حکومت بلوچستان

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Balochistan Comprehensive Development and Growth Strategy (BCDGS) 2021-2026

Message from Senior Minister Planning & Development Department (P&DD), Government of Balochistan

The Balochistan Comprehensive Development and Growth Strategy (BCDGS) 2021-2026 is the planning document of the Government of Balochistan which provides a roadmap towards a balanced development, inclusive growth, and improved living standards in the province.

The document provides an in-depth analysis of the challenges the province is confronted with and offers a comprehensive roadmap and specific strategic direction to the Government of Balochistan towards addressing these challenges. This meets the requirements necessary for the achievement of sustainable development and inclusive economic growth in the province.

One very important feature of the document is that it has been put together while keeping in view the opportunities and challenges coming from the China Pakistan Economic Corridor (CPEC) and the Sustainable Development Goals (SDGs). Balochistan's position is central to both CPEC and SDGs in the sense that both of them have immense potentials to guide Balochistan towards sustainable development and inclusive economic growth.

Balochistan is home to both challenges and opportunities. Balochistan's exceedingly scattered population and its lowermost population density make service delivery administratively challenging and development very much costly affair. It is undoubtedly a major factor behind Balochistan's backwardness and its lagging behind rest of the provinces in terms of key socioeconomic indicators. Therefore, good governance and access to, and quality of basic services remain the most important barriers to rapid socioeconomic development of the province. As recommended by the document, one tangible answer to the problems lies in improving regional connectivity, exploiting mineral resources, developing strong industrial base, managing natural resources, developing coastal and tourism potential, and investing in human capital by expending social safety nets and improving access to, and quality of service delivery.

Keeping in view the province's geographical location and multiple challenges, sustainable development and inclusive economic growth cannot take place without achieving rapid and sustainable gross provincial product (GPP) growth. Unfortunately, Balochistan has for long been lagging behind from among rest of the provinces in terms of GPP. But what is promising is that this document does not only include an in-depth analysis of the factors which keep Balochistan behind, but it also comes up with strategies to improve GPP growth in the province. Moreover, the document has also determined a number of potential economic growth sectors including industry, mining, energy, power, fisheries, and tourism which can put the province on the trajectory of inclusive and sustainable growth and development. The government is determined to develop the sectors by mobilising massive investments through both public and private financing. In this regard, public-private-partnerships (PPPs) is the key to develop new sectors of the economy and to transform the traditional ones. To attain the objective of PPPs, the Government of Balochistan has already set up a full-fledged PPP Unit in the province to promote PPPs for achieving the socioeconomic development targets of the province.

I would like to state that BCDGS 2021-2026 should not only be celebrated as a strategic document, but it should also propel serious structural and policy reforms which will facilitate the province to achieve the goals of balanced development, inclusive growth, improved image, and living standards in the province.

I would like to appreciate the entire team who have helped formulate this very important document for the government. I would like to thank the United Nations Development Programme (UNDP), especially its SDG Unit, for supporting this effort and for remaining engaged with us throughout its formulation. Our appreciation is also for the provincial secretaries and their teams, commissioners, deputy commissioners, academia, civil society organisations and resource persons from the consulting firm for putting together this important planning document which is in line with the aspirations of the people of the province. The Additional Chief Secretary Development, Hafiz Abdul Basit and the Chief of Section, Federal Projects/SDGs, Mr. Arif Hussain Shah need a special mention for their thorough technical guidance and supervision.

Mr. Zahoor Ahmed Buledi

Message from Additional Chief Secretary (DEV.) Planning & Development Department (P&DD), Government of Balochistan

The Government of Balochistan is cognizant of the economic and social challenges faced by the province. Our goal is to make Balochistan a prosperous province through balanced development and inclusive growth. The Balochistan Comprehensive Development and Growth Strategy (BCDGS) 2021-2026 is a roadmap of the Government of Balochistan towards achieving this goal. The BCDGS 2021-2026 aims to achieve inclusive and sustainable development and growth in all sectors of the provincial economy by creating opportunities for the people of Balochistan for livelihood and improved living standards.

