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## MANAGING DIRECTOR'S REPORT



NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LIMITED

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## Appraisals, Pre-feasibility and Feasibility Studies

- Reconnaissance Studies
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- Development of Alternative Proposals
- Outline Designs and Cost Estimates
- Front-end Engineering Design
- Technical and Economic Feasibility Studies
- Site Selection Studies
- Doability Studies

## Surveys and Investigations

- Topographic Surveys and Mapping
- Geographical Information System (GIS)
- Geotechnical and Soil Investigations
- Geological, Geophysical, Hydrological and Environmental Surveys
- Traffic Surveys
- Commercial Surveys
- Socio-economic Surveys
- Instrumentation and Monitoring

## Design

- Design Vetting
- Preliminary Designs
- Model Tests
- Computer Simulations
- Detailed Designs and Specifications
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## Tender and Contract Documents

- Bill of Quantities, Technical Specifications, Cost Estimates and Schedules
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- Evaluation of Tenders and Recommendations
- Contract Documents

## Construction Supervision and Contract Management

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- Certification of Periodic Payments to Contractors

## Post-construction Services

- Third-party Validation and Monitoring
- Completion Reports
- Operation and Maintenance Manuals
- Routine Maintenance and Safety Inspections
- Retrofitting and Rehabilitation
- Conservation of Structures
- Performance Monitoring

## Specialised Services

- Institutional Strengthening and Capacity Building
- Tourism Planning
- Inspection of Dams and Barrages
- Development of Building Codes
- Asset Valuation
- Services for Public-Private Partnership and BOT (Build-Operate-Transfer) Projects
- Trainings
- Building Codes
- Landslide Study and Mitigation
- Deep Excavation Support

## FIELDS OF ACTIVITY

- Water Resources Planning, Drainage, Salinity Control and Land Reclamation, Dams and Barrages, Irrigation and Drainage Systems, Water Resources Development and Management, Flood Management and Forecasting/Warning Systems and Institutional and Social Development
  - Power Transmission and Distribution, Substations, Hydropower, Thermal Power, Nuclear Power, Rural Electrification, Renewable Energy, Supervisory Control and Data Acquisition (SCADA) & Telecommunications and Oil & Gas
  - Motorways, Highways, Urban Roads, Rural Roads, Grade-separated Interchanges, Bridges and Flyovers, Subways and Underpasses, Tunnels, Computer Generated Transport Modelling and Planning, Rapid Mass Transit System, Railways, 3D Animation of Highway Projects (Real-life Simulation), Steel Structure Design, Pedestrian Bridges, Bus Shelters and Intelligent Transport System (ITS) Arrangement for Operational Facility
  - Geotechnical, Geo-environmental, Geohazards, Site Investigations, Geological Characterisation, Geophysical Surveys, Construction Materials and Minerals, Dams, Landslide Mitigation, Seismotectonic Studies, Seismic Risk Evaluation, Ground Improvement, Problematic Ground Mitigation and Deep Excavation Support Systems
  - Airport Terminal Buildings, Hangars, Runways, Taxiways and Air Traffic Control Towers
  - Deep Seaports, Fish Harbours, Marine Terminals, Container Terminals, Inland River Navigation and Marine Jetties
  - Architectural and Engineering Design, Healthcare Buildings, Educational Buildings, High-rise Buildings, Corporate Office Buildings, Commercial and Community Buildings, Sports and Recreational Facilities, Industrial Buildings, Low-cost Housing, Residential Communities, Urban/Rural Planning, Slum Upgradation, Landscaping, Interior Design and Rehabilitation and Refurbishment Works
  - Seismic Hazard Microzonation, Disaster Risk Reduction and Management Studies and Trainings,
- Implementation Strategies, Policy Formulation, Residential Communities, Advocacy Planning, Preparation of Zoning Regulations and Bye-laws, Tourism Planning, Regeneration and Building Codes
- Water Supply, Sewerage, Stormwater Drainage, Solid Waste Management, Plumbing, Water and Wastewater Treatment
- Site Characterisation/Baseline Data for Environmental Impact Assessment, Environmental Risk Assessment, Environmental Planning and Management, Environmental Health and Safety, Air and Noise Pollution Control, Contaminated Site Assessment and Mitigation, Environmental Audit and Resettlement Action Plans
- Steel Mills, Automobile Plants, Cement Plants, Fertilizer Plants, Polyester Plants, Sugar Plants, Chemical Industrial Plants and Textile Units
- Business Process Re-engineering, Management Information System, IT and Software Development, Database Applications, Web Portals, Data Warehousing, Data Conversion, Networking and Data Centres, Satellite Imagery Processing, Digital Terrain Modelling, Global Positioning System (GPS) Survey, Remote Sensing, GIS Development and Map Digitisation
- Land Surveying, Cadastral Surveying, Hydrographic Survey, Geodetic Survey, Drone Survey, Monitoring Design and Supervision of Heating Ventilation and Air Conditioning (HVAC), Fire-fighting, Elevators, Escalators, Platform Screen Doors, Building Management Systems and Building Energy Audits
- Agriculture Development and Management, On-farm Water Management, High-efficiency Irrigation Systems, Soil and Water Conservation, Social and Environmental Institutional Development, Natural Resources Development (Aquatic Life Study, Monitoring and Evaluation Tasks, Horticulture/Floriculture Forestry, Rangeland Management, Livestock and Dairy Development and Wildlife Management) and Socio-economic Project Impact Evaluation



I find that the harder  
I work, the more luck  
I seem to have.

Thomas Jefferson

As constant is the only change in the corporate world, people come and go but institutions are there to stay for longer. Same goes for the National Engineering Services Pakistan (Pvt.) Ltd. (NESPAK) which has attained the status of a major corporate entity in the engineering consultancy sector. NESPAK, which was established in 1973 as the premier organisation in Pakistan with the sole objective to make the country self-sufficient in the engineering consultancy sector, has entered the 48th year of its existence with professional elegance, thanks to the struggle by its studious workforce and industrious founders.

By the Grace of Allah Almighty, NESPAK's economic indicators are a welcome sign this year. NESPAK showed steady and sturdy growth in the business despite the sluggish economy hit by the Corona Pandemic. NESPAK has managed to acquire handsome business during the Financial Year 2020-21 due to its robust marketing strategy. During the year, NESPAK secured 136 projects including five (5) jobs overseas. Outside Pakistan, business was won in the Sultanate of Oman, State

of Qatar and Uzbekistan. Major projects include National Program for Improvement of Watercourses in Pakistan, Phase-II, Strengthening of East-West Connectivity of Merged Areas with Settled Districts, Khyber Pakhtunkhwa Integrated Tourism Development Project, Harnessing of Hill Torrents in Dera Ghazi Khan and Rajanpur, 500kV Double Circuit Transmission Line for Interconnection of K2/K3 Nuclear Power Plant with 500kV Single Circuit Port Qasim-Matiari Transmission Line, Apartment Scheme of Federal Government Employees Housing Authority at Nishtarabad, Peshawar, Infrastructure Work under FATA Infrastructure Program, Wadi Bani Khalid Road Repair Works and Cut Open Jebel Area Project, Oman and Sustainable Hydropower Project in Uzbekistan. The fee contracted from July 01, 2020 to June 30, 2021 was Rs. 13.2 billion which is 10% more than the last year's business acquisition. This is the highest ever since NESPAK's inception despite the prevailing current economic crunch. In a related development, NESPAK achieved a major breakthrough in Oman by getting certification of the Public Establishment for Industrial Estates-Madayan. The Mayadyn Certification allows NESPAK to participate in the road infrastructure tenders to help gain good projects.

NESPAK is an action-oriented organisation as timely decisions and action always bring prosperity to the Company and the people who work for it. Serious efforts are being made to explore business in the foreign lands as well as in Pakistan. The visits by NESPAK's top management including the Managing Director and colleagues to the foreign countries like Turkey and Azerbaijan are part of the plan to seek more business for NESPAK. During the Turkish tour, negotiations were held with six companies to seek cooperation in creating business

opportunities for NESPAK. Steps for business exploration in Africa, Nigeria Sudan, Tanzania and Ethiopia in association with Turkey were also discussed. The high-level NESPAK meetings with top officials including heads of various companies like the CPEC Authority, the Punjab Investment Board, Port Qasim Authority etc. are other attempts to boost the Company's business.

Keeping in view the well-being and financial health of NESPAK, a Receivables Committee has been set up. The Committee has devised a comprehensive strategy to make outstanding financial recoveries from various government departments and agencies.

NESPAK strictly monitors and maintains its quality standards and working methodology through yearly audits. An effective quality management system is in place to set and achieve the performance goals. During the year, NESPAK audit officials visited various Divisions and Offices to ensure compliance with the Quality Management System (QMS). The External

Surveillance Audits were also conducted in January 2021 at Karachi and Lahore Offices and in June, 2021 at Lahore and Islamabad Offices by the Lead Auditor of TUV Austria Bureau of Inspection & Certification to check compliance to the requirements of the ISO 9001:2015 Standard. No corrective action requests were raised and NESPAK Certification was recommended up to February 11, 2024. NESPAK achieved another milestone by fulfilling the requirements to acquire the certification of ISO 45001:2018 Standard for the Company after Certification Audit. This Standard provides framework to identify, control and decrease the risks associated with the health and safety of employees at the workplace. The External Audits were again conducted by the same auditor in December 2021 at the NESPAK Head Office. NESPAK has received the certifications of all the three Standards including ISO 14001:2015 & 45001:2018. We were the first engineering consultants to achieve ISO 9001 certificate in year 1998 and now these three certifications together have again put us at the top as the premier engineering consultancy organisation to be certified to all the three Standards. This will ensure confidence in our services to the Clients and enable us to obtain more projects locally and overseas.

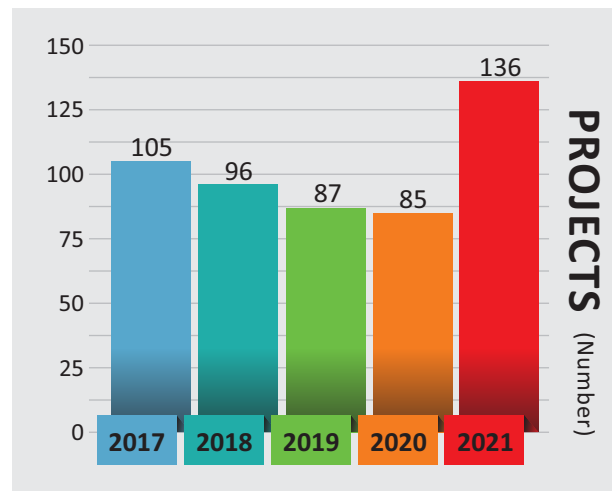
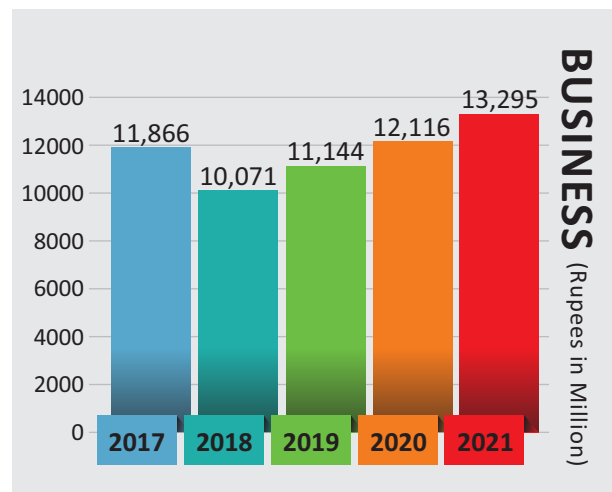
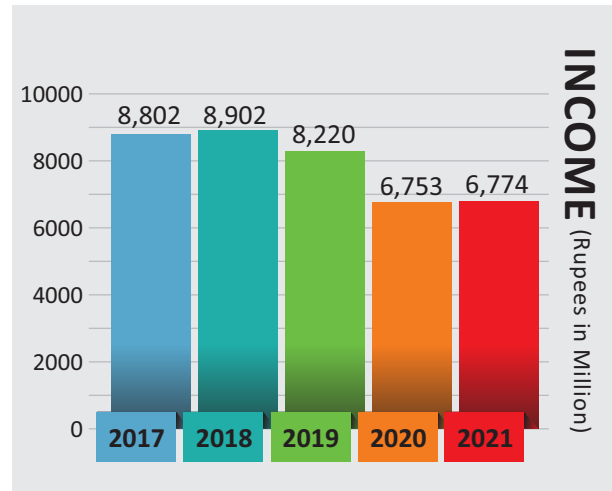
Human resources are always the lifeline of a company. NESPAK considers professional grooming as investment in the human capital to enhance performance and business. The Company conducted 25 online trainings with nine (9) foreign trainers and 1,300 participants during the Financial Year 2020-21 to enhance skills and expertise of NESPAK employees. The number of NESPAK staff including professionals and para-professionals stands at 4,107.

The Research and Development Cell at NESPAK is primarily focussing on developing work procedures, guidelines and manuals through all the working Divisions and Offices. To date, about 70 documents/manuals on various work procedures have been prepared by the R & D Cell and 20 are in the pipeline.

Having unfathomable trust in the Almighty, we are sure that we would definitely achieve what we dreamt. With the hope in our hearts, yearning in our minds and hard work in our hands, it is perceived that NESPAK will experience further growth in the days to come, in sha Allah!



**DR. TAHIR MASOOD**  
Managing Director & President





Energy conservation is  
the foundation of energy  
independence.

Thomas H. Allen

NESPAK fairly performed well in the Energy Sector during the Financial Year 2020-21 by securing eight (8) new projects worth Rs. 15 billion. NESPAK is honoured to have been selected for providing services for a unique project in Uzbekistan. The Sustainable Power Project along with Associated Transmission Lines in Uzbekistan is the first-of-its-kind project in the Central Asian States, which has introduced new dimensions in the Energy Sector in this part of the world. The Company continued to provide its state-of-the-art services for 19 ventures worth Rs. 2,571 billion including Diamer-Basha and Mohmad Dam Hydropower Projects. NESPAK wrapped up services for 21 projects worth Rs. 701 billion during the fiscal year.

**Among the fresh projects during the year,** the National Transmission and Despatch Company (NTDC) engaged NESPAK for rendering services for 500kV Double Circuit Quad Bundle Transmission Line from the Nokhar Substation to Lahore North Substation to Lahore HVDC (High voltage direct current) Converter Station (135km). The Rs. 11 billion project is envisaged to disperse power from the 4000MW Lahore Converter Station to the northern part of NTDC Network. NESPAK scope of services comprises construction supervision and allied activities including testing and commissioning.

NESPAK has been assigned for providing services for 500kV Double Circuit Quad Bundle Transmission Line for Interconnection of K-2/K-3 Nuclear Power Plants with 500kV Single Circuit Port Qasim-Matiari Transmission Line (102km). NESPAK scope of work includes construction supervision and allied activities for this Rs. 7 billion project.

NESPAK in a joint venture with DOLSAR, Turkey has been engaged for Sustainable Hydropower Project in Uzbekistan. The project comprises three 24MW hydropower plants in the Aksu River,



ENERGY SECTOR





Kashkandarya Region, Uzbekistan, namely Rabat Hydropower Project, Chappasuy Hydropower Project, Tamshush Hydropower Project with associated 22km 35-110kV transmission lines and mini-hydro units. The NESPAK-DOLSAR Joint Venture will provide services for project management, project performance monitoring, design review of technical documents and construction supervision. This US\$ 75 million project is being executed by the Stock Company — Uzbekhydroenergo — and financed by the Asian Development Bank (ADB) under an Engineer-Procure-Construct (EPC) turnkey contract.

#### **Among the ongoing projects during the year,**

consultancy work on the 4500MW Diamer Basha Dam hydropower project was started by the NESPAK-led Joint Venture Diamer Basha Consultants Group. Design review report was submitted to the Diamer Basha Development Company (DBDC) well before the contract schedule. The report findings were appreciated by the Client and its international panel of experts. The state-of-the-art construction design and drawings are in process for this Rs. 442 billion project. Works on contractor's facilities, diversion tunnels outlet and power intake were initiated during the year. Works are also underway on the main dam and excavation on the right and left banks, permanent roads and bridge and 21MW Tangir Hydropower Plant under this massive project. Construction of an adit for diversion tunnel and three upstream bridges to the right bank have been completed while underground excavation of diversion tunnel is in progress. NESPAK is also involved in design, construction supervision and contract administration of this hydropower project.

Construction works continued on diversion tunnels, powerhouse, spillway and dam plinth for the 800MW Mohmand Dam Hydropower Project during the year under the supervision of the NESPAK-led Joint Venture viz. Mohmand Dam Consultants Group. NESPAK is also rendering design review and contract management services for this Rs. 309 billion project awarded by the Water and Power Development Authority (WAPDA). Excavation works for access tunnel, re-regulation pond area and switchyard remained in progress for this dam project. The installation works for the Bailey Bridge and construction works at the



1. *Work underway for 500kV Double Circuit Quad Bundle Transmission Line for Interconnection of K-2/K-3 Nuclear Power Plants with 500kV Single Circuit Port Qasim-Matiari Transmission Line*
2. *Completed upstream temporary cableway bridges for 4500MW Diamer Basha Dam hydropower project*
3. *A view of diversion tunnel inlets for 800MW Mohmand Dam Hydropower Project*

WAPDA Colony (project colony) moved forward during the reporting period.

