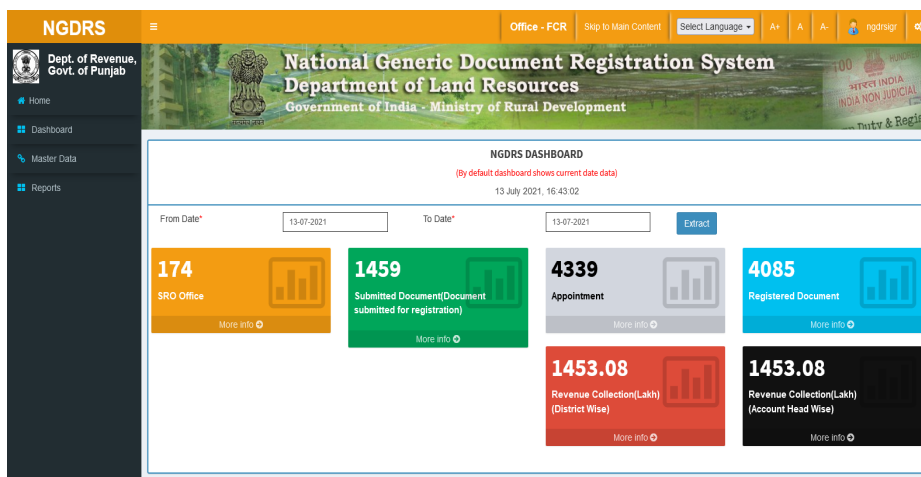
An iHRMS YouTube channel is having 45 Plus videos with 8270 subscribers and 5.60 Lakhs views. iHRMS Mobile app (1.50 Lakh downloads) is developed for marking daily attendance.

### Integrated Financial Management System (IFMS) Punjab <https://ifms.punjab.gov.in>

IFMS is designed to bring efficiency in financial planning and expenditure control. This platform has brought stakeholders like Department of Finance, Treasuries, Administrative Departments, Accountant General (AG), RBI, Banks and Citizens on a single platform. Smart Dashboards have provided a better Decision Support System. It also includes planning, budgeting, receipt, expenditure, bill processing and MIS. Government of Punjab successfully transitioned to new IFMS w.e.f. 1st April 2020.

### Single Sign On <https://digital.punjab.gov.in>

Initiatives have started to place all independent software systems having different authentication mechanisms onto single designated



### ▲ National Generic Document Registration System (NGDRS)- Punjab

platform through Single Sign On (Parichay). Some of the applications have been already registered on Parichay.

### Revenue Court Management System (RCMSPb) <http://rcms.punjab.gov.in>

RCMSPb has been developed and implemented in all Revenue Courts. It captures General Case Detail, Petitioner details, Respondent Details, Land related details. RCMS has integration with Land Record application. It includes a dashboard and citizen interface module. Implemented in 444 Revenue Courts and 67281 cases captured.

### eAbkari <https://excise.punjab.gov.in>

It is an online workflow-based solution for transformation of state excise ecosystems. The sourcing and distribution of spirits are being handled in real time. This has eliminated entire administrative layers involved in the processing of service requests. Issuance of online acknowledgement of service request has been incorporated to track the process status, Stock Inventory. Department can also monitor Enforcement Activity from preventive Raid Information System, Chemical Examination Laboratory Management, Excise Offender Information & Case Management.

### District Governance Mobile Challenge (DGMC)

NIC District Centres of Punjab took the DGMC challenge. Some of prominent mobile apps developed are m-Nivaran, Conquer the Sky, Schemes Information, Gov. Contacts, Career Counselling, Yojna.

### Business First <http://pbindustries.gov.in>

It is a user-friendly portal for investors of Punjab to obtain Regulatory Clearances & Fiscal Incentives for setting up and running businesses. Business First ensures conceptualization of the project till the commencement of commercial operations.