Balochistan's state of development is lagging behind the other provinces primarily due to lack of investment in key sectors of the economy, weak governance mechanisms, widespread poverty, and security situation of the province. Resultantly, the province is not able to realise its true potential, and the people of Balochistan are denied the development path similar to other provinces in the country. The Government of Balochistan is, however, determined to meet these challenges through a strategic framework which is based on political will and resolve of the GoB to improved governance and security measures to attract investment. This strategy shall also facilitate the Government of Balochistan in achieving the Sustainable Development Goals (SDGs) and tap the opportunities presented by CPEC.

The BCDGS 2020-2025 envisages a growth model, which recognises industrial development as a first priority for the province and paves the way for shifting agriculture-based economy to an industrial-based economy. Creating job opportunities through industrial development geared by investment in SMEs and SEZs shall be a priority for the Government of Balochistan. Increased urbanisation and integrated system of road infrastructure with an objective of enhancing connectivity within cities, other provinces, and neighbouring countries is also a priority of this strategy. The harnessing, extraction and processing of mineral and natural resources, available in abundant in the province, are important for economic growth, combating poverty and job creation. The strategy envisages investment in coastal development and fisheries as a priority. Developing fish harbours, establishing fish processing zones, enhancing compliance with international standards, adoption of alternate methods for fish production and introduction of modern digital technologies shall be the key instruments for coastal development and improvement in fisheries sector. The GoB shall also provide conscious and supportive investment in two core sectors - agriculture and livestock. Increasing youth employability through training and development and promoting business startups shall be key instruments for enhancing knowledge base of the human capital of the province.

The Planning and Development Department is fully geared to take up the responsibility for implementation of this strategy and supports the Government of Balochistan in making essential structural and policy reforms for forging ahead towards the path for a high, inclusive, and sustained growth in Balochistan and ultimately achieving the goals envisioned through the BCDGS 2021-2026.

I highly appreciate the efforts put in by the entire team which has contributed to the development of this landmark strategy. I highly acknowledge the UNDP for supporting

Planning and Development Department throughout the strategy formulation process. I also appreciate the consultants, M/s Yousuf Adil's team for putting together a strategy document which is aligned to our aspirations in close collaboration with the provincial administration.

Mr. Hafiz Abdul Basit

Acknowledgement

The Planning and Development Department embarked upon the development of Balochistan Comprehensive Development and Growth Strategy (BCDGS) 2021-2026 with assistance of the United Nations Development Programme (UNDP), and under the overall guidance of the Additional Chief Secretary. M/s Yousuf Adil, an independent correspondent firm to Deloitte Touch Tohmatsu (formerly Deloitte Yousuf Adil), was engaged to assist the Planning and Development Department, Government of Balochistan for development of the BCDGS 2021-2026. The consultant's team included subject matter experts from the fields of economics, education, health, agriculture, finance, infrastructure and urban development, mining, social and gender, energy, water and environment, and monitoring and evaluation.

The BCDGS was developed as a result of extensive sectoral research of all sectors contributing towards Balochistan's economy and a rigorous consultation process with the GoB's departments, academia, CPEC authorities, development institutions, civil society organisations, and other relevant organizations/departments at provincial and federal level including, but not limited to, the Sustainable Development Policy Institute (SDPI), Lasbela Industrial Estate Development Authority, Gwadar Development Authority, Gwadar Port Authority, Chamber of Commerce and Industry, Quetta, People Primary Health Care Initiative, etc. Divisional visits were also carried out to seek input on the strategy from stakeholders at divisional and district level. Various consultation sessions/presentations to the Additional Chief Secretary (Dev.) and secretaries of the GoB departments were conducted to discuss the strategies included in the draft BCDGS 2021-2026 and to seek comments in relation to the sectoral background, future vision and priorities. Written comments were also sought from the P&D Department colleagues before finalisation of the strategy.

The BCDGS is indeed a well thought out and prioritised development framework for the province linked with SDGs and CPEC and is based on a comprehensive development and growth model which envisioned outcomes of a balanced development, inclusive growth and livelihood and improved image and living standards contributing towards ultimate goal of *'Prosperous Balochistan'*.

The BCDGS implementation requires a sustained fiscal discipline including essential reforms in economic policy and economic management, as an integral part of the implementation process, which would help eliminate waste and inefficiency and impart a new element of dynamism to growth processes in our economy. The thrust of the reform process would be to gradually raise capacity of the public sector while creating opportunities for greater participation of the private sector as ultimately, it is the private sector which must drive the growth paradigm.