NESPAK continued to provide design and construction supervision for the Mangla Power Station Refurbishment and Upgradation Project with its joint venture partners, MWH International Inc. and ACE (Private) Ltd. The project registered good progress on a variety of restoration and renovation works under this Rs. 52 billion project awarded by WAPDA.

NESPAK started review of the design of the 900MW Bin Qasim Power Station Combined Cycle (BQPS-III) and Associated Projects and supervise civil construction and mechanical erection/installation works for this project during the year. NESPAK, as part of a consortium of Tractebel Engineering GmbH, Germany (lead firm) and Renewable Resources (Pvt.) Ltd, has been providing owner's engineer services for this Rs. 100 billion project awarded by the K-Electric Ltd. (KE). The BQPS-III project includes two single shaft combined cycle units each of 450MW capacity. The project is a brown field one, having interfaces with the KE's 900MW BQPS-I and BQPS-II Power Stations. The mega project also includes upgradation and rehabilitation of four associated grid stations at the Korangi Power Complex, Korangi West, Landhi and Qayyumabad.

NESPAK continued to render tender documentation, design review and construction supervision services for 1263MW Regasified Liquefied Natural Gas (RLNG)-based Combined Cycle Power Plant (CCPP) near Trimmu Barrage at Haveli Bahadur Shah, Jhang, Punjab. The EPC contract was signed by Punjab Thermal Power (Pvt.) Limited (PTPL) with the China Machinery Engineering Corporation (CMEC), China on





turnkey basis. Construction activities for the combined cycle remained in progress during the year. Work on the simple cycle has already been completed under this Rs. 56 billion project also titled as the Punjab Power Plant.

Construction works on the Transmission Scheme for Dispersal of Power from Neelum-Jhelum Hydropower Project are nearing completion at a rapid pace. The priority section from Neelum-Jhelum Hydropower Plant to Domeli (153km) has already been constructed and energised under the first phase of this Rs. 22 billion project awarded by the NTDC. The construction of 130km Section-II of this transmission line from Domeli to 500kV Substation at Gakkhar is in progress.

Route survey and tower staking activities in the Section from the Suki Kinari Hydropower Plant to the Neelum-Jhelum Interconnection Point progressed well for the 500kV Transmission Lines Interconnection Arrangement for Power Evacuation from Suki Kinari, Kohala and Mahl Hydropower Projects in the Northern Areas of Pakistan. NESPAK's services comprise engineering design bidding documents, design review and construction supervision. Construction work for the Interconnection of 720MW Karot Power Plant continued at a fast pace during the year. The Interconnection of the Karot Hydropower Project is the maiden hydropower plant under the China-Pakistan Economic Corridor (CPEC) with the Neelum-Jhelum Transmission Line. The project with the cumulative cost of Rs. 17 billion has been awarded by the NTDC.

Construction of tower foundations is in the advanced stage of completion whereas erection of towers is in full swing for the 220kV Double Circuit Transmission Line on Rail Conductor from Dera Ismail Khan to Zhob. NESPAK's services include supervision of civil, erection and stringing works along with the testing and commissioning. The Client, NTDC, appreciated the Consultants' efforts for saving millions of construction and material costs for this Rs. 7 billion project.

The NESPAK-Barqaab Joint Venture started work for the 220kV Transmission Lines in Lahore during the year with the

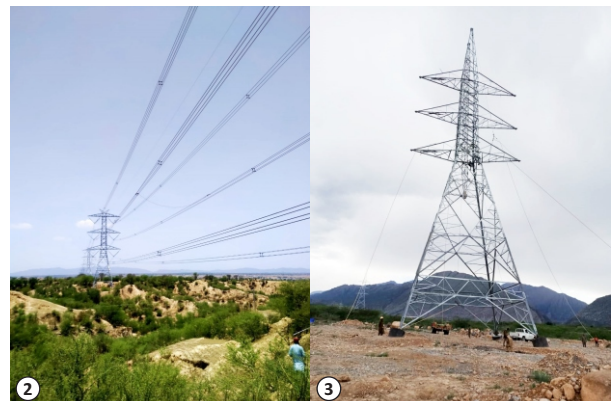
project showing good progress. The Rs. 1 billion project is part of the Tranche 3 of the ADB Second Power Transmission Enhancement Investment Program. NESPAK will supervise the construction and associated activities for three 220kV single circuit transmission lines, interconnecting the Ghazi Road, Kala Shah Kaku and 220kV Ravi Grids with the Lahore North Grid Station under this project assigned by the NTDC.

Construction works for 500kV Faisalabad West Grid Station and Associated 500kV and 220kV Transmission Lines entered the advanced stage of completion under the supervision of NESPAK. NESPAK has also reviewed the design of this Rs. 8 billion project awarded by the NTDC and funded by the Japan International Cooperation Agency. The 500kV transformers have been installed and the installation of the other equipment is in progress. The erection of transmission line towers was also underway during the year.

**Among the projects wrapped up during the year,** NESPAK completed major services for the 969MW Neelum-Jhelum Hydroelectric Project with this venture going into the commercial operation and contributing 13, 863,363 MWh energy to the system. However, the project is undergoing the Defects Liability Period. NESPAK as a lead partner with the local consultants in a joint venture has been involved in design review and construction supervision for this Rs. 506 billion mega project. Tunnel Boring Machines and Drill and Blast methods have been used on this project for the first time in Pakistan.

The NESPAK-MWH International Inc., USA Joint Venture designed and supervised the construction of 102MW Gulpur Hydropower Project as owner's engineer for M/s Mira Power

1. *1,263MW Regasified Liquefied Natural Gas (RLNG)-based Combined Cycle Power Plant (CCPP) near Trimmu Barrage at Haveli Bahadur Shah, Jhang*
2. *Transmission Scheme for Dispersal of Power from Neelum-Jhelum Hydropower Project*
3. *220kV Double Circuit Transmission Line on Rail Conductor from Dera Ismail Khan to Zhob*





Limited, a subsidiary of KOSEP, South Korea. The project has started to inject power to the National Grid after NESPAK completed major consultancy services for this Rs. 52 billion project in Azad Jammu and Kashmir.

NESPAK has completed services for the 1230MW RLNG-based CCPP at Haveli Bahadur Shah, Jhang. NESPAK was engaged by the National Power Parks Management Company (Pvt.) Limited. (NPPMCL) for feasibility study, design, design review and construction supervision for this Rs. 58 billion project. The commercial operation has been successfully achieved and NESPAK is providing services under the Defects Liability Period.



1. 1,223MW RLNG-based CCPP at Balloki, Kasur
2. 1,230MW RLNG-based CCPP at Haveli Bahadur Shah, Jhang
3. A view of the dam and reservoir for the 969MW Neelum-Jhelum Hydroelectric Project

NESPAK has carried out feasibility study, design, design review and construction supervision for the 1,223MW RLNG-based CCPP at Balloki, District Kasur. The project costing Rs. 55 billion is contributing to the National Grid. NESPAK has been providing technical services regarding closing/ resolution of Punch List under the Defects Liability Period extended by the NPPMCL. NESPAK has also carried out feasibility study, design, design review and construction supervision services for the 1,180MW RLNG-based CCPP at Bhikki, Sheikhupura. The Company has been delivering services under the Defects Liability Period extended by the Client, Quaid-e-Azam Thermal Power (Pvt.) Limited. The Rs. 54 billion project was formally inaugurated during the financial year.

NESPAK successfully completed the construction supervision of the 660kV HVDC Matiari to Lahore Transmission Line Project during the year. The first-of-its-kind project in Pakistan was awarded by the China Electric Power Equipment and Technology Company Limited of the State Grid Corporation of China under CPEC on BOOT (Build- Own- Operate-Transfer) basis.

NESPAK as a lead partner in with Barqaab supervised the construction of 500kV Double Circuit Quad Bundle Transmission Line from HUBCO to 500kV Jamshoro Substation for evacuation of power from 1320MW CPHGC (China Power Hub Generation Company) — HUBCO-II Power Plant — and 1100MW Nuclear Power Plant (K2). Both circuits of this transmission line were energised during the year. The project costing Rs. 3 billion was awarded by the NTDC. NESPAK as a lead partner in a joint venture with Barqaab supervised the construction of civil works, erection and testing and commissioning of the extension works at 500/220kV Yousafwala and 500kV Jamshoro Substations which were successfully energised during the fiscal year.



A drop of water, if it could write out its own history, would explain the universe to us.

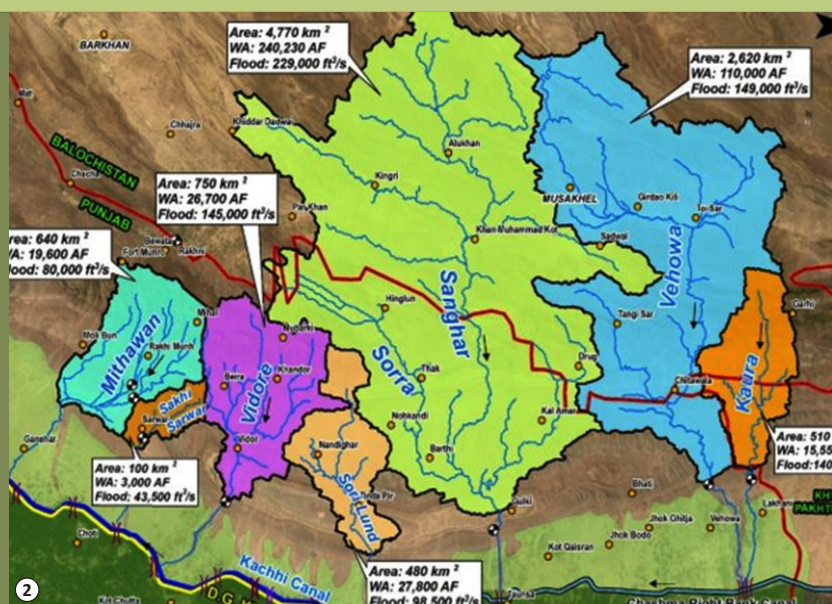
Lucy Larcom

NESPAK's Water and Agricultural Development Sector came up with a quality performance by attaining seven (6) new projects worth Rs. 163 billion during the fiscal year including the mega venture of the National Program for Improvement of Watercourses-Phase-II. The Company offers unrivalled experience in the water and agriculture projects and plays a pivotal role in planning, designing and management of water and agricultural development projects at the national and international levels. NESPAK continued to offer its matchless services for 10 major ongoing projects costing Rs. 338 billion.

**Among the fresh projects during the year,** the Federal Ministry of National Food Security and Research engaged NESPAK for rendering consultancy services for the National Program for Improvement of Watercourses in Pakistan, Phase-II (NPIWC-II). NESPAK in a joint venture with the Associated Consulting Engineers (ACE), Rehman Habib Consultants (Pvt.) Ltd. (RHC) in association with Kasib Associates will provide design, design review, third-party







1. A lined watercourse under the National Program for Improvement of Watercourses, Phase-II
2. Map for Harnessing of Hill Torrents in Dera Ghazi Khan and Rajanpur Project
3. Excavation works in progress for the Kachhi Canal Project

validation and construction supervision services for this Rs. 155 billion mega project. The project activities are being implemented in the Provinces of Punjab, Khyber Pakhtunkhwa, Balochistan, Azad Jammu and Kashmir, Gilgit-Baltistan and Islamabad Capital Territory. The quantitative objectives of the NPIWC-II include: Mobilisation through capacity building of 62,210 water user associations/farmers organisations; reconstruction/renovation and remodelling of 47,278 watercourses; and provision of 11,610 laser land levellers. The implementation of this huge irrigation project will save 5.82 MAF of water per annum.

NESPAK as a lead firm in a joint venture with the Engineering Consultancy Services Punjab (Pvt.) Ltd. has signed a contract with the Punjab Agriculture Department for rendering consultancy services for Promotion of High Value Agriculture through Solarization of Drip and Sprinkler Irrigation System. The project costing Rs. 4 billion will be implemented in the entire Punjab Province. The consultants' role includes design review, cost estimates and verification of implemented works.

During the year, the Punjab Irrigation Department hired a NESPAK-led joint venture for Harnessing of Hill Torrents in

Dera Ghazi Khan and Rajanpur, a project financed by the Asian Development Bank (ADB). The services include updated feasibility studies, detailed design, tender drawings, construction drawings, cost estimates, social safeguard documents, PC-Is and bidding documents for 13 hill torrents. The NESPAK Joint Venture is comprised of the AHT Group Management and Engineering, Germany and the ACE. The Rachna Development Consultants, Integrated Consulting Services (ICS) and Asian Advisory Services (Pvt.) Ltd. are associated partners for this project. The scope of work includes screening & ranking of 7-8 hill torrents, feasibility studies of these hill torrents and detailed design of 4-5 hill torrents. The objective of the assignment is to identify and recommend most feasible interventions in hill torrents for improved water and agricultural productivity in Dera Ghazi Khan and Rajanpur.

The Water and Power Development Authority (WAPDA) has entrusted the NESPAK JV of GLM Engineering COOP, Puerto Rico, and Hagler Bailly, Pakistan to provide services for Establishing a Sustainable Sediment Management Concept at Warsak Reservoir. The scope of works includes support to WAPDA for the procurement of sediment measurement equipment, on-job training on hydrometric and sediment-metric equipment and for minimum one experimental flushing per flood season. The post-flushing impacts would also be studied on river morphology, irrigation system, agriculture and environment to evaluate its overall efficacy.

**Among the ongoing projects,** the NESPAK Joint Venture of the Kachhi Canal Consultants (KCC) provided services under a new amendment, i.e., Amendment No. 11 to the original consultancy services agreement amounting to Rs.152 billion during the year 2020-21. Work proceeded at a good pace on five contracts of Kachhi Canal Project during the year. WAPDA





has offered the NESPAK-KCC Joint Venture to continue to provide services under the Amendment 12 for construction supervision of two Kachhi Canal contracts for another one year. The joint venture comprising NDC, ACE and Barqaab in association with the Engineering General Consultants (Pvt.) Ltd. (EGC) is also involved in design and tender documentation for this mega project. The Kachhi Canal Project aims to develop a new fertile area of 288,540 hectares in the Kachhi Plain in Balochistan through a supply of 6,000 cusecs from Indus Waters.

During the year, the contract of Monitoring of Irrigation Department Development Projects under the Annual Development Program (ADP) was extended/awarded to NESPAK for another three years. The NESPAK-RHC Joint Venture won this Rs. 100 billion contract in a stiff competition. TurkPak is the associated partner of the NESPAK Joint Venture in this project assigned by the Punjab Irrigation Department. The consultancy services would cover various important projects under the ADP, Public Sector Development Programme and deposit development works of the other departments. The projects included in these programs are spread throughout the Punjab Province. Major works comprise the lining of canals, rehabilitation of canal systems, remodeling/reconstruction of hydraulic structures, i.e., head regulators X-regulators, falls, cross-drainage structures and inlets. Construction of new dams & bridges and flood protection & river training works is also part of the ADP projects.

The Ninth Contract Package of the Rehabilitation and Upgradation of Balloki Barrage and Lower Bari Doab Canal Improvement System has been submitted for the closeout activities of the project. The NESPAK-led Joint Venture with the ACE, Mott Macdonald Pakistan and Mott Macdonald International has been providing design and construction supervision services for this project jointly funded by the Punjab Government and the ADB. The project costing Rs. 30 billion consists of a total of 10 packages out of which eight projects have been handed over to the Client, Punjab Irrigation Department.

Under the Trimmu and Panjnad Barrages Improvement Project (TPBIP), more upgradation works on the Trimmu Barrage have been started with the construction of additional bridges and a residential colony. The project is moving towards completion showing brilliant progress under the supervision of a NESPAK-led Joint Venture of SMEC and EGC under the umbrella of the TPB Consultants. The scope of services includes detailed design, design review, tender documentation and construction supervision for this project which will be completed at a revised cost of Rs. 18 billion. The implementation of Land Acquisition and Resettlement Plan and Environment Management Plan is also part of NESPAK job for this project awarded by the Punjab Irrigation Department and financed by the ADB.

Work started at a satisfactory pace on the ADB-funded Command Area Development Component of Jalalpur Irrigation Project (CAD-JIP). During the year 2020-21, NESPAK approved the design/plan for farm layout planning and Laser land levelling of 877 sites while final verification of completed work of 821 such sites were approved. Likewise, designs and cost estimates of High Efficiency Irrigation System (HEIS) for 61 sites are okayed by NESPAK. The Rs. 4 billion irrigation project was awarded to a NESPAK Joint Venture by the Punjab Agriculture Department for rendering design, tender documentation, design review and construction supervision services. The joint venture comprises the National Development Consultants (Pvt.) Ltd. (NDC), ACE and Waterman Consulting Engineers (Pvt.) Ltd.

1. An aerial view of Balloki Barrage, gated spillway and canal head regulators for Rehabilitation and Upgradation of Balloki Barrage and Lower Bari Doab Canal Improvement System
2. An overview of stage-II works of the Panjnad Barrage under the Trimmu and Panjnad Barrages Improvement Project







Construction works for the remaining five contract packages of Remodeling of Warsak Canal System Project-Phase-I (RWCS-I) have demonstrated good progress under the supervision of a NESPAK Joint Venture of Integrated Consulting Services (ICS) and Electra (Pvt.) Ltd. The scope of services also includes detailed design and tender documents for this Rs. 17 billion project awarded by the Khyber Pakhtunkhwa Irrigation Department. Nine (9) packages have already been completed out of a total of 14 packages of this modernisation and rehabilitation project.