### eLabour <https://pblabour.gov.in>

It deals with different wings of Department of Labour. It covers 100% Labour Reforms as

Implementation of various e-governance initiatives has been undertaken with a view to strengthen the management and monitoring activities of Revenue department with the objective of providing timely, transparent and effective services to the citizens. NIC Punjab has contributed significantly to this voyage.

with various state-wide citizen-centric applications like National Generic Documents Registration System (NGDRS), Revenue Court Management System (RCMSPb), Land Demarcation Application system (LDAS), Non-Encumbrance Certificate (NECIS) etc. along with providing technical support, as and when required.

I am happy to know that the forthcoming issue of Informatics is focusing on ICT initiatives of the State of Punjab for which I express my appreciation.

I would like to congratulate the NIC Punjab team for extending unstinting support to the Revenue department. I wish them the very best in their future endeavours.

**RAVNEET KAUR, IAS**  
Additional Chief Secretary (Revenue)  
Government of Punjab

NIC Punjab has supported State Government in the most crucial times by development and implementation of IFMS during COVID times, to replace the legacy system implemented by a private agency, in a record time.

NIC as the technology arm of Government is catering to the ICT needs of all levels of governance and has also built several premier digital solutions, making the last-mile delivery of Government services to the citizens a reality.

I wish NIC Punjab team all the success and hope that focused and sustained efforts will be carried forward to leverage the power of e-Governance at all levels of society.

**ANIRUDH TEWARI, IAS**  
Additional Chief Secretary  
Department of Governance Reforms  
Government of Punjab

suggested by the Department, GOI. It includes Online Services for employees, employers and law enforcement agencies, Online Services for Domestic Workers, Online Services for Punjab Labour Welfare Board, Online Services of Building and Other Construction Workers (BOCW).



▲ Launch of eOffice by Hon'ble Chief Minister Punjab

**PAROS - Punjab Advertisement Release Order System for DIPR** <http://dipr.punjab.gov.in>

This online release order system digitised the process of submission of advertisement requests by organizations and bill submission by print media. This initiative saves time & revenue and brings transparency besides ensuring real time tracking of Release Order by departments & DIPR. The application has been conferred with "Digital Technology Sabha Award 2021".

**Vehicle Management System (VMS)** <https://vms.punjab.gov.in>

It facilitates a check on POL Bills of State Government vehicles. Every Govt. official Vehicle has a POL Limit assigned by the Department of Finance. VMS has saved more than 17 Crore rupees for the state government in the first year of its launch.

**Government Property Management System (GPMS)** <https://gpms.punjab.gov.in>

A tracking system for the Immovable Properties of Govt. of Punjab. Once a property is verified by authority, the designated officials can search for un-utilized Properties and allocate the same to needed offices/ departments. State Government can check the availability of vacant office space.

**Punjab Sewa Portal (PSP)** <http://psp.punjab.gov.in/cui>

It facilitates the delivery of citizen-centric services of all the departments. It executes from Sewa Kendras in which online integration with eDistrict, PSPCL (Electricity Bill payment), BSNL (Telephone Bill payment) and Labor (Registration of workers), Housing (GMADA) application etc. It has dashboard and MIS module at state land district/sub-district level. PSP is also integrated with IFMS.

**CONFONET (Computerization and Computer Networking of Consumer Forums)** <http://confonet.nic.in>

CONFONET has been successfully implemented in 20 districts consumer forums and at State Commission.

**E-Daakhil** <https://edaakhil.nic.in/>

E-Daakhil portal which facilitates online filling of complaints by the Citizen/ Advocate, provision to pay case fee (online and offline), automatically marking of case filed by citizen to the concerned authority. It also facilitates citizens to file appeal, revision petition and automatic calculation of fee details depending upon the claim filed by citizen.

**DISE (District Information System for Elections)**

DISE was designed and developed by NIC Punjab for management of various tasks related to deployment of staff on polling duty covering all three levels of randomization process according to guidelines of ECI. The software is designed to handle Assembly, Parliament, Panchayat and Municipal Elections. Besides Punjab, DISE is being used in Himachal Pradesh, Karnataka, Delhi, Chandigarh and Manipur.