We acknowledge the provincial secretaries of all departments of the Government of Balochistan and their staff members, government officials at divisional and district levels, members of civil society, NGOs, business community, academia, development organisations and officials of various federal and provincial institutions which provided data and information,

participated in different consultative sessions and gave valuable inputs and comments which greatly contributed in the development of this Strategy.

The Planning and Development Department acknowledges unwavering support and assistance of UNDP Country Office (Development Policy Unit) and UNDP Sub-Office Balochistan team. Here, I would like to acknowledge the support and guidance extended in contract management and technical backstopping of the BCDGS process by UNDP Sub-Office team. We would like to extend our appreciation for the consultants' team for their work and the overall coordination process through which the strategy was finalised.

Arif Hussain Shah
Chief (SDGs/Federal Projects)
Planning and Development Department,
Government of Balochistan

Acronyms

ACR	Annual Confidential Report	CPEC	China Pakistan Economic Corridor
ADP	Annual Development Programme	CRI	Climate Risk Index
BBOIT	Balochistan Board of Investment and Trade	CSP	Child Support Program
BCDA	Balochistan Coastal Development Authority	CSSPPA	Council of Social Safety Protection and Poverty Alleviation
BCDGS	Balochistan Comprehensive Development and Growth Strategy	DADs	Delayed Action Dams
BCS	Balochistan Conservation Strategy	DD&IRE	Decarbonizing Development and Integrated Renewable Energy
BDMP	Balochistan Disaster Management Program	DFID	Department for International Development
BEA	Balochistan Energy Agency	DMIS	District Management Information System
BEF	Balochistan Education Fund	DRM	Disaster Recovery Management
BEMIS	Balochistan Education Management Information System	EAD	Economic Affair Division
BEPA	Balochistan Environment Protection Agency	ECE	Early Childhood Education
BESP	Balochistan Education Support Project	ECNEC	Executive Committee of National Economic Council
BIDA	Balochistan Irrigation and Drainage Authority	EIA	Environmental Impact Agency
BISP	Balochistan Public Service Commission	EL	Exploration License
BRACE	Balochistan Rural Development and Community Empowerment Programme	EOBI	Employee's Old-Age Benefits Institution
BRSP	Balochistan Rural Support Program	EPI	Expanded Program on Immunization
BSEZ	Bostan Special Economic Zone	EPZ	Export Processing Zone
BTBB	Balochistan Textbook Board	EU	European Union

BTEVTA	Balochistan Technical Education and Vocational Training Authority	FBR	Federal Board of Revenue
BWRMA	Balochistan Water Resources Management Agency	FC	Frontier Constables
CCCC	China Communication and Construction Company	FCDO	Foreign, Commonwealth &Development Office
CCT	Conditional Cash Transfer	GDA	Gwadar Development Authority
CDWP	Central Development Working Party	GDP	Gross Domestic Product
CIC	Continuous Improvement Cell	GIS	Geographic Information System
COPHC	China Oversees Port Holding Company	GoB	Government of Balochistan
CPD	Continuous Professional Development	GoP	Government of Pakistan
GPP	Gross Provincial Product	MoU	Memorandum of Understanding
GPS	Global Positioning System	MPI	Multidimensional Poverty Index
GSP	Geological Survey of Pakistan	MHSDP	Minimum Health Service Delivery Package
HDI	Human Development Index	MTBF	Medium Term Budgetary Framework
HEC	Higher Education Commission	MW	Mega Watt
HEIS	High Efficiency Irrigation System	NAVTTC	National Vocational and Technical Training Commission
HRE	Hydropower and Renewable Energy Projects	NBP	National Bank of Pakistan
IBIS	Indus Basin Irrigation System	NDMF	National Disaster Management Facility
ICAP	Institute of Chartered Accountants of Pakistan	NER	Net Enrollment Ratio
JWG	Joint Working Group	NFC	National Finance Commission
LCOE	Levelized Cost of Electricity	NHA	National Highway Authority
LIEDA	Lasbela Industrial Estate and Development Authority	NRSP	National Rural Support Programme
LOE	Letter of Engagement	NWP	National Water Policy
LSM	Large Scale Manufacturing	PASDEC	Pakistan Stone Development Corporation
MDG	Millennium Development Goals	PBM	Pakistan Bait–ul–Maal