Surveys and geo-technological investigations have been completed for all the 11 sub-projects under the ADB-funded Balochistan Water Resources Development Sector Project (BWRDSP). Construction activities on four (4) sub-projects have been started under the supervision of NESPAK-led Joint Venture of the RHC and EGC. The project costing Rs. 21 billion was awarded by the Balochistan Irrigation Department to help address the water management issues and enhance agricultural production by the construction of the Siri Toi Dam and rehabilitation/extension of 10 irrigation schemes in Zhob and Mula River Basins. The detailed design and bidding documents of Siri Toi Dam and design of the irrigation schemes have been completed by the consultants. The BWRDSP also includes installation of hydromet equipment on selected sites in Balochistan.

Significant progress was reported on the Gomal Zam Dam Command Area Development and On-Farm Water Management for High Value and High Efficiency Agriculture Project under the supervision of NESPAK which is also responsible for design of the project. Financed by the United States Agency for International Development (USAID), the project covers 76,455 hectares culturable command area in high-risk districts of Tank and Dera Ismail Khan in the Khyber Pakhtunkhwa Province. During the fiscal year, NESPAK submitted bidding documents of 393 watercourses, 393 multi-purpose earthen ponds and 20km farm-to-market earthen link roads. After the procurement of 305



watercourses, 131 watercourses were constructed and handed over to the water user associations after successful test-runs. Work on 20km roads is also in progress.

Construction works for the Lining of Distributaries and Minors in Sindh Province Project entered the advanced stage of completion under supervision of

NESPAK during the year. NESPAK is also responsible for design and tender documentation for this Rs. 14 billion project awarded by the Sindh Irrigation Department. The project is aimed to address seepage losses, waterlogging and salinity problems and water availability for additional irrigation and other livelihood. The project covers water channels located in the command area of Guddu, Sukkur and Kotri Barrages.



1. *Laser land levelling for the command area development of the Jalalpur Irrigation Project*
2. *The Lined Thatta Distributary at the Kotri Barrage Region under the Lining of Distributaries and Minors in Sindh Province Project*
3. *Precast Concrete Parabolic Segments lining section on a watercourse in Tehsil Kulachi, Dera Ismail Khan under the Gomal Zam Dam Command Area Development and On-Farm Water Management for High Value and High Efficiency Agriculture Project*



Though dams and artificial lakes can have significant negative environmental impacts, when carefully considered, mitigated, and managed, the benefits of hydropower often outweigh these costs.

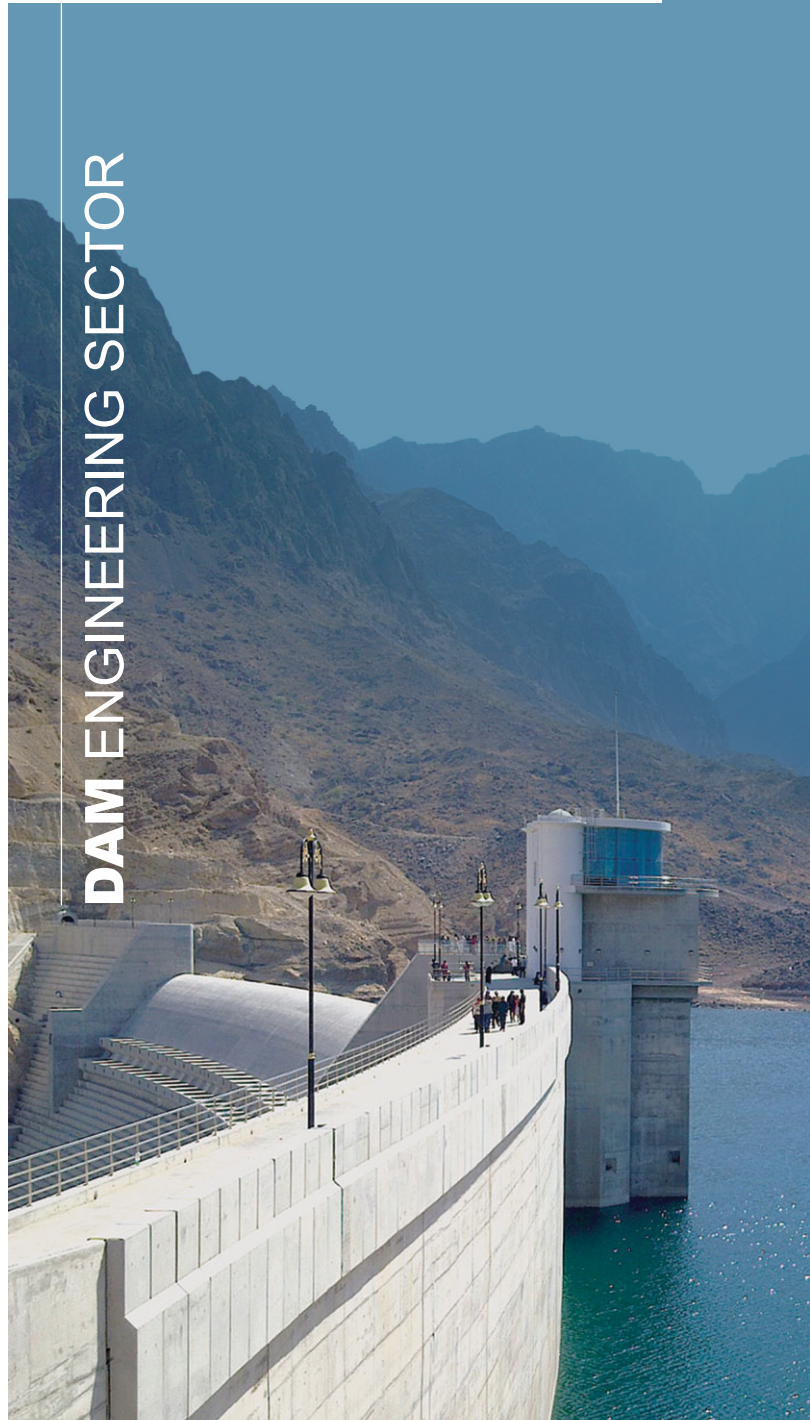
Seth Moulton

NESPAK exhibited moderate performance in the Dam Engineering Sector during the fiscal year. The Company offers unique professional experience in the Dam Engineering Sector. Keeping to its traditional work practice, NESPAK continued its state-of-the-art services for eleven (11) ventures including the Diamer Basha Dam and Mohmand Dam Hydropower Projects mentioned earlier in the Energy Sector. Consultancy services for the dam projects in the Kingdom of Saudi Arabia and Sultanate of Oman are also being delivered by NESPAK.

**Among the fresh projects during the year,** NESPAK was hired for detailed design of Sheikh Haider Zam Dam in Dera Ismail Khan, Khyber Pakhtunkhwa. The project, which is awarded by the Khyber Pakhtunkhwa Irrigation Department, is located 80 kilometres from Dera Ismail Khan via Daraban Town. The dam will be a 57 metres earth core rockfill dam with a gross storage capacity of 112 million cubic meters (MCM). The main scope of the project deals with the detailed design of dam and appurtenant structures, additional topographic survey, geotechnical investigations and hydrological assessment. Sediment study, seismic investigations, detailed command survey and layout, preparation of chakbandi and warabandi system, tender documents and drawings, periodic review of construction drawings and preparation of construction schedule are also part of the project.



## DAM ENGINEERING SECTOR





NESPAK was engaged for Feasibility Study of Three Small Dams in the Khyber Pakhtunkhwa Province. Among the three dams, the Pharari Dam will be located in District Haripur, Sokka Dam

in District Mansehra and Lora Shah Mansoor Dam in District Laki Marwat. The main scope of the project deals with the feasibility level design of three dams and appurtenant structures, topographic survey, geological mapping, geotechnical investigations, hydrological assessment, seismic hazard assessment, layout planning and design of project components, command area development proposal and environment study. Deliverables of the study include review reports/site visit reports, inception reports, draft and final feasibility reports and draft and final PC-I. The assignment has awarded to NESPAK by the Khyber Pakhtunkhwa Irrigation Department.

NESPAK won consultancy services for the Feasibility Study and Proposing Solutions of Problematic Small Dams in Development Zone during the year. The contract was awarded by the Punjab Irrigation Department for the duration of two years. The scope of the project includes identification of problematic areas of dams, review of design and drawings, finalisation of the solutions of all problematic dams, detailed feasibility reports, detailed design, command



area assessments, Environmental Impact Assessment reports, Resettlement Action Plans and cost estimates.

**Among the ongoing projects,** the NESPAK-led Joint Venture of Associated Consulting Engineers and AAB (Pvt.) Limited is providing consultancy services for the Murunj Dam Project. The Murunj Dam Project is planned to store flows of Kaha Nullah by the construction of a dam. The Kaha Hill Torrent is one of the major hill torrents of Dera Ghazi Khan Division. The construction of dam will provide flood control while the stored water will be released to meet the irrigation water requirements of the downstream cultivable area. Proposed project will irrigate an area of about 46,134 hectares of land. The scope of work includes feasibility study, detailed engineering design, tender documents and PC-I for this project awarded by the Water and Power Development Authority (WAPDA).

Construction activities continued at a good pace for dam projects under the supervision of NESPAK in the Southern part of the Kingdom of Saudi Arabia under two separate job contracts during the fiscal year 2020-21. The purpose of these dams is to control the floods and supply drinking water. The scope of work also includes the construction of gabion structures on upstream of already built dams to restrict sedimentation, installation of flood warning system downstream of large dam projects and installation of additional instrumentation and security/vigilance cameras at the selected dam sites. The total construction cost of these projects is US\$ 155 million. The consultancy services are being provided to the Client, Ministry of Environment, Water and Agriculture, under two contracts, "Construction Supervision of Dam Projects in Southern Region" and "Qanunah & Yabah Dam Projects." The projects are located in Aseer, Jizan, Najran and Makkah Regions of the Kingdom. The project types are concrete gravity, earthfill and roller compacted concrete gravity dams.

In the Sultanate of Oman, the Flood Protection Dam in Wadi Al-Jufainah Al Amerat has entered the second phase, i.e., the construction under the supervision of as its first phase i.e., design review, has already been accomplished by NESPAK. The project costing US\$ 147 million has been awarded by Oman's Ministry of Regional Municipalities and Water Resources. The project features a 30 metres high and 2.5 kilometres long plastic concrete core earthfill dam with gross storage capacity of 16 MCM. The project is likely to be completed in two and a half years.



1. Sheikh Haider Zam Dam Project site showing abutments and flow direction
2. Rock cutting in progress for the Al-Jufainah Dam Project, Sultanate of Oman
- 3 & 4. Views of under-construction Qanunah and Yabah Dams Project, Makkah Region, Kingdom of Saudi Arabia



Only the highway of  
useful service leads to  
the city of happiness.

Napoleon Hill

NESPAK took lead in the Highways and Transportation Engineering Sector by securing the maximum number of projects during the Financial Year 2020-21. NESPAK emerged as a brilliant performer by acquiring 48 new projects worth Rs. 340 billion related to the motorways, highways, roads and flyovers in Pakistan and abroad. NESPAK has been providing different categories of services ranging from advisory role in policy making to design and construction supervision for 59 ongoing projects worth Rs. 2,186 billion in Pakistan and overseas. The Company completed consultancy services for 17 projects worth Rs. 1,104 billion during the fiscal year.

**Among the fresh projects during the year,** the Sindh Mass Transit Authority awarded BRT Yellow Corridor under the Karachi Mobility Project to the NESPAK- Dar Al-Handasah Joint Venture. The project is being funded by the World Bank. The NESPAK Joint Venture will provide services for project planning, detailed design, preparation of bid documents, bid evaluation and construction supervision of this 22km corridor in Karachi. The mega project will be carried out at a cost of Rs. 70 billion.

The Khyber Pakhunkhwa Communication and Works Department tasked NESPAK with the preparation of feasibility study, detailed design, Environmental Impact Assessment, PC-I and construction

## HIGHWAYS & TRANSPORTATION ENGINEERING SECTOR

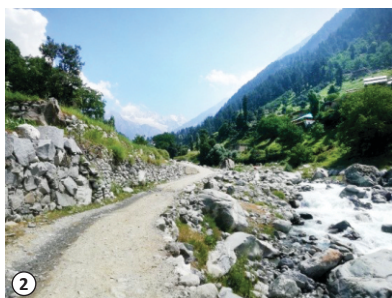




supervision for four Roads under the Khyber Pakhtunkhwa Integrated Tourism Development Project. The 132km project will be undertaken at a cumulative cost of Rs 20 billion. The

project roads comprise Supat Valley Road in District: Mansehra, Rehabilitation and Upgrading of Thandiani Road in District Abbottabad, Upgrading of Mankial Bada Serai Road in District Swat and Upgrading of Shishikoh-Madaklust Road in District Chitral.

NESPAK has been hired as general consultants by the Khyber Pakhtunkhwa Communication and Works Department for "Strengthening of East-West Connectivity of Merged Areas formerly Federally Administered Tribal Areas



*1&2. Glimpses of Supat Valley Road and Shishikoh-Madaklasht Road for the Khyber Pakhtunkhwa Integrated Tourism Development Project*

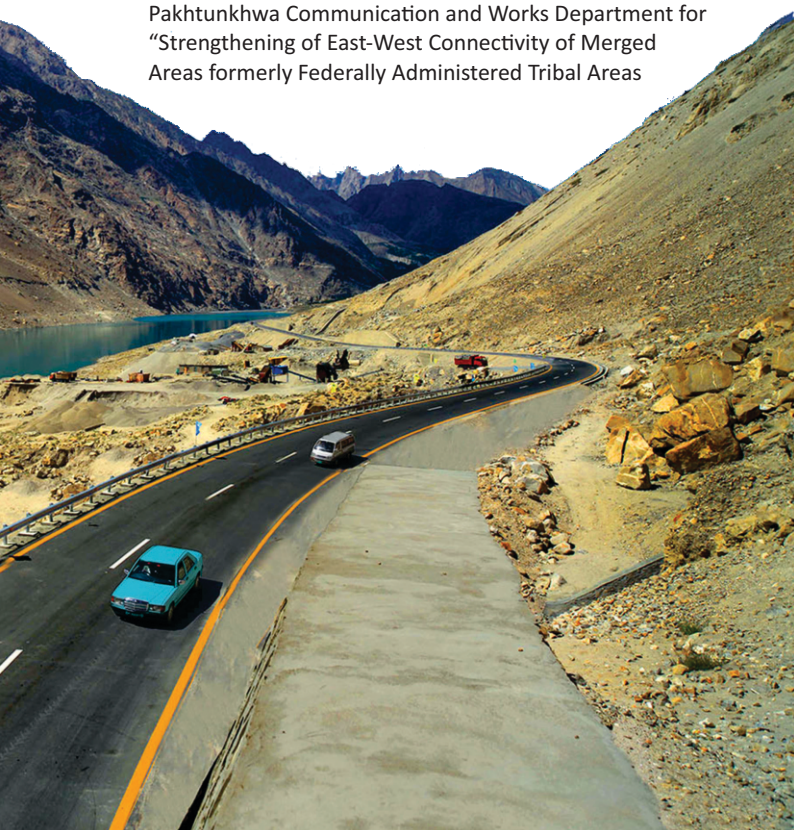
*3. Cutting in progress for improvement of blind curves for the Sheikh Baadin Road, Dera Ismail Khan, Khyber Pakhtunkhwa*

(FATA) with Settled Districts" under the Accelerated Implementation Programme (2019-20) during the Financial Year 2020-21. Recently, FATA areas have been merged with the neighbouring Khyber Pakhtunkhwa Province. The Rs. 15 billion rehabilitation project will be carried out in the Merged Districts of Bajaur, Mohmand, Khyber, Orakai, Kurram, North Waziristan and South Waziristan and the Frontier Regions of Peshawar, Kohat, Bannu, Lakk, Tank and Dera Ismail Khan.

The Gilgit Baltistan Public Works Department has engaged NESPAK for the construction of a road from Shigar to Paiju. NESPAK scope of services comprise feasibility study, tender documentation and construction supervision of this 152km road project costing Rs. 16 billion. The project road starts from Shigar, running parallel to the Shigar River, passes through high-altitude mountainous area and ends at Paiju, Gilgit-Baltistan.

The National Highway Authority (NHA) hired NESPAK for Construction/Improvement and Widening of Chitral-Garam Chashma-Doraha Pass Road. The scope of services includes design review and construction supervision for this 83km road project worth Rs. 8 billion. The project road starts from Chitral City, passes through Garam Chashma and ends at Doraha Pass.

NESPAK has been appointed as consultants for design review and construction supervision of the road leading to Sheikh Baadin in Dera Ismail Khan. The 30km road will be constructed, making its way to historical tourist destination of Shiekh Baadin National Park located on a hilltop in Dera Ismail Khan. The project costing Rs. 2 billion has been awarded by the Khyber Pakhtunkhwa Communication and Works Department.







1. Proposed alignment for the Barang Tunnel, Bajaur, Khyber Pakhtunkhwa
2. The photograph shows interchange at the starting point of the Dir Motorway Project
3. Topographic survey underway at the site of Wadi Bani Khalid Road in the North Al-Sharqiyya Governorate, Sultanate of Oman

NESPAK has been awarded the construction supervision of road connecting Sub-division Wazir to Bannu Circular Road including three bridges along with approaches. The services will be provided by NESPAK in a lead with M/s TurkPak. Awarded by the Khyber Pakhtunkhwa Highway Authority (KPHA), this Rs. 2 billion project has been divided in three packages for the purpose of execution.