**Portal for Mahatma Gandhi State Institute of Public Administration (MGSIPA)** <https://mgsipa.punjab.gov.in/>

It facilitates content management through authorized logins with in-built work-flow and roles. The portal offers online booking of accommodation of Conference Halls, Lecture Rooms, Hostel, and Training Labs with back-end enforcement of business rules like approval/cancellation, blocking, assignment of accommodation, Training calendar Management, Knowledge Management, Applying Online for Trainings, Resource Person Registration & Management.



DIPR's (Department of Information and Public Relations, Government of Punjab) initiative on the implementation of PAROS is a step towards good governance. PAROS (Punjab Advertisement Release Order System) has been a significant accelerator in connecting Government of Punjab with common man through print media. Using this system Government of Punjab is able to publish its advertisements transparently and expeditiously in print media which has resulted in considerable revenue savings. I would like to congratulate NIC Punjab team on behalf of Government of Punjab for devising, designing and implementing the project.

I wish NIC Punjab all the success in its endeavor to drive and implement many more e-governance solutions in Punjab.



**GURKIRAT KRIPAL SINGH**  
Secretary (DIPR)  
Government of Punjab

**DARPAN**

<https://pb.cmdashboard.nic.in>

It provides Analytical Review of Projects like eOffice, NSAP, MGNREGA, NRLM, Prime Minister Awas Yojna (Gramin), Swachh Bharat Mission (Gramin), RCH, SARATHI, VAHAN, Soil Health card, Jal Jeevan Mission, Invest Punjab, iHRMS, eLabour, Schools Info, Category-wise Building Progress, Scheme-wise Road Progress, Scholarship schemes etc.

**Mukh Mantri Punjab Cancer Rahat Kosh (MMPCRK)** <http://mmpcrk.gov.in/>

MMPCRK monitors the financial aid provided by Govt of Punjab to residents suffering from cancer. It is a work-flow based solution involving application/estimate submission by Hospital, approval by Civil Surgeon Office, District Committees & DHS and finally release of funds to the Hospitals on submission of Utilization certificate. MMPCRK Sahayak chatbot is developed and programmed to answer specific, frequently asked questions, offering an easy way to answer the queries of Visitors.



I feel a world of instinctive happiness to share that our university is the first university of Punjab to adopt, implement and having successfully run the e-Office. The espousal of e-Office is one of the leading initiatives taken by the university to be in line with the department of Digital India.

The execution of e Office has been instrumental in ensuring transparency and accountability in the working of various departments of the university. A multitude of benefits has ensued including an improved file management system/ speedy processing of files at every end, better handling of diverse problems that occur with physical files, prudent use of the human resource, time & space. coverage of distance between the main campus & constituent campuses. Making the offices paperless, the application is indeed saving the environment.

I acknowledge the sincere efforts and assiduous task performed by the team of IKGPTU in their positive acceptance. Successful accomplishment and effective realization of objectives of e Office. I also wish to recognize the dedicated efforts of the project team of NIC officers for developing such a user-friendly application. It is only because of their perseverance that e-Office could be implemented in PAN Punjab within a short period of time.

May Almighty bless us with the same amount of vigour, hard work and courage to come up with such brilliant enterprises like e-Office those would pave a way for developed and surprising India across the world

My greetings and best wishes to all.



**Dr. AJAY K SHARMA**

Vice Chancellor

L. K. Gujral Punjab Technical University, Jalandhar  
Government of Punjab

**PPSC-ISR (Integrated Solution for Recruitments for Punjab Public Service Commission) <https://ppsc.gov.in>**

It automates the recruitment process with the creation of advertisements, Publishing/Closing of Advertisements as per defined schedule, on-line/offline registration, online generation of admit cards & roll numbers, Centre Wise availability a list of eligible candidates, allotment of exam Centre. More than 172 numbers of advertisements have been published inviting more than 5 lakhs candidates' registrations.