MER	Monitoring, Evaluation and Reporting	PDRMU	Protection & Development Resource Management Unit
MFI	Micro Finance Institutions	PFHA	Pasni Fish Harbor Authority
Mha	Million Hectares	PGDP	Provincial Gross Domestic product
MMDD	Mining and Mineral Development Department	PGP	Poverty Graduation Pilot for Afghan Refugees
MMR	Maternal Mortality Rare	PHED	Public Health Engineering Department
MNCH	Maternal, Newborn and Child Health	PITE	Provincial Institute of Teachers Education
MOFCOM	Ministry of Commerce China	PL	Prospecting License
MOOCs	Massive Open Online Courses	PMD	Pakistan Meteorological Department
MOP&S	Ministry of Ports and Shipping	PMIFL	Prime Minister's Interest Free Loan
MoPDR	Ministry of Planning, Development & Reform	PMIU	Program Monitoring and Implementation Unit
BPSC	Benazir Income Support Programme	FEZ	Fisheries Economic Zone
PPHI	People's Primary Health Care Initiative	SPDC	Social Policy and Development Center
PPP	Public Private Partnership	SRHR	Sexual and Reproductive Health Rights
PPR	Program for Poverty Reduction	STR	Student Teacher Ratio
PRF	Poverty Reduction Framework	TEVTA	Technical Education and Vocational Training Authority
PSDP	Public Sector Development Program	TMA	Tehsil Municipal Administration
PSEZ	Priority Special Economic Zone	TOR	Terms of Reference
PSH	Pakistan Sweet Homes	TTx	Tetanus Toxoid
PSLM	Pakistan Social and Living Standard Measurement	UCT	Unconditional Cash Transfer
PTSMC	Parent Teacher School Management Committee	VC	Venture Capital
PWD	Person with Disabilities	VEC	Vocational Education Committee
QC	Quality Circle	WTO	World Trade Organization
QESCO	Quetta Electricity Supply Company	WWF	Worker Welfare Fund
RSP	Rural Support Programs	SIZ	Special Industrial Zone
SBP	State Bank of Pakistan	SME	Small Medium Enterprise
SCGP	Saindak Copper Gold Project	SMEDA	Small Medium Enterprises Development Authority

SDG	Sustainable Development Goal	SML	Saindak Metals Limited
SECP	Securities and Exchange Commission of Pakistan	SOB	South Ore Body
SEZ	Special Economic Zone	SOPS	Standard Operating Procedures
SP&PAF	Social Protection and Poverty Alleviation Fund		

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VISION, MISSION AND GOALS

VISION & MISSION

A buoyant, progressive harmonious and flourishing Balochistan through a balanced development pillared on regional connectivity, natural resources exploration, tourism and coastal area development, inclusive growth, human capital development, and social protection of the people.

Government of Balochistan plans to achieve its vision through concerted efforts to benefit from CPEC in order to achieve SDGs along with attaining the following major goals

BCDGS GOALS

Regional Connectivity

Enhancing connectivity not only within the province but also with other provinces and countries in the region through inter-city high-speed roads and integrated road/rail network for connecting with national highways, trade corridors, airports and Gwadar Port.

Industrial Based Economy

Promoting both large scale and small-scale industries through ease of doing business, enhancing access to skills, infrastructure and finance, establishment and development of special economic zones, and facilitating innovation through business incubation.

Exploring Mineral Resources

Developing, extracting and processing of deposits of mineral and natural resources including but not limited to copper, gold, marble, chromite, coal, oil and gas.

Urban Development

Undertake prioritized development of all districts of Balochistan through development of Master Plans, improving water and sanitation services and establishing regional development of authorities for better planning and management.

Promoting Agriculture and Livestock

Promoting agriculture and livestock and providing employment to an overwhelming majority of the population dependent directly or indirectly on this sector.

Job Creation and Poverty Reduction

Creating employment opportunities, reducing poverty through inclusive economic growth and improvement in living standards to achieve SDGs.

Enacting Energy Policy and Water Resource Management

Enacting energy policy for the province and improving water resource governance and water supply service delivery through investment in infrastructure, risk mitigation, institutional and legal reforms.

Coastal Development and Tourism

Developing fish harbors, enhancing compliance with international standards, adoption of alternate fish production methods and use of modern ICT technologies. Promoting tourism through developing sites having tourism potential to enhance visibility and image of Balochistan.