The Khyber Pakhtunkhwa Communication and Works Department hired NESPAK for detailed design and construction supervision for rehabilitation of flood-damaged rural roads under Japan-assisted counter-value funds (CVF). The project includes the rehabilitation of three flood damaged rural roads in the districts of Swat and Haripur having a total length of 29 kilometres. The Rs. 1 billion project will be executed with the funding of Japan International Cooperation Agency (JICA).

The Punjab Highway Department engaged NESPAK for providing services for 75km roads under the Rural Accessibility Programme. Nine (9) project roads will be constructed in rural districts of Pakpattan, Sahiwal and Okara under this project. NESPAK scope of work includes construction supervision and quality control for this Rs. 1 billion project.

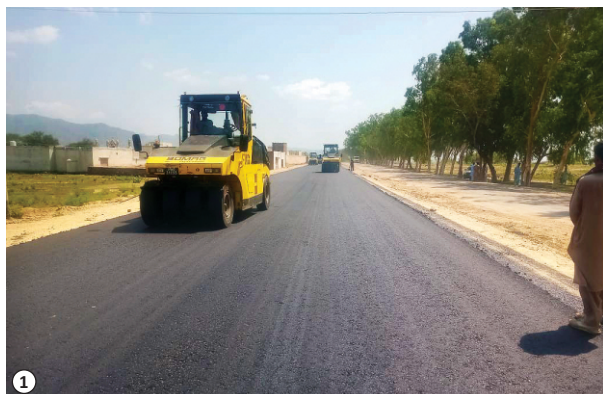
During the year, NESPAK won Dualisation of 150km Depalpur-Pakpattan-Vehari Road and 75km Hasilpur-Bahawalnagar Road Project in an open bidding competition. NESPAK will undertake design and technical advisory services for this project awarded by the Punjab Communication and Works Department on the Public-Private Partnership (PPP) mode. The project will be constructed at a cumulative cost of Rs. 43 billion.

The KPHA has awarded Dir Motorway Project to NESPAK through an open bidding competition. The Rs. 39 billion motorway project is to be designed by providing a 2-lane road on either side. NESPAK services include feasibility study and preliminary design of the 30km Dir Motorway including three interchanges and two tunnels. The project road starts from the Chakdara Interchange and ends at Rabat on Nowshera-Dir-Chitral Highway, passing through hilly/rolling area.

The Balochistan Government has selected NESPAK for preparing detailed design for six roads and one bridge in less developed areas of South Balochistan. The Provincial Road Circle Mekran awarded this Rs. 38 billion project to NESPAK in open bidding. The venture consists of six roads (634km) in different districts and Niheng Bridge in the south-west part of Balochistan.

The KPHA has selected NESPAK for feasibility study and detailed design of Barang Tunnel in the hilly district of Bajaur. The Rs. 9 billion tunnel project will provide access to Bajaur and Khar by reducing travel distance of 19 kilometres.





The NHA has hired NESPAK for “Construction of Flyover at the Junction of N-5 and N-65” at Sukkur. NESPAK will prepare feasibility study and detailed design for this Rs. 2 billion project.

NESPAK has been awarded design and construction supervision services of Intelligent Transportation System (ITS) installation at the Hakla-Dera Ismail Khan Motorway by the NHA. The ITS employs communication and smart technologies to transport networks to improve road safety, quality and efficiency. The 292km motorway is part of the western alignment of the China-Pakistan Economic Corridor (CPEC).

In the Sultanate of Oman, NESPAK was awarded consultancy services for Repair Works on Wadi Bani Khalid Road in the North Al-Sharqiyya Governorate. NESPAK will prepare preliminary and detailed design of 15 locations on Main Wadi Bani Khalid Road and 10 locations on internal roads. The project also includes design of two bridges on Wadi Adfain and Wadi Saiq.

**Among the ongoing projects,** construction works have entered the advanced stages for the Kot Belian-Tarap Road (Package-3) being executed under CPEC. The 52km road is the section of the Hakla (M-I)–Yarak at Dera Ismail Khan Motorway. NESPAK in association with M/s Zeeruk (Intl.) is the supervisory consultant on the Tarap-Kot Belian Road

1. *Work in progress for the Dualisation and Improvement of Old Bannu Road Project*
2. *Under-construction Shatial-Thor Nullah Bypass Project*
3. *Work underway at one of the roads for the Highway Circle Bahawalpur under the Annual Development Programme*
4. *An aerial view of the completed Sawan Bridge under Kot Belian Road to Tarap, Package-3, Section of Hakla-Dera Ismail Khan Motorway for the China Pakistan Economic Corridor*

Project worth Rs. 28 billion. The project alignment crosses one major river i.e., Sawan River where a 300m long bridge is proposed by the design consultants. The scope of work includes design review and construction supervision for this project of utmost importance.

During the year, the Dualisation and Improvement of Pindigheb-Kohat Road Project registered brilliant progress under NESPAK supervision. The scope of work includes construction of a four-lane road and bridges/culverts. Awarded by the NHA, the Rs. 20 billion project is divided into two sections i.e., package-I and package-II for the purpose of execution. NESPAK is also involved in the design review of this 80km facility located at the Rawalpindi-Jand-Kohat Highway.



Satisfactory progress was recorded on the Dualisation and Improvement of Old Bannu Road Project during the fiscal year. The first section of this Rs. 18 billion project i.e., the Gandhi Chowk-Sarai Naurang Section has already been constructed while construction on the remaining two sections — Domail-Khurram and Khurram-Krapa —continued during the year under NESPAK supervision. NESPAK is rendering design review of this 83km road project awarded by the NHA.

Construction activities for the Dualisation and Improvement of Sarai Gambila-Karak Road—the Package-I of the Indus Highway Road Project—moved forward at a rapid pace during the year. NESPAK services include design review and construction supervision for a 2-lane carriageway, 112 box & pipe culverts and 12 bridges under this Rs. 11 billion project. The new road facility will connect the Indus Highway to the Rawalpind-Jand-Kohat Road.

Construction for Infrastructure including Allied Works for Islamabad Metro Bus from Peshawar Morr to New Islamabad Airport is nearing completion under the supervision of NESPAK. NESPAK has been also providing design services for this Rs. 17 billion project assigned by the NHA.

Solid progress was reported on the construction of 35km Shatial-Thor Nullah Bypass (Relocation of Karakoram Highway-KKH) including the Link Road to the existing KKH. The Rs. 4 billion project was awarded to NESPAK by the NHA. The proposed KKH Relocation passes through terrain of flat/rolling to hilly/mountainous. Running almost parallel to the existing road, it rises at a mild grade to about 1200m, near the Diamer Bhasha dam site away from the future lake.

The Abbottabad Bypass Road Project showed first-rate progress on the construction works under the supervision of



1. Survey work underway for Dualisation of Sultan Said Bin Taimur Road at Duqm Town, Sultanate of Oman
- 2 & 3. Two views of the Orange Line Metro Train Project, Lahore

NESPAK during the year. NESPAK also redesigned the project on the request of the Client, Khyber Pakhtunkhwa Communication and Works Department. The Rs. 3 billion project is fast nearing completion.

Work progressed at a rapid pace on the roads in the Highway Circle Bahawalpur under the Annual Development Programme during the year. The Rs. 3 billion project has been awarded to NESPAK by the Punjab Communication and Works Department. The scope of work involves rehabilitation, reconstruction and widening/strengthening of 170 rural and urban roads (1,125km) in the Bahawalpur Division.

Good progress was achieved for Dualisation of Khuzdar-Chaman Road along with Technical Study for Alternative Route at Lakpass and Tunnel at Khojak Bypass Project. Awarded by the NHA, the project will be constructed at a cumulative cost of Rs. 82 billion.

NESPAK completed design of Road Connecting Thumaid Interchange in Wilayat Bidbid with the Al-Mubaila Interchange at the Muscat Expressway in Oman. The proposed corridor is situated mostly in the Ad-Dakhiliyah Governorate, having a distinctive location on the western slopes of Al-Hajar Mountains towards the desert in the south. NESPAK is also rendering tender documentation services for this US\$ 324 million project.

NESPAK is supervising the construction of Dualisation of Sultan Said Bin Taimur Road at Duqm Town in the Sultanate of Oman. The design of this 13km road project was also carried out by NESPAK. The project will be completed at a cost of US\$ 63 million.

**Among the projects wrapped up during the year,** the NESPAK-China CEC Engineering Corporation Joint Venture completed design and construction supervision services for the Lahore Orange Line Metro Train Project. The project went into commercial operation after it was formally inaugurated by the Punjab Government during the fiscal year 2020-21. The Rs. 163 billion mega project was undertaken on the Engineer-Procure-Construct (EPC) basis by the Punjab Mass Transit Authority. The 27km train track project operates from Ali Town to Dera Gujran, Lahore.

During the year, NESPAK completed consultancy services for Widening and Rehabilitation of Road from Mufti Mehmood Flyover up to Wahid Gari Including Reconstruction of Old Budni Bridge Peshawar. The Rs. 1 billion project, which is part of Peshawar-Charsadda Road, was executed by the KPHA. NESPAK carried out detailed design, traffic studies, commercial feasibility study and bid evaluation for the Hyderabad-Sukkur Motorway Project during the year. Awarded by the NHA, the 300km project will be executed on the Built-Operate-Transfer (BOT) basis under PPP arrangement. The Rs. 200 billion facility will ensure high-speed connectivity of Karachi City with other parts of the country via the under-construction motorway facilities between Sukkur & Multan and Multan & Lahore.

NESPAK prepared feasibility study, detailed design and tender documents for the construction of four RCC bridges in Gilgit-Baltistan. The proposed project includes a bridge from Sonikote Paeen-Kiu, a bridge over Gilgit River at Chamugarh and the Skarkoi-Basin Bridge.

## AIRPORTS

**Among the ongoing projects,** construction activities on the expansion and renovation works for the Bacha Khan International Airport (BKIA) were completed under the supervision of NESPAK and scrutiny of the Final Statement is in progress. NESPAK has also rendered design and tender documentation services for this Rs. 4 billion project. After the expansion and augmentation of various services,



*1&2. Views of the Expansion and Renovation Project of Bacha Khan International Airport, Khyber Pakhtunkhwa*

the capacity of the airport has been increased to 3.5 million passengers per year. The terminal building is now equipped with the latest communication systems, passenger boarding bridges, HVAC and power supply systems. The expansion of the facility also includes various external services including firefighting, water supply, sewage disposal and treatment systems, stormwater drainage system and provision of several other utilities. Landscaping work has also been carried out under the Prime Minister's Clean Green Pakistan program for this project.

NESPAK is providing consultancy services for the New Gwadar International Airport (NGIA) Project. The PC-I document and preliminary design for several components of the NGIA i.e., CAA Residential Complex, Airport Security Force Camp, external infrastructure works, external telecommunication works and site security & perimeter intrusion detection system have already been finalised by NESPAK and submitted to the Pakistan Civil Aviation Authority (PCCA) for approval. NESPAK services also include detailed design and preparation of bidding documents for the Rs. 10 billion NGIA Project.





**Among the projects wrapped up during the year,** consultancy services were rendered for the construction of a new Departure Lounge at the Sialkot International Airport–Pakistan's first private sector and green-field airport. The expansion of SIAL Secretariat and upgradation of allied infrastructure facilities including construction of Link Taxiway with new dumbbell, airfield lighting works, maintenance of runway and works for augmentation of power supply system for new airport facilities were also undertaken. The master plan of the airport was

developed by NESPAK in the early 2000s followed by design of airport facilities. The facility has been operational since 2007 with a phase-wise development plan. NESPAK has been involved in the design, tender documentation and construction supervision of this Rs. 5 billion project.

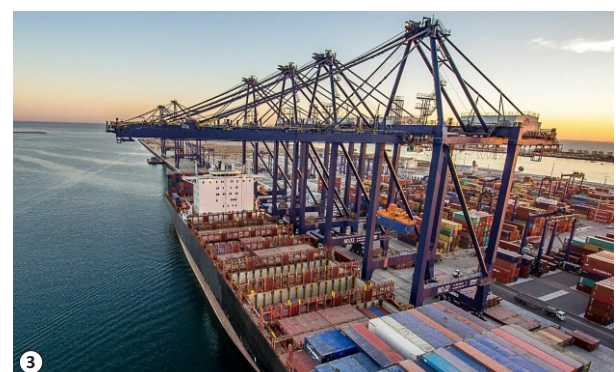


1. Extension of Passenger Terminal Building at the Allama Iqbal International Airport, Lahore
2. Sialkot International Airport
3. Development of the Container Terminal at South Wharf, Karachi

During the year, NESPAK continued to provide design and tender documentation services for the Extension of Passenger Terminal Building at the Allama Iqbal International Airport, Lahore. The terminal building will be extended to the southern side by constructing a new domestic terminal facility equipped with three dedicated passenger boarding bridges. The terminal building will be converted into an international terminal with requisite changes in the layout, which will vastly improve the passenger experience and also offer enhanced service. Concept design has been developed by NESPAK and approved by the PCAA. NESPAK has also prepared the PC-I document for this Rs. 18 billion project.

## PORTS & HARBOURS

**Among the fresh projects during the year,** NESPAK was engaged by the Karachi Port Trust (KPT) to provide design review and construction supervision for the new Container Terminal Project at South Wharf, Pakistan Deep Water Container Port, Karachi. The terminal comprises 10 berths at 18m dredged depth, with 5km long quay wall and railway yard, making it Pakistan's largest container terminal. The first two phases of this project have been put into operation since December 2016. The other two phases are in progress for which NESPAK will provide its expertise and specialised services in overseeing works of commissioning of container terminals under this Rs. 73 billion venture. The services to be







rendered by NESPAK are based on the Terminal Operator Company's (also named as South Asia Pakistan Terminal) assignments for the commissioning of the terminal as per the concession agreement signed with the sponsor, M/s Hutchinson Port Holdings Hong Kong, one of the largest container terminal operators in the world. The mega project is expected to be completed in two years.

**Among the ongoing projects,** the Phase-I works for Conversion of Marginal Wharf Berths 3 & 4 into Coal Terminal at the Port Qasim are fast nearing completion. The project is aimed at handling 4 million tonnes per annum of imported coal for the Sahiwal Coal Power Project. NESPAK was awarded this project by the Port Qasim Authority for vetting and construction quality audit works undertaken by M/s Huaneng Fuyun Port and Shipping (Pvt.) Limited, a Chinese sponsor, on the Build-Operate-Transfer (BOT) basis. The Phase-I of the project is now substantially completed and operations have been started. NESAPK has yet to conduct testing and commissioning of this Rs. 4 billion project.

Good progress was registered on the Rehabilitation and Renovation of Karachi Fish Harbour during the year under the supervision of NESPAK. The Rs. 563 million project is expected to be completed in a year. NESPAK is also involved in the design review and tender documentation for this project awarded by the Sindh Works and Services Department.

NESPAK continued to render services for the establishment of a Multipurpose Dry Bulk Clean Cargo Terminal at East Wharf,

Karachi Port. The terminal is the part of Karachi Port Improvement Project which is being planned to handle various dry bulk clean commodities in an environment-friendly manner through the Public-Private Partnership mode. NESPAK scope of services includes preparation of feasibility study, project planning and tender documents for this Rs. 50 billion project. The re-tendering process will start after the approval of feasibility study by the KPT Board.

NESPAK has started work for feasibility study of the Port Connectivity Project of the KPT under PPP Arrangement. The Initial Environmental Examination Report was submitted to the KPT during the year. The main objective of feasibility study is to review current traffic situation keeping in view the forecasted cargo handling at the Karachi Port. This study will analyse the traffic congestion issues and recommend options for the improved port connectivity to evacuate cargo from the Karachi Port. NESPAK will also carry out project planning, detailed design and tender documentation for this project.

**Among the projects wrapped up during the year,** NESPAK successfully completed services for the construction of a new ship repair facility comprising Shiplift and Transfer System Project at the Karachi Shipyard and Engineering Works Limited. The Rs. 5 billion project will be capable of lifting vessels up to 7300 DWT with the capacity to repair up to 12 vessels at a time. NESPAK carried out design review and construction supervision of the project including installation of the mechanical and electrical systems. The project was inaugurated by the Prime Minister of Pakistan, Imran Khan, during the Financial Year 2020-21.

1. Train loader for the Conversion of Marginal Wharf Berths 3 & 4 into Coal Terminal at the Port Qasim, Karachi
2. Multipurpose Dry Bulk Clean Cargo Terminal at East Wharf, Karachi Port
3. Shiplift and Transfer System Project at the Karachi Shipyard and Engineering Works Limited





As an architect you design for the present, with an awareness of the past, for a future which is essentially unknown.

Norman Foster

NESPAK won laurels in the Architecture and Planning Sector with the acquisition of 47 new projects worth Rs. 80 billion during the Financial Year 2020-21 in the fields of housing, education, healthcare, tourism etc. The Company continued to render its up-to-date services for 79 ongoing projects worth Rs. 519 billion including some mega ventures. NESPAK wrapped up services for 48 projects worth Rs. 113 billion during the reporting period.