**Court Cases Monitoring System - Punjab (CCMSPb) <http://ccmspb.punjab.gov.in>**

It is a centralized state-wide application for departments/officers to manage and monitor court cases of varied kinds pending in various courts. It is integrated with Punjab and Haryana High Court enables automatic updation of court cases data for cases pending in High Court. CCMSPB offers dashboard and MIS reports and implemented in more than 110 departments.

**Land Demarcation Application System (LDAS) <http://rcms.punjab.gov.in>**

It provides services to the citizen to apply and obtain land demarcation certificates. It is also integrated with the Land Record application for fetching all property-related details and updation of property status as disputed. 8343 number of application requests has been captured.

**Non-Encumbrance Certificate Issuance System (NECIS) <http://rcms.punjab.gov.in>**

It automates the process of obtaining NE certificate. It is integrated with IFMS and with Land Record application for masters and property related details and for work-flow processing of the application.

▼ **Integrated Human Resource Management System**

The screenshot shows the homepage of the Integrated Human Resource Management System Punjab. At the top, there is a header with the system name and a tagline: "A Tool of Effective Management of Human Resources and Decision Support". Below the header, there are navigation links for Home, English, A+, A-, Screen Reader, Demo, Get iHRMS Code, and Login. A status bar indicates the system is available from 9 AM to 5 PM on working days. The main content area is divided into three columns: Notice Board (with links to YouTube, Facebook, and Mobile App), Employee Related (with links for Property Return, eService Book, and Feedback), and Department Related (with links for Data Entry Status Report, Search Orders, and Recruitment - Apply Online). At the bottom, there are sections for Notifications (listing various administrative updates) and News (listing help desk support and ACR performance information).



The Mobile Based Citizen-Centric Solution, M-Nivaran was launched to provide an umbrella platform to touch every aspect of citizens needs starting from the panic button for the Citizens in danger, to all government popular schemes, grievances, suggestion, Janbhagidari to Covid crises management including vaccination, Covid dashboard, and real time updates to the citizens.

I appreciate NIC whose Technological prowess and sustained efforts have always being instrumental in Better planning and Decision-making for Citizen's Centric Services in District. This endeavour of NIC Faridkot has made Faridkot one of the Leading Districts of State in terms of Citizen Accessibility.



**VIMAL KUMAR SETIA, IAS**  
Deputy Commissioner Faridkot  
Government of Punjab



▲ Single Sign On

**Punjab ITI eCounseling** <http://itipunjab.nic.in>

It is online, off-campus counseling for automating process of admissions in ITIs includes admissions to engineering, non-engineering and vocational courses.

**E-Procurement / GePNIC** [eproc.punjab.gov.in](http://eproc.punjab.gov.in)

It is rolled out in Govt. Departments/Board and Corporations. 95 purchasing agencies, 2378 Tender Inviting Authorities (TIAs) are using the GePNIC platform. An average of 3100 tenders worth ₹ 1500 crores are published on the GePNIC platform every month.

**eSamiksha** <https://esamiksha.punjab.gov.in>

eSamiksha, an online Monitoring and Compliance to fast track the compliance of action-points/proposals/issues/Projects/schemes/targets etc. pending with or within various implementing agencies such as Ministries/Departments/Organizations.

**Scholarship Portal of Punjab**

<http://www.scholarships.punjab.gov.in>

It is a workflow-based system for SC and OBC

students to apply for the post-matric scholarship. It includes solution for application, verification, sanctioning and disbursement through IFMS directly to student bank accounts. 350 crores of scholarships to 3 lakh students are disbursed annually.

**Automation of Economic and Statistical Organization of Punjab**

<https://esopb.gov.in>

It includes various solutions like Village Directory, Consumer Price Index, Index of Industrial Production and Punjab State Data Accessibility Policy which contains 14823 resources in 510 categories.