Social Protection and Basic Services

Protecting the poor, vulnerable and persons with disabilities and IDPs through poverty alleviation and social protection programs, and provision of basic services, and promoting gender equality and women's development as a priority.

Human Capital and Service Delivery

Improving human skills through investment in human capital to increase youth employability and promoting business startups, improvement in education and health service delivery to the general public.

EXECUTIVE SUMMARY

Executive Summary

The Balochistan Comprehensive Development and Growth Strategy (2021-2026) is the planning document of the Government of Balochistan for undertaking strategic policy actions coherent with the priorities set towards the vision of balanced development and inclusive growth with an aim of making progress towards attaining Sustainable Development Goals (SDGs).

Existing State of Development

Balochistan is the largest province of Pakistan in terms of territory but the smallest (6.02%) in population. Furthermore, the state of development and participation in Balochistan remains much lower than the national averages. It faces daunting challenges in the development sector as its Gross Provincial Product (GPP) growth has been clearly lagging behind other provinces. The main reason for uninspiring growth is its dependency on agriculture and obvious lack of development and investment in other economic growth sectors including manufacturing industry, mining, energy and power, fisheries and tourism.

Poverty is widespread and deep rooted in the province. The Multidimensional Poverty Index (MPI) indicated the highest level of poverty at 71.2%[1] in Balochistan as compared to 38.8% at national level in 2015. This MPI was further hampered by rural-urban divide in development, inequality and disparity among districts, as the proportion of people identified as poor in urban areas was significantly lower at 37.7% than in rural areas at 84.6%. Killa Abdullah, Harnai, Barkhan, Jhal Magsi, Sherani and Ziarat are significantly lagging behind the other districts of Balochistan in terms of social development, exhibiting extremely high levels of poverty and deprivation in relation to basic services.

Although Pakistan, is lagging in most of the SDGs. The situation in Balochistan is worse. The Net Enrollment Ratio (NER) for primary level (6 to 10) in Balochistan was 40% as against national average of 66% (excluding Kachhi). The gender disparities are large and the gap continues to widen in the province when compared to the national level.

Balochistan is highly prone to *climate change risks* and is potentially unable to cope with *water-related development challenges*. The province is highly *water scarce* with arid to hyper arid climate and low precipitation levels. Agriculture and livestock are the source of livelihood for majority of population. But the water shortages in the province threaten the productivity and income generated from these two core sectors. Despite developments in the water sector, other factors including population growth, urbanisation, mining and industrialisation place greater demands on water resources of the province.

One of the many important challenges to growth and development is the comparatively *small size of private sector and enterprises,* which itself is constrained by multiple limitations. The private sector growth is impeded due to insufficient financial and banking services, weak human resources and talent pool, and small markets.

Security and development are closely linked especially in an underdeveloped province such as Balochistan. Development has been defined in terms of economic growth whereas security has been interpreted as individual, human and state security. The long-standing instability, insecurity, and inter-sectarian tension have the deep rooted and multifaceted aspects which may

[1] Multidimensional Poverty in Pakistan, 2015-16, Planning Commission 2016

require efforts at a multidimensional level by the stakeholders. The security landscape in Balochistan has been improving constantly.

Proposed Model for Development and Growth in Balochistan: Balanced Development and Inclusive Growth

A balanced development entails strengthening linkages between urban centers and rural areas, and between more developed and less developed regions, between an equitable distribution of amenities of life and creation of decent employment for the citizens. Inclusive economic growth requires creation of employment opportunities and a reduction in poverty through improvement in living standards.

In recognition of the existing poor state of development in the province, Balochistan's Development and Growth Strategy is based on the theme of *Balanced Development and Inclusive Growth,* aiming to achieve inclusive and sustainable development and growth in all sectors of the provincial economy by creating opportunities for the people of Balochistan for livelihood and improved living standards.

The proposed Balochistan Development and Growth Model identifies three (3) growth foundations and six (6) growth pillars for development. The growth pillars have been developed primarily taking into account the key potential growth sectors, CPEC and SDGs. The Model envisages on the focused efforts and investment in these growth foundations and pillars to materialise three (3) key outcomes including Balanced Development, Inclusive Growth and Livelihood and Improved Image and Living Standard, which will ultimately facilitate in achieving the Goal of *"Prosperous Balochistan"*.