**Among the fresh projects during the year,** NESPAK was awarded design review, tender documentation and construction supervision for the Sangjani Housing Scheme Project in Islamabad by the Naya Pakistan Housing and Development Authority. Sangjani has some highly advantageous features such as connectivity with major road networks like the G.T. Road, M1 Motorway, proposed Rawalpindi Ring Road and E-11 Link Road along with its location within residential hotspots. The 39-acre project worth Rs. 14 billion will include 2,392 low-cost finished apartments of ground-plus-three-storey buildings, infrastructure development works and public utilities.

The Federal Government Employees Housing Authority (FGEHA) hired NESPAK for its new project, Apartment Scheme of FGEHA with the Khyber Pakhtunkhwa Housing Authority (PHA) at Nishtarabad, Peshawar. The Rs. 8 billion project is planned to be a ground-plus-23-storey building. NESPAK services include master planning, detailed design, tender documentation and construction supervision for this housing venture.

NESPAK has been selected for master planning, designing and construction supervision for Urban Regeneration of Federal Government Servants Colony, Sariab Road, Quetta by the FGEHA. The project will include 1,080 two-storey apartments, Mosque, community centre, shops, parks etc. The 60-acre project is expected to be completed at a cost of Rs. 7 billion in five years.

NESPAK has been engaged for the Smart Island Housing Scheme at Chakri Road in District Rawalpindi. NESPAK scope

## ARCHITECTURE & PLANNING SECTOR







1&2. Artistic designs of the Govt. Technical Institute Ghiljo, Orakzai and the Land Record Complex, Peshawar for the Merged Areas under the FATA Infrastructure Program

3. Master plan of the Swat Agriculture University in Tehsil Matta, Khyber Pakhtunkhwa



of work includes master planning and detailed engineering design of roads, stormwater drainage, water supply network, sanitary sewer system, slope protection works, underground electrification works, seismic hazard microzonation study, Bill of Quantities, tender documents and engineer's cost estimate of about 3,000 kanal area under this Rs. 3 billion project.

The Sindh Home Department hired NESPAK for Establishment of Sindh Forensic Science Laboratory at Karachi. This state-of-the-art forensic science laboratory having various facilities will be constructed at a cost of Rs. 3 billion in five years. The Infrastructure Development Authority Punjab hired NESPAK for the construction supervision for the Sardar Fateh Muhammad Khan Buzdar Institute of Cardiology, Dera Ghazi Khan. The project is envisaged to be a state-of-the-art 200-bed Institute of Cardiology. The Rs. 2 billion Phase-I comprises design and execution of a 100-bed hospital with the provision of an additional 100-bed facility to be designed and executed in the Phase-II. The Phase-I will consist of a basement-ground-plus-three-storey main hospital building, including an out-patient department, Mosque and allied facilities. The project to be managed by a NESPAK-TurkPak Joint Venture will be part of a proposed medical complex in Dera Ghazi Khan.





1. A conceptual design of the Aiwan-e-Sayyhat/  
Tourism House, Islamabad

2. An artistic view of the King Salman Bin Abdul Aziz  
Grand Mosque at the new campus of the  
International Islamic University, Islamabad

NESPAK was hired by the Khyber Pakhtunkhwa Communication and Works Department for detailed design and construction supervision of the Swat Agriculture University in Tehsil Matta on a single source basis. The project costing Rs. 5 billion is likely to be completed in three years.

The Khyber Pakhtunkhwa Planning and Development Department selected NESPAK for reconstruction, rehabilitation and development works in the Merged Areas under the FATA Infrastructure Program. NESPAK services include design and construction supervision for the Government Degree College Dogar in District Kurram and Govt. Technical Institute Ghiljo in District Orakzai, 122 fully-damaged schools in Tribal District Bajaur, Mohmand, Khyber, North & South Waziristan and Land Record Complex of Merged Districts in Peshawar with 7 delivery centres. The Rs. 5 billion project is expected to be completed in three years.

University of Swat, Khyber Pakhtunkhwa engaged NESPAK for project planning, detailed design, tender documentation and construction supervision for Establishment of Women Sub-Campus, Swat in Islamabad at a cost of Rs. 1 billion.

The Ministry of Kashmir Affairs and Gilgit-Baltistan engaged NESPAK for providing services for the construction of AJK Legislative Assembly Complex Project, Muzaffarabad. NESPAK services include design review, contract management and construction supervision for this Rs. 3 billion project.

The Khyber Pakhtunkhwa Communication and Works Department awarded NESPAK the construction supervision for various new blocks in Saidu Medical College, Swat. The project will be constructed at an estimated cost of Rs. 1 billion

NESPAK has signed an agreement with the Pakistan Public Works Department for feasibility study and design of the Aiwan-e-Sayyhat/Tourism House in Islamabad. The project will be constructed at an estimated cost of Rs. 4 billion.

NESPAK was entrusted with the design of King Salman Bin Abdul Aziz Grand Mosque at the new campus of International Islamic University, Islamabad. NESPAK developed the design of the Grand Mosque inspired by Verse-35 of Surah Al-Noor. The Prayer Hall and Courtyard have a 12,000 namazis. A library, museum and auditorium are designed as part of the Mosque Complex.

The Khyber Pakhtunkhwa Planning and Development Department assigned NESPAK with master plans of Urban Centres of Khyber Pakhtunkhwa's Headquarter Cities. The study area comprises Divisional/District Headquarter cities of Khyber Pakhtunkhwa Package-2 (Kohat, Bannu and Dera Ismail Khan and Package-4 (Abbottabad and Haripur).

**Among the ongoing projects,** NESPAK is rendering consultancy services for various projects under the Rs. 200 billion mega venture, Reconstruction and Rehabilitation of Earthquake Affected Areas. The reconstruction projects were initiated in the wake of the October 2005 earthquake which devastated large parts of Pakistan. The projects were launched by the Earthquake Reconstruction and Rehabilitation Authority (ERRA) in the earthquake-affected areas of Azad Jammu and Kashmir (AJK) and Khyber Pakhtunkhwa. A total of 2,283 reconstruction sub-projects were wrapped up during the year 2020-21 in health, education, governance and road sectors as well as Kuwait-Funded Colleges in the quake-hit areas. NESPAK services include master planning, tender documentation, detailed design, design review and construction supervision for this biggest project in NESPAK's history.

Good progress was reported on Defense Housing Authority (DHA) Housing Scheme, Gujranwala under the construction management of NESPAK during the year. NESPAK is also rendering project planning, design and tender documentation for this Rs. 40 billion project. Construction stage for Phase-I of the DHA Housing Scheme was started in 2019 while various sectors out of total 12 are being planned and executed in different construction packages. The 4,375-acre scheme consists of 30,000 residential and 1,200 commercial plots.



1. The under-construction building of the Kohat Institute of Medical Sciences, Khyber Pakhtunkhwa
2. A conceptual view of the National Aerospace Science and Technology Park, Aviation City Pakistan, Kamra
3. An artistic view of the Apartments at the OPF Housing Scheme, Phase-I Raiwand Road, Lahore
4. The Government Boys Primary School, Sea Kothi, District Bagh, Azad Jammu and Kashmir for the Reconstruction and Rehabilitation of Earthquake Affected Areas Project

NESPAK is involved in detailed design/review and construction supervision for the Establishment of Infrastructure in LDA City (Phase-I) Project awarded by the Lahore Development Authority. During the year, moderate progress was reported on the packages No 2, 3 and 5 of this project. Work is moving at a fast pace on the packages No 1, 4 and 6 of this Rs. 15 billion venture.

During the year, a package comprising construction works was completed at the Civil Services Cooperative Housing Society Hawksbay, Karachi. NESPAK prepared the master plan and engineering design of Infrastructure works of this 300-acre residential scheme. Separate packages for water supply and boundary wall works are in progress under this Rs. 2 billion project.

Construction activities on the Building No. 1 for National Aerospace Science and Technology Park (NASTP), Kamra are undergoing on a fast-track basis as scheduled under NESPAK supervision. NASTP is an integral part of the Aviation City Pakistan, being developed as Pakistan's first aerospace cluster and smart city around PAC Kamra and the Pakistan Air Force Base Minhas. The Rs. 4 billion NASTP is designed by NESPAK along with related infrastructure development works.

The grey structure (Phase-I) of DHA Bahawalpur Office Complex was almost completed under the supervision of





NESPAK during the year. NESPAK services also include master planning, architectural design and engineer's cost estimates for this Rs.2 billion project. NESPAK has submitted the engineer's cost estimate for the finishing works of this job.

NESPAK is involved in master planning, detailed engineering design and tender documentation for development of Rs. 8 billion Rudn Enclave Housing Scheme, Adyala, Rawalpindi.

NESPAK started design work for Apartments at the OPF Housing Scheme, Phase-I Raiwand Road, Lahore during the year. The Rs. 7 billion project has been planned on a 58 kanal piece of land comprising eight apartment towers with one, two and three-bed units along with commercial and recreational facilities.

Excellent progress was achieved on the Kohat Institute of Medical Sciences under the supervision of NESPAK during the year. This healthcare project will now be completed at a revised cost of Rs. 2 billion.

Design work for University of Buner, Swari, Khyber Pakhtunkhwa has been substantially completed and construction has begun under the supervision of NESPAK. The project shall be completed at an estimated cost of Rs. 2 billion.

Satisfactory progress was registered on the construction for buildings of the Airport Campus of the Ghazi University, Dera Ghazi Khan under the supervision of NESPAK. NESPAK is also providing design services for this Rs. 1 billion job.



1. A 3D view of the Five Al-Meera Malls Project, State of Qatar
2. A 3D view of Development of New Balakot City Project as a Tourism Hub at Bakriyal, District Mansehra, Khyber Pakhtunkhwa
3. Construction underway for the Hazara University, Mansehra, Khyber Pakhtunkhwa

Construction work continued smoothly for Rs. 1 billion Uplifting of academic and infrastructure facilities at Hazara University, Mansehra and Rs. 1 billion University of Kotli, AJK under NESPAK supervision.

NESPAK submitted the Ziarat Town master plan and PC-I for short-term projects, under the Development of Ziarat Town in Balochistan. The Balochistan Government has okayed the draft and work on tenders for short-term projects is in progress for this Rs. 3 billion project. The services also comprise design and construction supervision for this tourism-related venture.

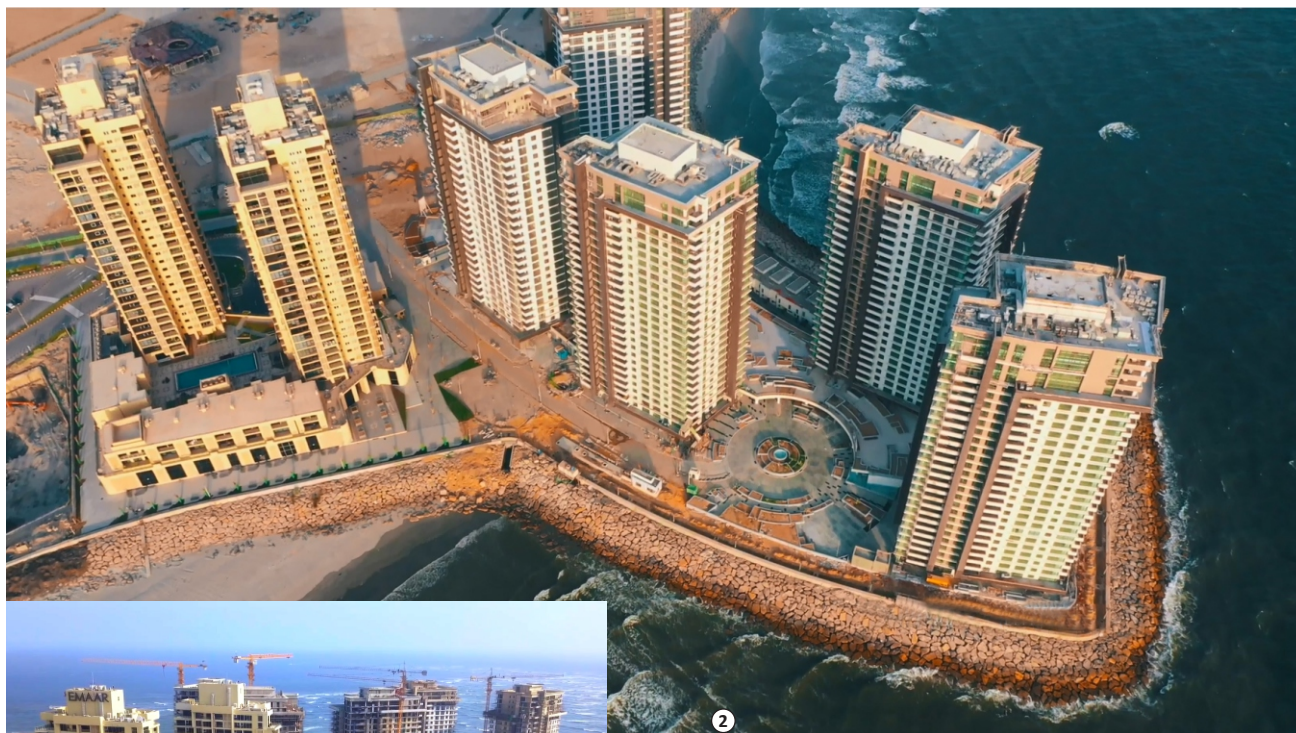
During the year, NESPAK presented concept design and feasibility study for Development of New Balakot City Project as a Tourism Hub at Bakriyal, District Mansehra to ERRA, Islamabad for approval. The project will be implemented at an estimated cost of Rs. 16 billion.

Brilliant progress was registered on the construction works of New Bus/Truck Adda, Vegetable/Fruit Market Square at Chaman, Balochistan under NESPAK supervision. The Rs. 2 billion project was awarded to NESPAK by the Balochistan Communication and Works Department.

Overseas, construction work is underway for Five Al-Meera Malls under the supervision of NESPAK. Owned by the Al-Meera Consumers Goods, the project is located in Al-Faroosh, Umm Al-Amad, Al-Muaither, Al-Luqta and Al-Thumama areas in the State of Qatar. NESPAK has also been involved in the designing and tender documentation of this US\$ 29 million project.

**Among the projects wrapped up during the year,** NESPAK successfully completed construction supervision for





Emaar's (UAE) Crescent Bay Development Project. The Crescent Bay Development is an upscale, mixed-use ocean-front project in Karachi. The development consists of a series of high-rise towers for residential and commercial use. NESPAK provided services for the Coral Towers (two high-rise residential tower buildings) and Pearl and Reef Towers (five high-rise residential towers). The estimated cost of the project towers for which NESPAK rendered services is Rs. 39 billion.

NESPAK has carried out master planning, designing and construction supervision for the Malakand University academic block and examination centre. The Rs. 1 billion project was inaugurated by the Prime Minister of Pakistan during the year.

In the State of Qatar, NESPAK completed project management and construction supervision for 110 Villas and Mosque for the Al-Khor Housing Project. Awarded by the Al-Aqaria Real Estate Qatar, the US\$ 42 million project comprises 110 villas each having four bedrooms and a Friday Masjid in the Al-Khor State. The total built-up area of 110 villas is 30,724 sqm.



1 & 2. The Crescent Bay Development Project, Karachi

3. The Malakand University academic block, Khyber Pakhtunkhwa

4. The Al-Khor Housing Project, State of Qatar



“A nation that destroys its soils  
destroys itself. Forests are the lungs  
of our land, purifying the air and  
giving fresh strength to our people.”

Franklin D. Roosevelt

NESPAK put up a good show in the Environmental & Public Health Engineering Sector as it acquired 10 projects worth Rs. 18 billion during the fiscal year. The Company continued to provide its high-tech services for 26 ongoing projects worth Rs. 351 billion during the reporting period.

**Among the fresh projects during the year,** a framework contract agreement was signed between the Ravi Urban Development Authority (RUDA) and NESPAK for the multi-billion Ravi Riverfront Urban Development Project (RRUDP), Lahore. NESPAK will be rendering project management, design and construction supervision services for this huge venture. The mega project aims to rehabilitate and develop the dying River Ravi into a perennial fresh water body with high quality waterfront urban development on reclaimed and adjoining lands. The presently dead river shall be brought back to life to allow it to meet the primary goal of the project and the fulfillment of the new urban plan to revive the entire Lahore as a premier symbol of economic growth, industrial success and superb urban living. NESPAK will undertake the following assignments for this massive project: Review and updation of strategic development Plan for Phase-I; Topographic survey of Phase-I; River survey and model studies; River training works and barrage; Development of trunk infrastructure of Phase-I;





Construction of access roads for RRUDP; Establishment of industrial zone; Wastewater treatment plants; Waste-to-energy plant; Land development in Jhok Forest; Deployment of Smart Services in Jhok Forest; and construction supervision for river training works in first 3 kilometres.



The National Disaster Management Authority (NDMA) awarded NESPAK three projects of similar nature related to environment and public health in Karachi. NESPAK will render construction supervision for the projects of Gujjar Nullah and its Tributaries and Orangi Nullah and its Tributaries worth Rs. 22 billion. The third project is Mehmoodabad Nullah for which NESPAK will carry out structural design vetting. The Gujjar and Orangi Nullahs are natural drains of the Karachi City. The 13 km long and 210 feet wide Gujjar Nullah starts from New Karachi, ending at the Chuna Depot in Haji Mureed Goth where it falls into the Lyari River before draining into the Arabian Sea. The 11 km long and 98 feet wide Orangi Nullah starts from Pakistan Bazar Police Station and ends into the Lyari River near the Golimar area. Both the projects will be constructed on a fast-track basis.