**MedLEaPR (Computerization of Medico Legal Reports and Post Mortem Report)**

<http://medleapr.punjab.gov.in>

MedLEaPR is the computerization of MLR and PMR. The need of reports was felt as the courts, the prosecutions and the defense generally face problems in understanding and reading the Post-mortem and Medico legal reports during the trials as the MLR & PMR are more often penned down in

illegible handwriting. It has been implemented in all the Govt. and Private health institutions.

**XLN- Xtended Licensing & Laboratory Node** <https://xln.punjab.gov.in>

It enables online submission of applications by retailers and whole-sellers of pharmaceutical products, e-file movements from field offices to head office, inspections and monitoring of legal actions, sampling and laboratory testing, mass dissemination of sub-standard or spurious drug batches to end-users etc.

**COVID19CC and RTPCR (Reverse Transcription and Polymerase Chain reaction)** <https://covid19cc.nic.in>

RT-PCR app helps the sample collectors to fill SR-Form from the patient location or away from patient location, Sending SRF-ID and COVID19 reports to patients. Overall, it helps ICMR to integrate with ICMR data and contact tracing and identification of sensitive zones.

**PMCARES-OC MIS (Oxygen Concentrator Management Information System)**

<https://covid19cc.nic.in>

PMCARE OCMIS is implemented in Punjab for tracking and deployment of OCs in real-time.

**Transport Department (Vahan and Sarathi)** <https://parivahan.gov.in/parivahan/>

All the 92 authorities of Punjab have been computerised with implementation of all the modules of 'Vahan' and 'Sarathi'. Self-backlog implemented which allows the applicant to digitise his manual RC/DL to digital.

**Prisoner Management System (ePrison)**

<https://eprisons.nic.in/public/Home.aspx>

After Successful implementation in Central Jail Ludhiana, it has been replicated in all 27 Central, District & Sub-Jails with Total Prisoners (24998) till date.

**S3waas**

<https://punjab.s3waas.gov.in>

Website for 22 districts has been developed and migrated to S3WaaS framework. Information

▼ e-LABOUR Punjab Dashboard

▼ Integration Financial Management System

dissemination from these websites has been done for other department websites at districts.

**India Code Portal** [indiacode.nic.in](http://indiacode.nic.in)

Till now, 75 Department Nodal Officers accounts have been created. Total 260 acts uploaded with 219 rules, 33 regulations and 51 notifications etc. uploaded on India Code Portal for Punjab.

**PM Kisan** <https://pmkisan.gov.in/>

21 lakhs beneficiaries under the scheme have been identified by the State.

**Cooperative Core Banking System (CCBS)** <https://pbccbs.nic.in/>

90 Primary Agriculture Cooperative Banks branches are using this software customized as per their requirement.

**Central Inspection System**

<http://pbinspections.gov.in>

It is a combined inspection portal for Department of Labour, PPCB and Director of Boilers. The system is randomizing and provides joint inspections to inspectors of above said departments.

**eMPR**

eMPR digitized the whole process of monthly MPR preparation, submission and compilation. The state in charge will further get the complete reports in a click away.

**eProsecution** <https://eprosecution.gov.in>

eProsecution has been rolled out in 22 District Attorney Offices of Punjab and mapped with the 167 lower courts and 420 police stations.

**Arms License Issuance System**

<https://alis.nic.in>

4.5 Lac legacy arms licenses of Punjab have been digitized and implemented in 28 arms licensing authorities and Home Department.

**Indian Citizenship Online**

<https://indiancitizenshiponline.nic.in>

Implemented in 22 DC offices, SSP offices and Home Department.

**NIC Punjab State Data Centre**

NIC Punjab SDC is equipped with 450 TB of storage and 6TB of RAM.

**NICNET/ NKN Connectivity**

Three core links 10Gbps, 1Gbps and 100mbps connectivity at INoC for providing Internet connectivity to GOP. Punjab SWAN/PAWAN has been integrated with NKN at the district level. All the 22 Districts and the SDC are connected with 10Gbps/1Gbps/34Mbps fiber with PB-SHQ. 33 Institutes of Higher learning connected to network speeds of 1GBPS/100Mbps. 89 Horizontal Links from SHQ to Departments and DHQ to Departments have been provided. More than 5000 nodes at both Secretariats, Police HQ and Kendriya Sadan are being managed.