Growth Foundation

The BCDGS identifies three key elements for triggering economic growth in the province. They include (i) Political Will, (ii) Improved Governance and (iii) Security and shall serve as growth foundation for Balochistan. The GoB recognizes its responsibility in growth and development of the province through a prioritised approach and implementation of the BCDGS. The targets and interventions envisaged under the BCDGS shall be monitored through an efficient monitoring and evaluation system at a multi-tier level with specific dashboards for the Chief Minister, the provincial Ministers and the Secretaries of provincial departments.

In relation to improved governance, the GoB shall introduce civil service reforms involving merit-based recruitment through BPSC, revising and updating the performance management and promotion policies, adoption of need-based trainings, promoting E-Governance, introduction of smart city concept involving IT Platform/decision centres providing real time monitoring, and dissemination of information regarding implementation of the BCDGS through dedicated webpages at the GoB's web portal. The GoB shall devise a comprehensive security strategy to secure a conducive environment for investment. In addition to this, the GoB shall upgrade intelligence system, physical infrastructure of police stations, and shall build capacity of police for improving security of the province.

The Balochistan Development and Growth Model is built upon the following six (6) growth pillars:

Growth Pillar 1: Attracting Investment in SMEs and SEZs

The Model recognises industrial development as the Topmost priority for the province. This shall serve as an initial step in introducing an industrial-based economy on top of an agriculture-based economy. The key targets to be achieved under this pillar include increasing the overall manufacturing employment through creating 420,000 new jobs, increasing average hourly earnings of employees in Balochistan from 118.24 per hour to Rs. 177.24 per hour and reduction in unemployment rates from existing 4.09% to 2.86% by FY 2026. In order to achieve these targets, the GoB shall adopt a strategy to facilitate both large scale and small-scale industries through:

a. Reassessing and improving the ease of doing business across Balochistan / improving ranking of Balochistan with regard to ease of doing business in Pakistan and South Asia region;
b. Enhancing access to skills through training and development of human resource;
c. Preparing youth of Balochistan to benefit from gig economy;
d. Provision of infrastructure and finance to SMEs;
e. Imparting 4th generation industrial revolution skills to the youth of Balochistan;
f. Strengthening industry and commerce department;
g. Establishment and development of Special Economic Zones;
h. Exploring funding options for SEZs especially Bostan Special Economic Zone (BSEZ);
i. Facilitating the completion of Phase II of Hub Industrial and Trading Estate;
j. Strengthening BBOIT with enhanced cooperation with all stakeholders; and
k. Facilitating innovation by establishing business incubation centers, innovation labs, venture capital funds, technology parks, and technological research institutes.

Growth Pillar 2: Improved Infrastructure and Regional Connectivity

The proposed model envisions an increased urbanisation and integrated system of road infrastructure with an objective of enhancing connectivity, not only within the province but also with other provinces and neighbouring countries. This shall include inter-city high-speed roads and integrated road/rail network for connecting with national highways, airports and Gwadar Port. The overall strategy is to connect economic hubs with trade corridors (especially CPEC), enhancing access to local and international markets and minimising transportation costs. The overall targets envisioned under this pillar for urbanisation include reduction in houses made of mud bricks/mud from existing 60% to 45% and increasing access to basic facilities including tap water from 33% to 50%, electricity from 81% to 95%, usage of gas for cooking from 25% to 50% and availability of toilets from 31% to 50% by FY 2026. In relation to the road infrastructure, the targets set under this strategy are to increase the road density from existing 0.09 km/sq.km to 0.2 km/sq.km and reduction in shingle roads from existing 60% to 25% by FY 2026. Therefore, the GoB has devised a comprehensive strategy for urban development and road and transportation infrastructure in connection with CPEC.

In relation to urban development, the strategy is aimed at emphasising the need for inclusive development planning and improved management of cities and human settlements as envisioned in SDG-11. Following up the targets under this goal, the emphasis is on:

a. Ensuring sustainable and inclusive urban planning, providing formal and affordable housing, enhancing access to basic services, improving transport system and road safety, increasing efficiency in waste management and preservation, protection and conservation of national and cultural heritage;

b. Creation of Regional Development Authorities, wherever feasible, with a focus on improving urban and rural infrastructure through development of master plans for all cities considering the future growth, decongesting the city markets by earmarking land for the wholesale markets, bus stops etc. in the outskirts of cities and relocation of markets, widening of roads and pavements, improving drainage system and planning for wastewater treatment; and
c. Supporting and facilitating the provision of low-cost housing.