NESPAK has been hired for planning, design/review, tender documentation and construction supervision of Combined Effluent Treatment Plant (CETP) in the North-West Industrial Zone (NWIZ) and Upgrading/Enhancement of Sewage Treatment Plant and construction supervision at the Port Qasim, Karachi. The PQA Industrial area is spread over 12,220 acres and is divided into three industrial zones. The proposed 6.0MGD CETP will be implemented in two phases based on modular approach in the NWIZ to treat the effluent generated from different industries established in the NWIZ. Upgradation of the sewage treatment plant in the South-West Industrial Zone also falls in the project scope to protect the environment.

The Khyber Pakhtunkhwa Public Health Engineering Department hired NESPAK for providing review of feasibility study and detailed design for the construction of Gravity Flow Water Supply Scheme, Mansehra during the year. The main objective of this Rs. 17 billion project is to provide potable water to the entire population of the project area up to design horizon, Year 2050. The scope of services comprises identification & development of water sources, water quality sampling & testing, design of water conduction main, design of water conveyance system up to water treatment plant, water storage reservoirs and water distribution network(s).

NESPAK won "Mitigation Sub-Schemes in All Four Provinces and Gilgit-Baltistan, Pakistan" during the year. NESPAK services include detailed geohazard studies, rapid geotechnical and hydrologic assessments, detailed design/review and construction supervision of this Rs. 1 billion project awarded by the Pakistan Poverty Alleviation Fund.



1. Map for the Ravi Riverfront Urban Development Project, Lahore
2. The view of a completed structure at the Sahiwal Park under the Punjab Intermediate Cities Improvement Investment Program (PICIIIP)
3. Lowering of sewer pipes in Sialkot under the PICIIIP Project

During the year, NESPAK and the Pakistan Red Crescent Society signed a contract for providing design review, vetting and construction supervision services for Mitigation Structures at Neelum, Hattian, Sudhnothi and Bagh Districts of Azad Jammu and Kashmir.

The Central Design Office, Muzaffarabad, AJK has selected NESPAK for preparing feasibility study and design of Sewerage System along with Development of Additional Water Source for Muzaffarabad Water Supply.

NESPAK has signed the Long-Term Agreement with the United Nations International Children's Emergency Fund (UNICEF) for conducting feasibility study and engineering assessments for Construction and Rehabilitation of WASH Services in Communities and Institutions. The scope of work comprises water supply & sanitation, water quality, wastewater and solid waste management. The project will cover selected cities of Punjab, Khyber Pakhtunkhwa, Balochistan, Sindh, Islamabad Capital Territory, Azad Jammu and Kashmir and Gilgit-Baltistan.

**Among the ongoing projects,** excellent progress was demonstrated on all contracts of PICIIIP including upgradation of parks in Sahiwal, procurement of solid waste management machinery/equipment, establishment of Punjab Local Government. Academy, Lahore and Water Supply and Sewerage Projects in Sahiwal and Sialkot under NESPAK supervision during the year. NESPAK as a lead in a joint venture with a foreign firm has already prepared master plan and design for these works under the Punjab Intermediate Cities Improvement Investment Program (PICIIIP), Package



No-2 (Sahiwal & Sialkot). The Rs. 28 billion mega PICIIP project was assigned to NESPAK by the Punjab Local Government and Community Development Department in the cities of Sahiwal, Sialkot and Lahore.

Construction works progressed at a fast pace on the Stormwater Drainage System from Haji Camp to River Ravi via Lakshmi Chowk, McLeod Road, Nabha Road, Chauburji and



1. Laying of pipe for the Replacement of Outlived Sewer in Multan, Phase-II
2. A disposal station pump house for the Prime Minister's Package, Part-I, Water and Sanitation Authority (WASA), Multan
3. An overhead water tank under the Land-use Planning and Infrastructure Designing for Fazaia Housing Scheme, Gujranwala
4. A completed manhole under Five ADP Schemes of WASA, Multan



Sham Nagar, Lahore under NESPAK supervision during the year. NESPAK has also rendered design services for this Rs. 3 billion project awarded by the Water and sanitation Agency (WASA), Lahore. Precast conduit and cast in-situ reinforced cement concrete (RCC) have been adopted as construction methodology for this 9km stormwater drainage project.

The Prime Minister's Package (Part-I) for improvement of water and sewerage systems in Multan is fast nearing completion under the supervision of NESPAK. The Rs 3 billion project was awarded to NESPAK by WASA Multan.

The Upgradation of Chungi No. 9 Disposal Station, Multan Project entered the construction phase after the completion of detailed design by NESPAK during the year. NESPAK services also include topographic survey, geotechnical investigations, updating of Environmental Impact Assessment (EIA) Report and construction supervision of this project awarded by WASA, Multan. The project costing Rs. 3 billion is likely to be completed in five years.

Satisfactory progress was recorded on the Replacement of Outlived Sewer in Multan, Phase-II under NESPAK supervision during the year. NESPAK has completed the design work of this Rs. 2 billion project assigned by WASA, Multan.

Brilliant progress was made on Five Annual Development Programme (ADP) Schemes of WASA Multan for Financial Year 2017-2018 under NESPAK supervision. The scope of this Rs. 1 billion project includes installation of three tube wells, 51 water purification plants and three overhead reservoirs along with 210,000 ft. water supply lines. In addition, sewerage lines from 12" to 36" dia will be extended/replaced with the construction of a disposal station under this project awarded by WASA, Multan.

Design and construction works for Fazaia Housing Scheme, Gujranwala moved forward at a brilliant speed under the supervision of NESPAK during the year. Two phases of the project have been designed and construction activities at the Phase-II are in progress. NESPAK also completed land-use

planning of the Phase-III of this Rs. 1 billion housing venture awarded by the Pakistan Air Force. The scope of project includes land-use planning, design and construction of infrastructure works (roads, electrification, water supply distribution network including overhead tanks, sewerage and stormwater drainage systems).





## OIL, GAS &amp; INDUSTRIAL ENGINEERING SECTOR

“Sloth makes all things difficult, but industry all things easy.”  
Benjamin Franklin

NESPAK showed satisfactory performance in the Oil, Gas and Industrial Engineering Sector by getting six (6) projects worth Rs. 16 billion during the year. The Company continued to provide its state-of-the-art services for eight (8) projects worth Rs. 17 billion during the fiscal year 2020-21.

**Among the fresh projects during the year,** NESPAK signed an agreement with Punjab Industrial Estates Development and Management Company for development of infrastructure works of Quaid-e-Azam Business Park located on Motorway, M-2. The scope of services includes master planning, detailed design and construction supervision of all infrastructure components such as road network, water supply system, sewerage system, stormwater drainage system and underground electrical distribution network. This business park will be developed over an area of 1,859 acres at an estimated cost of Rs. 16 billion.

NESPAK and Packages Limited, Lahore signed a contract for the latter's new plant in Kasur. NESPAK scope of services includes master planning and design for the construction of Packages' business units of flexible packaging, carton folding, consumer product etc. to a new site near Kasur over an area of 100 acres. The new business units including starch plant will also be added at the new site.

NESPAK has entered into an agreement with the World Food Programme (WFP) to provide consultancy services for construction of additional warehouses in Muzaffarabad, Azad Jammu and Kashmir. NESPAK scope of work includes detailed design and construction supervision for this project which is the extension of the already constructed warehouses by the WFP under Phase-6 in Muzaffarabad.

**Among the ongoing projects,** NESPAK is working on the structural design and modifications for a project for the extension of the main industrial plant structures for the Fatima Fertilizer Company Limited (FFCL). The structural design project encapsulates the evaluation and capacity





1. Urea Prilling Tower and Building at the Fatima Group's Pakarab Fertilizer Limited, Multan
2. The Fatima Group's Ammonia Plant at Rahim Yar Khan
3. Cooler Tower Building for the 450MW Combined Cycle Power Plant, Abdul Hakim, Khanewal



enhancement of the existing industrial plant buildings. The scope of work includes structural design modifications in various buildings i.e., CAN plant, Nitro Phosphate plant, substations, prilling towers, blast-proof DCS building and township buildings. These multistorey buildings house a number of heavy vessels, machines, motors, grinders, electrical cabinets and heavy industry equipment. First-rate progress has been registered on this project. Design and detailed structural evaluation have been performed on the existing steel and concrete structures. New capacity enhancement design and drawings are being prepared for this project.

Construction activities have been started under the supervision of NESPAK for the rehabilitation of Cooler Tower building for the 450MW Combined Cycle Power Plant, Abdul Hakim, Khanewal. During the last couple of years, the Cooling Tower structure started deteriorating gradually due to continuous water exposure, temperature effects and Alkali-Silica gel formation in concrete. Consequently, a significant number of cracks were observed in the main structural components, particularly the beams and columns. NESPAK was engaged by the Rousch (Pakistan) Power Limited, an independent power producer, for this evaluation and rehabilitation assignment. NESPAK has earlier completed a comprehensive design for this project.



Technology just means  
information technology.

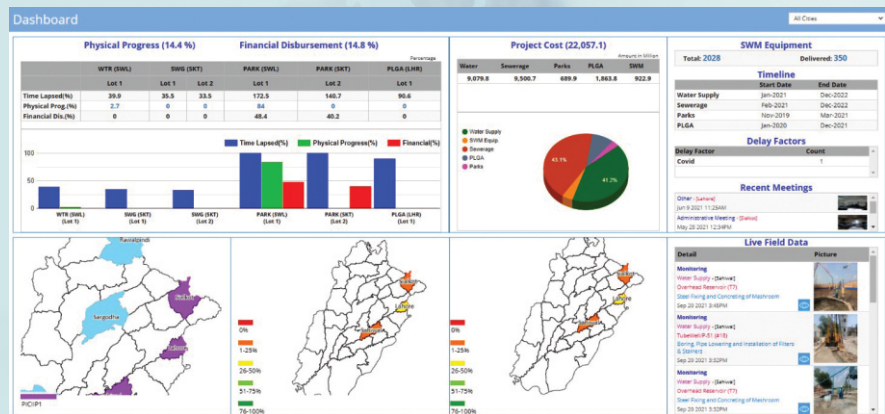
Peter Thiel

NESPAK has undertaken the assignment of Development of Project Progress Monitoring — Management Information System (PP-MIS) under the Punjab Intermediate Cities Improvement Investment Program (PICIIIP) during the year 2020-21. The assignment includes the development and implementation of a high-standard web-based project progress monitoring system, including MIS, dashboard and an Android-based system for real-time monitoring of the PICIIIP's physical and financial progress. NESPAK scope of work will cover live field data, reporting and dashboard for various organs of the PICIIIP. The monitoring module consists of field visits at component/sub-component level search and detailed view of monitoring, field visits, pictures, delay factors, scheme statistics detail, tree view etc. The training of PPM-MIS and Android application to the relevant staff at Sahiwal, Sialkot, and Lahore is also included in the scope of work.

## INFORMATION TECHNOLOGY & GIS SECTOR

NESPAK performed moderately well in the Information Technology (IT) and Geographical Information System (GIS) Sector by acquiring good projects during the Financial Year 2020-21. The Company completed its advanced and sophisticated services for various important projects including the high-profile project of IT/BMS-related Works at New Buildings of Punjab Assembly during the fiscal year.

Among the fresh projects during the year, the National Information Technology Board, Ministry of Information Technology and Telecommunication hired NESPAK to render consultancy services for the President's Initiative for the Cyber Efficient Parliament (PICEP) Project through a competitive bidding. NESPAK scope of services includes preparation of three different business requirements specification document (BRSD) for the automation of complete parliamentary system including legislative, semi-legislative and non-legislative functions covering the legislative bodies i.e., Ministry of Parliamentary Affairs, National Assembly of Pakistan (Lower House) and Senate of Pakistan (Upper House). A combined project PC-I document covering all the three stakeholders is also part of the NESPAK scope of services for the PICEP venture. NESPAK completed consultancy work as per timeline for this Rs. 2 billion project during the reporting period.



The monitoring dashboard of the project progress and management information system for the President's Initiative for Efficient Parliament Project, Islamabad



Among the projects wrapped up during the year, NESPAK completed planning, designing, procurement, and construction supervision for IT/BMS-related Works at New Buildings of Punjab Assembly Project during the year. Comprehensive and state-of-the-art IT and security systems

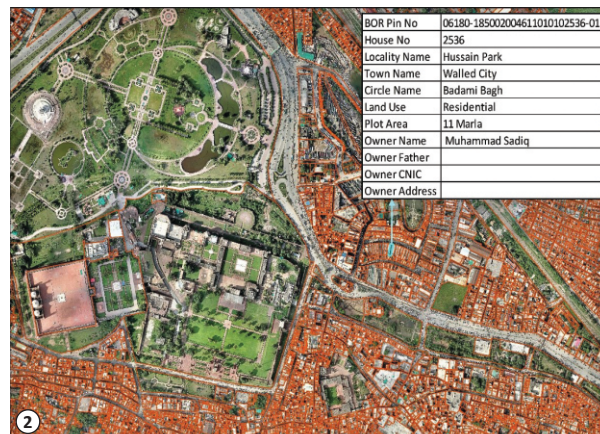


including the local area network (LAN), wireless local area network (WLAN), network management & monitoring (NMS), uninterruptible power supply system (UPS), data centre, servers & storage, microphone conferencing & student information systems for the Assembly Hall, audio/video streaming system, voice network, electronic quorum bell, public address system and mobile phone Jamming have been installed under this prestigious project.

## Geographical Information System Sector

Among the fresh projects during the year, NESPAK was engaged for providing consultancy services on Cadastral Mapping Project of Lahore and Karachi Cities under the Prime Minister's directive. The project area of Karachi and Lahore is 1,062 sq-km and 756 sq. km. respectively. As per the agreement, initial scope of the work involves collection of ground imagery & society layout plans, collection of land ownership records, digitisation of land parcels on satellite imagery, attribute entry from layout plans, topological checks on spatial database, field survey activities and ground control points' collection, spatial integration of ownership records with land units and finally development of a comprehensive geo-database. During the project tenure, scope was enhanced and acquisition of drone imagery of highly congested areas was included in this Rs. 600 million job.

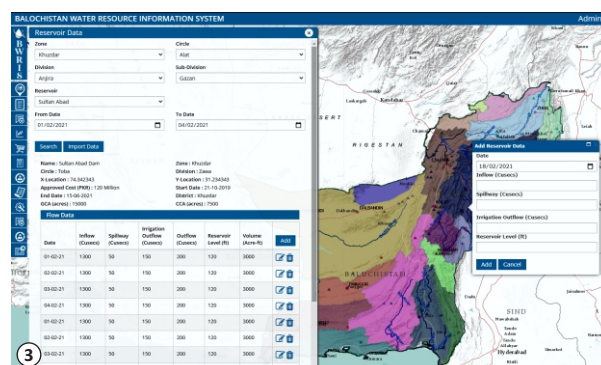
NESPAK was been hired for the Improvement of Water Resources Information System (WRIS) in Balochistan by the Asian Development Bank. Under the project, a centralised provincial level, web GIS application will be developed which will highlight dynamic data-driven online thematic maps of water resources, present water and climatic indices using automatic satellite data downloading, processing and visualisation techniques. A network of hydro-meteorology sensors is being developed to automatically send weather



and river flows data to the WRIS for instant online display in the form of dashboards.

Among the projects wrapped up during the year, NESPAK completed GIS-related services for Master Planning and Development of Ziarat Town, Balochistan, Pakistan. The scope of work included ariel photogrammetric survey of project area using drone technology, base-map using high-resolution ortho imagery and digital elevation model (DEM) extracted from the ariel photogrammetric survey. The GIS based analysis and mapping of the existing landuse, infrastructure, utility mapping, drinking water resources and other facilities were also undertaken for this project. The GIS activities including the submission of detailed design drawings and landuse & road maps were successfully carried out by NESPAK for this project during the fiscal year.