**Video Conferencing**

70 plus VC studios have been set up. During Covid-19 Pandemic support was provided 24x7. Virtual VIDHAN Sabha sessions were covered where live proceedings of house were made

available for the news agency and other dignitaries during pandemic. Total 2192 VC sessions were held during pandemic.

**Road Ahead**

**Online Service Delivery through ServicePlus** <https://eservices.punjab.gov.in>

eServices is the initiative for extending portfolio of services for consumption by the citizens. The first service for receiving the applications for various posts has been developed and launched for IISER Mohali, received 2500+ applications in a month. PoC has been done for four services i.e., Registration of Bed and Breakfast/Homestay Units, Registration of Tour Operator, Dogra Certificate, Income Certificate.

**Electronics Deposits Management System (eDMS)** <https://edms.punjab.gov.in>

(eDMS) portal is being developed for Directorate of Institutional Finance Banking, Department of Finance for the placement of funds available with Government Departments using online bidding process. It is role based and responsive application. A Pilot run is going on for Technical education and Agriculture department.

**eAwaas**

This application caters to the allocation of Government Accommodation to Punjab Government employees as per entitlement and seniority, who desire Government Accommodation for residence from pool of Government houses, located in Chandigarh.

**National e-Vidhan Application (NeVA)**

<https://pvs.neva.gov.in>

This project includes hardware procurement, manpower, civil/electrical work and NeVA software rollout.

**Punjab Water Regulation and Development Authority**

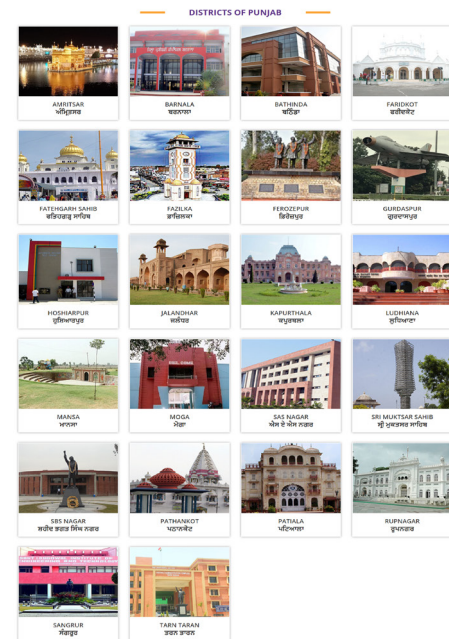
To developed a digital solution for regulating groundwater usage and other modules like Portal & Online Permission for Grant of Ground Water Extraction, Grievances Management System Conservation Schemes etc.

**Launch**

- CM Punjab launched E-Daakhil portal on 7th January 2021
- CM virtually launched PAROS on 30-12-2020
- Launched First Service for recruitment for various posts in ServicePlus for IISER Punjab
- Various mobile apps developed by DIOs for District Administration have been launched

**Accolades**

- NIC Punjab won the Silver Award for overall performance and NIC Faridkot received Bronze Award for Design and Development of m-Nivaran Mobile, an "Ocean in a Pot" by which citizens can have government services at their doorstep



▲ S3WaaS Portal Punjab

- PAROS application has been awarded "Digital Technology Sabha Award 2021"

**Way Forward**

Informational Communication Technology (ICT) is a tool of global development. The use of ICT in third world countries has witnessed a number of pitfalls, despite relevant efforts to savage the situation. NIC Punjab will serve as benchmark for providing solutions for ICT projects to make LIVE the dream of Digital Punjab more effectively. This part of the subcontinent will take the advantages of NIC ICT Solutions to yield its lantern benefit to diffuse Information technology in all directions.

For further information, please contact:

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