In relation to road and transportation infrastructure, the GoB acknowledges the need to look out for new ways and means for building affordable and sustainable roads. This shall be achieved through focused efforts and investment in the following key areas:

a. Developing road sector master plan for Balochistan taking in to account the top priority roads connecting economic and administrative hubs, converting shingle roads to paved roads and constructing and rehabilitating rural access roads;
b. Engaging with international development donors for a comprehensive investment programme based on the road sector master plan;
c. Engaging with the GoP and the NHA for early completion of the CPEC related and other important highways and rail portfolio;
d. Developing an Asset Management Plan for urban and rural roads for undertaking institutionalised and planned rehabilitation on sustainable basis;
e. Assessing feasibility of outsourcing for maintenance of roads;
f. Institutionalising PPPs framework and accordingly developing the capacity to undertake partnerships with the private sector for investment in the sector;
g. Soliciting Technical Assistance for supporting planning through modern technological and ICT tools; and
h. Geo-mapping all road infrastructures in Balochistan for improved decision-making and setting sector priorities.

Growth Pillar 3: Exploration of Minerals and Natural Resources

Balochistan has been endowed with one of the largest deposits of mineral and natural resources including, but not limited to, copper, gold, marble, chromite, coal, oil and gas. The development, extraction and processing of these mineral and natural resources has been identified as a priority for economic growth, combating poverty and job creation in the province. The underlying targets under this growth pillar are to increase contribution of the mining sector towards the Gross Provincial Product through generating more revenue from existing Rs. 2.79 billion to Rs. 5 billion per year, reorganizing and consolidating laws, which govern the mining sector to facilitate ease of doing business and creating 7,400 new jobs in the mining sector by engaging in new projects and capacity building of human resource to increase employability.

The GoB shall utilise the following key strategy instruments to achieve the above targets:

a. Capitalising over inherent possession of natural resources to enhance long-term self-sustainability by expediting the development of Dalbandin, Pachinko, Chilghazi and Lasbela iron ore deposits along with their upgrade;
b. Encouraging private extraction firms by providing them with incentives to aid in development and extractions. There is enough potential to develop Reko Diq mine under JV with multinational mining companies as it is reported to have reserves of about 420 million pounds of copper;
c. Engaging with the Federal Government for settlement with Tethyan Copper Company (TCC) and resumption of exploration at the world's largest undeveloped porphyry copper gold deposits of Reko Diq which can be a game changer for the economy of Balochistan;

d. Facilitating engagement of private sector for value addition of minerals and incentivising private investors by offering Public Private Partnerships and financing facilities over favorable conditions;
e. Establishing Oil and Gas Development Authority to undertake extraction and development of provincial oil and gas resources. It shall work for prompt availability of geo-physical, geo-chemical and geological survey reports for prospective investors;
f. Converting Geo-Data Centre, MMDD into one window "Geo-Data/MMDD and Investment Center";
g. Devising a mechanism to ensure interaction with mining industry and academia to keep up with professional competence, enhance efficiency in performance and to remain up to date with current international mining practices;
h. Creating enabling environment for private sector to adopt in quarrying and processing of minerals to reduce quarry wastage and install value addition industry in Balochistan;
i. Preparing detailed profile (quality and underground location details) of both metallic and non-metallic minerals of Balochistan and create an investment environment that gives competitive edge to investors in Balochistan; and
j. Increasing productivity of mining workers to raise their per capita income.

Growth Pillar 4: Developing Coastal Area for Fisheries and Tourism

The strategy recognises the potential of this sector and envisages investment in coastal development and fisheries as a priority. Developing the fish harbours, establishing fish processing zones, enhancing compliance with international standards, adoption of alternate methods for fish production and introduction of modern digital technologies shall be the key instruments for coastal development and improvement in fisheries sector. The key targets envisioned by the GoB in developing the fisheries sector are increase in fish catch by 10-15% and preserving the available fish stock through sustainable fishing. The Model also recognizes the tourism potential of the province as a key enabler for triggering economic activity and growth. Institutional development for promoting tourism, development of sites having tourism potential and enhancing visibility and image building of Balochistan shall be the key interventions with tourism industry. The key targets set for tourism include increase in culture and tourism expenditure from existing 0.7% to 2% of the PSDP.