1. The local control room for the Information Technology Building Management System for the New Buildings at Punjab Assembly, Lahore
2. Data development on drone imagery of Lahore's congested area — Minar-e-Pakistan and adjacent areas, under the Cadastral Mapping Project of Lahore and Karachi Cities
3. Improvement of Water Resources Information System in Balochistan Project



## Major New, Ongoing & Completed Projects

a) Feasibility Study  
b) Project Planning  
c) Detailed Design  
d) Tender Documents  
e) Construction Supervision  
f) Design Review  
g) Software Requirement Specification

h) Functional Specifications Document  
i) System Study Design  
j) Software Development  
k) Testing, Debugging & Implementation  
l) Documentation & Training  
m) Satellite Imagery  
n) Map Digitisation

o) Digital Terrain Model  
p) Global Positioning System  
q) GIS Database & Model  
r) Map Analyses  
s) Cadastral Mapping

| PROJECT | LOCATION | CLIENT | SCOPE OF WORK | COST<br>Rs. Million<br>US\$ Million |
|---------|----------|--------|---------------|-------------------------------------|
|---------|----------|--------|---------------|-------------------------------------|

### Energy Sector New

|                                                                                                                                                                |            |                                          |                        |              |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------------------------------------|------------------------|--------------|
| 500kV Double Circuit Transmission Line for Interconnection of K2/K3 Nuclear Power Plant with 500kV Single Circuit Port Qasim-Matiari Transmission Line (102km) | Pakistan   | National Transmission & Despatch Company | e<br>Allied Activities | 2,000<br>12  |
| 500kV Double Circuit Quad Bundle Transmission Line: Nokhar S/S - Lahore, North S/S - Lahore HVDC Converter Station (135km)                                     | Pakistan   | National Transmission & Despatch Company | e<br>Allied Activities | N.A<br>N.A   |
| Sustainable Hydropower Project (Construction of Rabat, Chappasuy & Tamshush HPPs with Associated Transmission Line in Kashkadarya Region), Uzbekistan          | Uzbekistan | Joint Stock Company Uzbekhydroenergo     | e f                    | 12,750<br>75 |

### Ongoing

|                                                                                                                                                               |          |                                                              |                    |                     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|--------------------------------------------------------------|--------------------|---------------------|
| 4500MW Diamer Basha Dam                                                                                                                                       | Pakistan | Diamer Basha Development Company (Private) Limited, Pakistan | b c d e f          | 1,862,000<br>11,860 |
| 800MW Mohmand Dam Hydropower Project                                                                                                                          | Pakistan | Water & Power Development Authority                          | c e f              | 309,600<br>2,227    |
| Upgradation and Refurbishment of Generating Units (1-6) of Mangla Power Station                                                                               | Pakistan | Water & Power Development Authority                          | e f                | 52,224<br>497       |
| 1263MW Regasified Liquefied Natural Gas (RLNG) based Combined Cycle Power Plant near Trimmu Barrage, Jhang District                                           | Pakistan | Punjab Thermal Power (Pvt.) Limited                          | a d e f            | 52,000<br>495       |
| 1180MW RLNG-based Combined Cycle Power Plant Bhikki, District Sheikhpura                                                                                      | Pakistan | Quaid-e-Azam Thermal Power (Pvt.) Limited                    | a d e f            | 54,000<br>535       |
| 500kV Transmission Lines Interconnection Arrangement for Power Evacuation from Suki Kinari, Kohala and Mahl Hydropower Projects in Northern Areas of Pakistan | Pakistan | National Transmission & Despatch Company                     | b c d e f<br>l p s | 17,000<br>127       |
| Transmission Scheme for Dispersal of Power from Neelum-Jhelum Hydropower Project                                                                              | Pakistan | National Transmission & Despatch Company                     | d e f              | 21,697<br>258       |
| 900MW Bin Qasim Power Station (BQPS-III) Combined Cycle & Associated Transmission Projects                                                                    | Pakistan | K-Electric Limited, Karachi                                  | e f                | 100,219<br>638      |
| 220kV D.I. Khan-Zhob Transmission Line                                                                                                                        | Pakistan | National Transmission & Despatch Company                     | e                  | 7,000<br>45         |
| 500kV Faisalabad West Grid Station, Extension & Associated 500kV Transmission Lines Project (Phase-II)                                                        | Pakistan | National Transmission & Despatch Company                     | d e f              | 8,000<br>60         |
| 220kV Transmission Lines included in Tranche 3 of ADB Second Power Transmission Enhancement Investment Program                                                | Pakistan | National Transmission & Despatch Company                     | e                  | 1,228<br>8          |

### Completed

|                                           |          |                                       |       |                  |
|-------------------------------------------|----------|---------------------------------------|-------|------------------|
| 969MW Neelum-Jhelum Hydroelectric Project | Pakistan | Water and Power Development Authority | c e f | 506,808<br>7,870 |
|-------------------------------------------|----------|---------------------------------------|-------|------------------|



| PROJECT                                                          | LOCATION | CLIENT                                                                                    | SCOPE OF WORK | COST<br>Rs. Million<br>US\$ Million |
|------------------------------------------------------------------|----------|-------------------------------------------------------------------------------------------|---------------|-------------------------------------|
| 102MW Gulpur Hydropower Project                                  | Pakistan | Mira Power Limited                                                                        | e f           | 52,000<br>333                       |
| 1223MW RLNG-based Combined Cycle Power Plant at Kasur            | Pakistan | National Power Parks Management Company Limited                                           | a d e f       | 55,000<br>536                       |
| 1230MW RLNG-based Combined Cycle Power Plant Haveli Bahadur Shah | Pakistan | National Power Parks Management Company Limited                                           | a d e f       | 58,900<br>583                       |
| 500kV Double Circuit Hubco-Jamshoro Transmission Line            | Pakistan | National Transmission & Despatch Company                                                  | e             | 3,000<br>24                         |
| 660kV HVDC Transmission Line from Matiari to Lahore (Lot 2-3)    | Pakistan | China Energy Engineering Group Hunan Electric Power Engineering Consulting Co. Ltd. China | e             | 410<br>3                            |

## Water & Agricultural Development and Dam Engineering Sector

### New

|                                                                                                        |          |                                                                              |        |                |
|--------------------------------------------------------------------------------------------------------|----------|------------------------------------------------------------------------------|--------|----------------|
| National Program for Improvement of Watercourses in Pakistan, Phase-II                                 | Pakistan | Federal Water Management Cell, Ministry of National Food Security & Research | c e f  | 155,000<br>939 |
| Harnessing of Hill Torrents in Dera Ghazi Khan and Rajanpur                                            | Pakistan | Irrigation Department Government of the Punjab                               | a c d  | N.A<br>N.A     |
| Promotion of High Value Agriculture through Solarisation of Drip & Sprinkler Irrigation System, Punjab | Pakistan | Agriculture Department Government of the Punjab                              | c e    | 4,000<br>26    |
| Consultancy Services for Solution of Problematic Small Dams in Development Zone, Punjab                | Pakistan | Irrigation Department Government of the Punjab                               | a c d  | N.A<br>N.A     |
| Three Small Dams in Districts Haripur, Mansehra and Lakki Marwat, Khyber Pakhtunkhwa (Package-W)       | Pakistan | Irrigation Department Government of Khyber Pakhtunkhwa                       | a PC-I | N.A<br>N.A     |

### Ongoing

|                                                                                                                  |          |                                                         |           |                  |
|------------------------------------------------------------------------------------------------------------------|----------|---------------------------------------------------------|-----------|------------------|
| Trimmu and Panjnad Barrages Improvement Project                                                                  | Pakistan | Irrigation Department Government of the Punjab          | b c d e f | 18,316<br>178    |
| Rehabilitation & Upgradation of Balloki Barrage & Lower Bari Doab Canal System                                   | Pakistan | Irrigation & Power Department Government of the Punjab  | c d e     | 30,000<br>381    |
| Remodelling of Warsak Canal System in Peshawar & Nowshera Districts                                              | Pakistan | Irrigation Department, Government of Khyber Pakhtunkhwa | c d e     | 17,000<br>190    |
| Projects under Annual Development Program                                                                        | Pakistan | Irrigation & Power Department Government of the Punjab  | e f       | 100,000<br>1,203 |
| Kachhi Canal Project                                                                                             | Pakistan | Water and Power Development Authority                   | c d e     | 152,000<br>2,649 |
| Lining of Distributaries & Minors in Sindh Province                                                              | Pakistan | Irrigation & Power Department Government of Sindh       | c d e     | 13,828<br>228    |
| Balochistan Water Resources Development Sector Project                                                           | Pakistan | Irrigation Department, Government of Balochistan        | a c d e   | 21,000<br>151    |
| Gomal Zam Dam Command Area Development and On-Farm Water Management for High Value & High Efficiency Agriculture | Pakistan | Gomal Zam Dam Command Area Development Project          | c d e     | 3,370<br>32      |
| Command Area Development Component of Jalalpur Irrigation Project                                                | Pakistan | Agriculture Department Government of the Punjab         | c d e f   | 4,000<br>24      |
| Murunj Dam Project                                                                                               | Pakistan | Water & Power Development Authority                     | a c d     | N.A<br>N.A       |
| Raising of Wala Dam                                                                                              | Jordan   | Jordan Valley Authority Ministry of Water & Irrigation  | e f       | 3,690<br>35      |

| PROJECT                                                                                                              | LOCATION        | CLIENT                                          | SCOPE OF WORK | COST<br>Rs. Million |
|----------------------------------------------------------------------------------------------------------------------|-----------------|-------------------------------------------------|---------------|---------------------|
| Kano River and Hadejia Valley Irrigation Schemes<br>Dams Safety & Rivers Training in Hadejia<br>Jama'are River Basin | Nigeria         | Federal Ministry of Water<br>Resources          | e<br>Training | 308<br>2            |
| Flood Protection Dam in Al-Jufainah,<br>Muscat Governorate                                                           | Oman            | Ministry of Agriculture & Fisheries             | e f           | 13,393<br>130       |
| Dams in Southern Region                                                                                              | Saudi<br>Arabia | Ministry of Environment, Water &<br>Agriculture | e f           | 19,198<br>155       |

## Highways & Transportation Engineering Sector

### New

|                                                                                                                   |          |                                                                          |           |               |
|-------------------------------------------------------------------------------------------------------------------|----------|--------------------------------------------------------------------------|-----------|---------------|
| Bus Rapid Transit Yellow<br>Corridor under Karachi Mobility Project                                               | Pakistan | Transport & Mass Transit<br>Department, Government of Sindh              | c d e     | 70,000<br>407 |
| Strengthening of East-West Connectivity of Merged<br>Areas (FATA) with Settled Districts and<br>Improvement Links | Pakistan | Communication & Works<br>Department, Government of<br>Khyber Pakhtunkhwa | a c d e f | 15,000<br>91  |
| Khyber Pakhtunkhwa Integrated<br>Tourism Development Project                                                      | Pakistan | Communication & Works<br>Department, Government of<br>Khyber Pakhtunkhwa | a c e     | 20,000<br>120 |
| Roads and Bridge in Less Developed<br>Districts of South Balochistan                                              | Pakistan | Provincial B & R Circle Khuzdar,<br>Balochistan                          | c         | 38,000<br>248 |
| Chitral-Garam Chashma-Doraha<br>Pass Road (82km)                                                                  | Pakistan | National Highway Authority                                               | e f       | 7,507<br>48   |
| Road Leading to Sheikh Baadin (30km) Districts<br>Lakki Marwat & Dera Ismail Khan                                 | Pakistan | Communication & Works Department<br>Government of Khyber Pakhtunkhwa     | e f       | 2,584<br>16   |
| Depalpur-Pakpattan-Vehari Road (150km) and<br>Hasilpur-Bahawalnagar Road (75km)                                   | Pakistan | Communication & Works Department<br>Government of the Punjab             | c         | 35,000<br>210 |
| Road (152km) from Shigar to Paiju District Shigar                                                                 | Pakistan | Public Works Department<br>Government of Gilgit-Baltistan                | a d e     | 16,000<br>103 |
| Rehabilitation of Flood Damaged Rural Roads Under<br>Counter Value Funds Khyber Pakhtunkhwa                       | Pakistan | Communication & Works Department<br>Government of Khyber Pakhtunkhwa     | c e       | 1,000<br>7    |
| Intelligent Transportation System Installation<br>at Hakla Dera Ismail Khan Motorway                              | Pakistan | National Highway Authority                                               | c d e     | N.A<br>N.A    |
| Roads under Rural Accessibility Programme<br>Phase-II in Sahiwal                                                  | Pakistan | Communication & Works Department<br>Government of the Punjab             | e         | 1,000<br>6    |
| Dir Motorway Project (30km)                                                                                       | Pakistan | Pakhtunkhwa Highway Authority                                            | a c       | 39,000<br>244 |
| Flyover at Junction of N-5 & N-65 at Sukkur                                                                       | Pakistan | National Highway Authority                                               | a c       | 2,000<br>12   |
| Repair Works on Wadi Bani Khalid Road,<br>North Al-Sharqiyya Governorate                                          | Oman     | Ministry of Transport,<br>Communications & Information<br>Technology     | c         | N.A<br>N.A    |

### Ongoing

|                                                                                                              |          |                                                                    |       |               |
|--------------------------------------------------------------------------------------------------------------|----------|--------------------------------------------------------------------|-------|---------------|
| Permanent Reconstruction Works in Federally<br>Administered Tribal Areas                                     | Pakistan | Temporarily Dislocated Persons<br>Support & Management Secretariat | c e   | 11,450<br>110 |
| Infrastructure including Allied Works for Islamabad<br>Metro Bus from Peshawar Morr to New Airport<br>(27km) | Pakistan | National Highway Authority                                         | c e   | 17,000<br>163 |
| Bus Rapid Transit Orange Line Karachi                                                                        | Pakistan | Transport & Mass Transit<br>Department, Government of Sindh        | c d e | 1,800<br>18   |
| Kot Belian-Tarap Road Package-3 (52km), Section<br>of Hakla (M-1)-Yarak (Dera Ismail Khan) Motorway          | Pakistan | National Highway Authority                                         | e f   | 28,000<br>269 |



| PROJECT                                                                                                                        | LOCATION | CLIENT                                                        | SCOPE OF WORK | COST<br>Rs. Million<br>US\$ Million |
|--------------------------------------------------------------------------------------------------------------------------------|----------|---------------------------------------------------------------|---------------|-------------------------------------|
| Dualisation and Improvement of Sarai Gambila to Karak Section of Indus Highway N-55 (61km)                                     | Pakistan | National Highway Authority                                    | e f           | 11,000<br>79                        |
| Road (73km) and RCC Bridges from Mushkin-Chilim including Bridge at Ramghat over the Astore River                              | Pakistan | Public Works Department, Government of Gilgit-Baltistan       | c e           | 19,195<br>120                       |
| Dualisation and Improvement of Old Bannu Road Project N-55 Gandhi Chowk-Sarai Naurang, Domail-Khurram & Khurram-Krapa Sections | Pakistan | National Highway Authority                                    | e f           | 18,000<br>158                       |
| Dualisation & Improvement of Pindigheb-Kohat Road N-80 (80km)                                                                  | Pakistan | National Highway Authority                                    | e f           | 20,000<br>144                       |
| Urban Roads Initiatives in Karachi                                                                                             | Pakistan | Government of Sindh                                           | a b d         | N.A<br>N.A                          |
| Improvement/widening of Nizampur Kohat Road (64km), Districts Nowshera & Kohat                                                 | Pakistan | Pakhtunkhwa Highway Authority                                 | e             | 3,000<br>19                         |
| Dualisation of Multan-Vehari Road (90km)                                                                                       | Pakistan | Communication & Works Department Government of the Punjab     | a b c d       | 12,200<br>78                        |
| Roads in the Highway Circle Bahawalpur under Annual Development Programme                                                      | Pakistan | Communication & Works Department Government of the Punjab     | e             | 3,000<br>18                         |
| Road Connecting Thumaid Interchange with Al-Mubaila Interchange, Muscat Expressway                                             | Oman     | Ministry of Transport Communications & Information Technology | c d           | 51,840<br>324                       |
| Dual Carriageway Road for NR32 Phase-I Duqm                                                                                    | Oman     | Special Economic Zone Authority at Duqm                       | c d           | N.A<br>N.A                          |
| Dualisation of Sultan Said Bin Taimur Road (13km) in Duqm                                                                      | Oman     | Ministry of Transport Communications & Information Technology | c e           | 9,891<br>63                         |

## Completed

|                                                                                                                                                           |          |                                                        |                                                |                  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|----------|--------------------------------------------------------|------------------------------------------------|------------------|
| Lahore Orange Line Metro Train Project (27km)                                                                                                             | Pakistan | Punjab Masstransit Authority, Government of the Punjab | c e f                                          | 163,000<br>1,587 |
| Hyderabad-Sukkur Motorway (300km) Project on Built-Operate-Transfer (BOT) Basis Under Public Private Partnership                                          | Pakistan | National Highway Authority                             | a c<br>1. Bid Evaluation<br>2. Traffic Studies | 200,000<br>1,438 |
| Karachi-Hyderabad Motorway (136km) - M-9                                                                                                                  | Pakistan | Frontier Works Organization                            | e f                                            | 38,000<br>370    |
| Widening & Rehabilitation of Road from Mufti Mehmood Flyover up to Wahid Garhi including Reconstruction of Old Budni Bridge, Peshawar (Packages-II & III) | Pakistan | Pakhtunkhwa Highway Authority                          | e                                              | 1,120<br>11      |

## Airports

### Ongoing

|                                                                              |          |                          |         |               |
|------------------------------------------------------------------------------|----------|--------------------------|---------|---------------|
| Extension of Terminal Building at Bacha Khan International Airport, Peshawar | Pakistan | Civil Aviation Authority | b c d e | 3,800<br>48   |
| Additional Services for the New Gwadar International Airport                 | Pakistan | Civil Aviation Authority | c d     | 10,000<br>64  |
| Extension of Terminal Building at Allama Iqbal International Airport, Lahore | Pakistan | Civil Aviation Authority | c d     | 18,000<br>175 |

### Completed

|                                                       |          |                                       |       |                  |
|-------------------------------------------------------|----------|---------------------------------------|-------|------------------|
| New Islamabad International Airport                   | Pakistan | Civil Aviation Authority              | c d e | 100,000<br>1,190 |
| New Departure Lounge at Sialkot International Airport | Pakistan | Sialkot International Airport Limited | c d e | 5,000<br>31      |

| PROJECT | LOCATION | CLIENT | SCOPE OF WORK | COST<br>Rs. Million<br>US\$ Million |
|---------|----------|--------|---------------|-------------------------------------|
|---------|----------|--------|---------------|-------------------------------------|

## Ports & Harbours

### New

|                                                                                     |          |                    |     |               |
|-------------------------------------------------------------------------------------|----------|--------------------|-----|---------------|
| Development of the Container Terminal at Pakistan Deep Water Container Port Project | Pakistan | Karachi Port Trust | e f | 72,812<br>455 |
|-------------------------------------------------------------------------------------|----------|--------------------|-----|---------------|

### Ongoing

|                                                                                       |          |                                        |                    |               |
|---------------------------------------------------------------------------------------|----------|----------------------------------------|--------------------|---------------|
| Multipurpose Dry Bulk Clean Cargo Terminal at East Wharf of Karachi Port on BOT Basis | Pakistan | Karachi Port Trust                     | a b d              | 50,000<br>480 |
| Upgradation of Shipyard for Project 313                                               | Pakistan | Karachi Shipyard and Engineering Works | c d e f            | 20,000<br>176 |
| Dedicated Coal Terminal at Marginal Wharf Berths 3 & 4 at Port Qasim on BOT Basis     | Pakistan | Port Qasim Authority                   | f<br>Quality Audit | 4,000<br>38   |
| Port Connectivity Project under Public-Private Partnership arrangement of KPT         | Pakistan | Karachi Port Trust                     | a b c d            | N.A<br>N.A    |
| Rehabilitation & Renovation of Karachi Fish Harbour Project                           | Pakistan | Karachi Fisheries Harbour Authority    | e f                | 600<br>6      |

### Completed

|                                                |          |                                  |     |             |
|------------------------------------------------|----------|----------------------------------|-----|-------------|
| Shiplift and Transfer System at KS&EW, Karachi | Pakistan | Karachi Shipyard and Engineering | e f | 4,600<br>45 |
|------------------------------------------------|----------|----------------------------------|-----|-------------|

## Architecture & Planning Sector

### New

|                                                                                                           |          |                                                                    |         |              |
|-----------------------------------------------------------------------------------------------------------|----------|--------------------------------------------------------------------|---------|--------------|
| Sangjani Housing Scheme, Islamabad                                                                        | Pakistan | Naya Pakistan Housing & Development Authority                      | d e f   | 14,000<br>84 |
| Apartment Scheme of Federal Government Employees Housing Authority with PHA, KPK at Nishtarabad, Peshawar | Pakistan | Federal Government Employees Housing Authority, Islamabad          | b c d e | 8,000<br>51  |
| Infrastructure Work under FATA Infrastructure Program                                                     | Pakistan | Planning & Development Department Government of Khyber Pakhtunkhwa | c e     | 4,015<br>25  |
| UNHCR Offices in Pakistan                                                                                 | Pakistan | United Nations High Commissioner for Refugees                      | c e     | N.A<br>N.A   |
| Establishment of Agriculture University at Swat                                                           | Pakistan | Communication & Works Department Government of Khyber Pakhtunkhwa  | c e     | 5,250<br>33  |
| Urban Regeneration of Federal Government Servants Colony, Sariab Road, Quetta                             | Pakistan | Federal Government Employees Housing Authority, Islamabad          | c e     | 7,500<br>47  |
| Sindh Forensic Science Laboratory, Karachi                                                                | Pakistan | Home Department, Government of Sindh                               | b c e   | 3,000<br>19  |
| AJK Legislative Assembly Complex Project, Muzaffarabad                                                    | Pakistan | Ministry of Kashmir Affairs & Gilgit - Baltistan, Pakistan         | e f     | 2,499<br>16  |
| Sardar Fateh Muhammad Khan Buzdar Institute of Cardiology, Dera Ghazi Khan                                | Pakistan | Infrastructure Development Authority Punjab                        | e       | 1,916<br>11  |
| Establishment of Women Sub Campus University of Swat                                                      | Pakistan | University of Swat, Khyber Pakhtunkhwa                             | b c e   | 1,000<br>7   |
| Master Planning of Smart Island Housing Scheme Chakri Road, Rawalpindi                                    | Pakistan | Smart Island Programme                                             | c d     | N.A<br>N.A   |
| Aiwan-e-Sayyahat/Tourism Complex at Sector F-5/1, Islamabad                                               | Pakistan | Pakistan Public Works Department                                   | a c d   | 4,000<br>26  |
| Hostel, Laboratories and Auditorium at Saidu Medical College, Swat                                        | Pakistan | Communication & Works Department Government of Khyber Pakhtunkhwa  | e       | 1,000<br>6   |



| PROJECT                                                                                                  | LOCATION | CLIENT                                      | SCOPE OF WORK | COST<br>Rs. Million<br>US\$ Million |
|----------------------------------------------------------------------------------------------------------|----------|---------------------------------------------|---------------|-------------------------------------|
| King Salman Bin Abdul Aziz Grand Mosque at the New Campus of International Islamic University, Islamabad | Pakistan | International Islamic University, Islamabad | c             | N.A<br>N.A                          |

### Ongoing

|                                                                                                                                 |          |                                                                                        |           |                  |
|---------------------------------------------------------------------------------------------------------------------------------|----------|----------------------------------------------------------------------------------------|-----------|------------------|
| Reconstruction and Rehabilitation of Earthquake Affected Areas                                                                  | Pakistan | Earthquake Reconstruction and Rehabilitation Authority                                 | b c d e f | 200,000<br>3,324 |
| Pakistan Kidney & Liver Institute and Research Center (Package-C1), Lahore                                                      | Pakistan | Infrastructure Development Authority Punjab                                            | c d e     | 3,240<br>32      |
| Establishment of Infrastructure in LDA City (Phase-I), Lahore                                                                   | Pakistan | Lahore Development Authority                                                           | e f       | 15,000<br>108    |
| Standardisation of Higher Secondary Schools in Khyber Pakhtunkhwa Province (DFID-assisted)                                      | Pakistan | Elementary & Secondary Education Department Peshawar, Government of Khyber Pakhtunkhwa | e f       | 4,469<br>28      |
| Naval Housing Scheme at Karsaz Phase-II Phase-III and Phase-IV, Karachi                                                         | Pakistan | Pakistan Navy                                                                          | b c d e   | 5,000<br>58      |
| Infrastructure Works for DHA Housing Scheme, Gujranwala                                                                         | Pakistan | Defence Housing Authority Gujranwala                                                   | b c d     | 40,000<br>308    |
| Development of Ziarat Town                                                                                                      | Pakistan | Ziarat Development Package, Government of Balochistan                                  | b c d e   | 3,000<br>19      |
| National Aerospace Science & Technology Park, Aviation City, Kamra                                                              | Pakistan | Aviation City, Pakistan (Pvt.) Limited                                                 | a b c d e | 4,318<br>35      |
| University of Buner, Swari                                                                                                      | Pakistan | University of Buner, Swari Buner                                                       | b c d e   | 1,800<br>14      |
| Reconstruction/Rehabilitation of Fully Damaged Schools in Bara, Tribal District Khyber Khyber Pakhtunkhwa (Package I, II & III) | Pakistan | Works & Services Department, Government of Khyber Pakhtunkhwa                          | c e       | 1,348<br>8       |
| Development & Improvement of Academic Facilities at Ghazi University, Dera Ghazi Khan                                           | Pakistan | Ghazi University, Dera Ghazi Khan                                                      | b c d e   | 1,000<br>7       |
| Uplifting of Academic & Infrastructure Facilities at Hazara University, Mansehra                                                | Pakistan | Hazara University, Mansehra                                                            | c d e     | 1,096<br>7       |
| Academic & Research Facilities at University of Kotli, AJK                                                                      | Pakistan | University of Kotli, AJK                                                               | c d e     | 1,000<br>7       |
| Establishment of Girl's Cadet College, Mardan                                                                                   | Pakistan | Communication & Works Department Govt. of Khyber Pakhtunkhwa                           | e f       | 2,395<br>21      |
| Construction of Apartments at 58 Kanal Land, OPF Housing Scheme Phase-I Raiwind Road, Lahore                                    | Pakistan | Overseas Pakistanis Foundation                                                         | b c d e   | 7,300<br>44      |
| Neurology and Psychiatry Project at Jinnah Post Graduate Medical Centre, Karachi                                                | Pakistan | Jinnah Post-Graduate Medical Center, Karachi                                           | b c d e   | 735<br>6         |
| New Balakot City Development Project as a Tourism Hub at Bakriyal, District Mansehra                                            | Pakistan | Earthquake Reconstruction and Rehabilitation Authority                                 | a c d e   | 15,720<br>99     |
| Office Complex, DHA Bahawalpur                                                                                                  | Pakistan | Defence Housing Authority Bahawalpur                                                   | b c d     | 1,570<br>11      |
| Al-Meera Five Malls (Al-Froosh, Umm Al-Amad Al-Luqta, Al-Thumama and Al-Muaither)                                               | Qatar    | Al-Meera Consumer Goods Co.                                                            | c d e     | 4,620<br>29      |

### Completed

|                                                        |          |                            |         |               |
|--------------------------------------------------------|----------|----------------------------|---------|---------------|
| Crescent Bay Development Project, Karachi              | Pakistan | EMAAR Giga Karachi Limited | e       | 39,060<br>380 |
| Academic & Allied Facilities at University of Malakand | Pakistan | University of Malakand     | b c d e | 837<br>8      |

| PROJECT | LOCATION | CLIENT | SCOPE OF WORK | COST<br>Rs. Million<br>US\$ Million |
|---------|----------|--------|---------------|-------------------------------------|
|---------|----------|--------|---------------|-------------------------------------|

## Environmental & Public Health Engineering Sector

### New

|                                                                                                                 |          |                                                                               |                                                        |               |
|-----------------------------------------------------------------------------------------------------------------|----------|-------------------------------------------------------------------------------|--------------------------------------------------------|---------------|
| Ravi Riverfront Urban Development Authority                                                                     | Pakistan | Ravi Urban Development Authority                                              | c e                                                    | N.A<br>N.A    |
| Stormwater Drain Projects - Gujjar Nullah, Orangi Nullah and Mehmodabad Nullah, Karachi                         | Pakistan | National Disaster Management Authority                                        | e f                                                    | 22,000<br>132 |
| Combined Effluent Treatment Plant in NWIZ and Upgrading/Enhancement of Existing Sewage Treatment Plant, Karachi | Pakistan | Port Qasim Authority                                                          | c d e f                                                | N.A<br>N.A    |
| Gravity Flow Water Supply Scheme, Mansehra                                                                      | Pakistan | Public Health Engineering Division Mansehra, Government of Khyber Pakhtunkhwa | a c d e                                                | N.A<br>N.A    |
| Mitigation Sub-Schemes Located in all Four Provinces of Pakistan and Gilgit-Baltistan                           | Pakistan | Pakistan Poverty Alleviation Fund                                             | e f<br>1. Hydrology Assessment<br>2. Geohazard Studies | 1,000<br>6    |
| Sewerage System along with Development of Additional Water Sources for Muzaffarabad Water Supply                | Pakistan | Government of Azad Jammu & Kashmir                                            | a b c d<br>Geotech Investigations                      | N.A<br>N.A    |

### Ongoing

|                                                                                                                                      |          |                                                                                                                                |                                                  |               |
|--------------------------------------------------------------------------------------------------------------------------------------|----------|--------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|---------------|
| Punjab Intermediate Cities Improvement Investment Program                                                                            | Pakistan | 1. Punjab Intermediate Cities Improvement Investment Program<br>2. Local Government & Community Development Department, Punjab | b c d e g h i j<br>k l                           | 28,000<br>246 |
| Stormwater Drainage System from Haji Camp to River Ravi via Lakshmi Chowk, McLeod Road, Nabha Road, Chauburji and Sham Nagar, Lahore | Pakistan | 1. Lahore Development Authority<br>2. Water & Sanitation Agency, Lahore                                                        | b c                                              | 3,000<br>29   |
| Wastewater Treatment Plants for Mehmood Booti Shadbagh, Shahdara and Babu Sabu, Lahore                                               | Pakistan | Water & Sanitation Agency, Lahore                                                                                              | c d<br>ESIA Study                                | 40,000<br>288 |
| Upgradation & Environmental Improvement of Chungi No. 9 Disposal Station, Multan                                                     | Pakistan | 1. Multan Development Authority<br>2. Water & Sanitation Agency, Multan                                                        | c e<br>1. EIA Study<br>2. Geotech Investigations | 3,000<br>19   |
| Replacement of Outlived Sewer in Multan Phase-II                                                                                     | Pakistan | 1. Multan Development Authority<br>2. Water & Sanitation Agency, Multan                                                        | c d e<br>EIA Study                               | 2,000<br>13   |
| Greater Water Supply Scheme, DHQ Kotli (Phase-II), Azad Jammu & Kashmir                                                              | Pakistan | Public Health Engineering Division Kotli                                                                                       | a c d                                            | N.A<br>N.A    |
| Land Use Planning & Infrastructure Designing for Fazaia Housing Scheme, Gujranwala                                                   | Pakistan | Pakistan Air Force                                                                                                             | b c d e                                          | 1,000<br>8    |

## Oil, Gas & Industrial Engineering Sector

### New

|                                                                 |          |                                                              |       |              |
|-----------------------------------------------------------------|----------|--------------------------------------------------------------|-------|--------------|
| Quaid-e-Azam Business Park on Motorway M-2, District Sheikhpura | Pakistan | Punjab Industrial Estates Development and Management Company | c e   | 16,000<br>96 |
| Master Planning of New Packages Plant near Kasur                | Pakistan | Packages Limited, Lahore                                     | b c   | N.A<br>N.A   |
| NDMA Pakistan Warehouse Network Phase-6, Muzaffarabad, AJ&K     | Pakistan | World Food Programme, Pakistan                               | c d e | N.A<br>N.A   |

### Ongoing

|                                                                                       |          |                                   |         |          |
|---------------------------------------------------------------------------------------|----------|-----------------------------------|---------|----------|
| Evaluation and Rehabilitation of CF Silos and Topographic Survey at Grey Cement Plant | Pakistan | Maple Leaf Cement Factory Limited | c d e f | 350<br>3 |
|---------------------------------------------------------------------------------------|----------|-----------------------------------|---------|----------|



| PROJECT                                                                                              | LOCATION | CLIENT                            | SCOPE OF WORK                                   | COST<br>Rs. Million<br>US\$ Million |
|------------------------------------------------------------------------------------------------------|----------|-----------------------------------|-------------------------------------------------|-------------------------------------|
| Review of Structural Evaluation/Retrofitting Reports of Silos and Kiln Pier at Askari Cement Limited | Pakistan | Askari Cement Limited             | f<br>Structural Stability                       | 720<br>5                            |
| Cooling Tower and Technical Assessment of Foundation Cracks & Remedial Measures of CT FAN            | Pakistan | Rousch (Pakistan) Power Limited   | 1. Structural Stability<br>2. Remedial Measures | N.A<br>N.A                          |
| Extension of Fatima Fertilizer Company Main Industrial Plant                                         | Pakistan | Fatima Fertilizer Company Limited | c<br>Structural Stability                       | N.A<br>N.A                          |

## Information Technology and Geographical Information System Sector

### Information Technology

#### New

|                                                       |          |                                                  |       |            |
|-------------------------------------------------------|----------|--------------------------------------------------|-------|------------|
| President's Initiative for Cyber Efficient Parliament | Pakistan | National Information Technology Board, Islamabad | a g l | N.A<br>N.A |
|-------------------------------------------------------|----------|--------------------------------------------------|-------|------------|

#### Ongoing

|                                                                                                                                              |          |                                                           |                                                        |             |
|----------------------------------------------------------------------------------------------------------------------------------------------|----------|-----------------------------------------------------------|--------------------------------------------------------|-------------|
| Quetta Safe City Project                                                                                                                     | Pakistan | Science & IT Department, Government of Balochistan        | d f<br>1. Bid Evaluation<br>2. PC-I<br>3. Surveillance | 1,500<br>14 |
| Development of Project Progress Monitoring Management Information System under the Punjab Intermediate Cities Improvement Investment Program | Pakistan | Punjab Intermediate Cities Improvement Investment Program | g h i j k l                                            | N.A<br>N.A  |

#### Completed

|                                                               |          |                                   |             |          |
|---------------------------------------------------------------|----------|-----------------------------------|-------------|----------|
| IT/BMS Infrastructure at New Punjab Assembly Building, Lahore | Pakistan | Provincial Assembly of the Punjab | c d e f i k | 348<br>4 |
|---------------------------------------------------------------|----------|-----------------------------------|-------------|----------|

### Geographical Information System

#### New

|                                                                  |          |                        |     |            |
|------------------------------------------------------------------|----------|------------------------|-----|------------|
| Improvement of Water Resources Information System in Balochistan | Pakistan | Asian Development Bank | m q | N.A<br>N.A |
| Cadastral Mapping Project of Lahore & Karachi                    | Pakistan | Government of Pakistan | m q | 600<br>4   |

#### Ongoing

|                                                                     |          |                                   |                      |            |
|---------------------------------------------------------------------|----------|-----------------------------------|----------------------|------------|
| Grey Cement Plant Line-III, Maple Leaf Cement Factory, Iskandarabad | Pakistan | Maple Leaf Cement Factory Limited | a b c m n o p<br>q r | N.A<br>N.A |
|---------------------------------------------------------------------|----------|-----------------------------------|----------------------|------------|

#### Completed

|                                         |          |                                                       |     |            |
|-----------------------------------------|----------|-------------------------------------------------------|-----|------------|
| Development of Ziarat Town, Balochistan | Pakistan | Ziarat Development Package, Government of Balochistan | m s | N.A<br>N.A |
|-----------------------------------------|----------|-------------------------------------------------------|-----|------------|



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