The development of fisheries sector shall be driven by the following strategy agenda of the GoB:

a. Preparing Fisheries Sector Plan;
b. Developing Fisheries Economic Zones (FEZ) at Surbandar, Ormara, Kund Malir and Gaddani. FEZ shall include end-to-end facilities from catching, processing, export, training and research on fisheries as well as low-cost housing schemes for fisherfolk and other workers;
c. Early completion of landing sites at Jiwani, Damb and Pasni to accommodate fishermfolk and provide them with required facilitations to enhance the rate of catch;
d. Improving and monitoring compliance with WTO's Sanitary and Phytosanitary Standards and other international standards and certifications e.g., Hazard Analysis and Critical Control Points to increase exports to EU and USA markets;
e. Adopting alternate methods of fish production i.e., aquaculture (shrimp hatchery, cage farming) for increasing fish production and introduction of innovative and effective fishing techniques;
f. Reviewing roles of Fisheries and Coastal Development Department, BCDA, PFHA, BDA and GDA to eliminate duplication of roles and responsibilities and increasing efficiency of performance;
g. Introducing modern technologies including Vessel Monitoring System, Global Positioning System, Global Navigation Satellite System application, and Automatic Identification System etc., for better monitoring of fishing boats and vessels to curb illegal, unreported and unregulated fishing to streamline operations and achieve efficiency in functions of the Fisheries Department;
h. Effectively regulating fish harvesting by ending unsustainable, illegal, unreported and unregulated fishing, and destructive fishing practices, and by implementing science-based management plans to

restore fish stocks in the shortest feasible time, at least to the levels that can produce maximum sustainable yield as determined by their biological characteristics;

i. Increasing scientific knowledge, developing research capacity, and transfer marine technology, taking into account the Intergovernmental Oceanographic Commission Criteria and Guidelines on the Transfer of Marine Technology, to improve ocean health and to enhance contribution of marine biodiversity to the development of coastal areas of Balochistan and increasing share of fisheries in the provincial GDP.

On tourism front, the GoB shall take the following key initiatives for development:

a. Exploring option of setting up tourism development corporation to engage with private sector to develop/construct hotels and tourism facilities with a particular focus on coastal tourism on PPP basis;
b. Developing tourism sites and resorts, showcasing natural beauty of the province, and attracting investment and creating jobs;
c. Promoting private tour operators, restoring echo system, and enhancing visibility and image of Balochistan;
d. Promoting local culture, arts, crafts and folklore through creating a dedicated fund for local musicians, actors, singers and folk artists;
e. Developing sustainable tourism development policy which focuses on creating jobs and promotes local cultures and products;
f. Devising marketing strategy for promotion of tourism in Balochistan by making use of all social media tools and filming technologies including 360° videos;
g. Chalking out incentives for the investors to invest in tourism in Balochistan; and
h. Substantially increasing share of tourism in provincial GDP by setting quantitated targets.

Growth Pillar 5: Protecting Agriculture and Livestock

The strategy recognises protection of the agriculture and livestock which being the mainstay of the provincial economy contributes more than a quarter to the Gross Provincial Product and provides employment to an overwhelming majority of the population who depend on it directly or indirectly. The targets set for agriculture include increase in volume of production through improving access to land, productive resources and inputs, agricultural knowledge, financial services, market opportunities and creating 20,000 new jobs in agriculture on a yearly basis.

The GoB shall provide conscious and supportive investment in agriculture and livestock. Water resource management and sustainable and equitable farming systems are central to the new thinking which must be handled at river basin level through participatory approaches. Effective water usage shall be achieved through *Sailaba* farming and use of high efficiency water systems. Change over to high value products at river basin level would be central to sustainable water use. For effective extension services, availability of quality seeds and other inputs, competitive markets and entire supply chain must be brought closer to farmers through innovative strategies. The GoB shall consider undertaking the following steps:

a. Increasing at least by a quarter the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous people, family farmers, pastoralists and fisherfolks, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment;
b. Ensuring sustainable food production systems and implementing resilient agricultural practices which increase productivity and production. They help maintain ecosystems strengthening capacity for adaptation to climate change, extreme weather, drought, flooding, and other disasters, and progressively improving land and soil quality;
c. Integrating command area of existing small/medium dams;

d. Rehabilitating and modernising the *Karezes* command area;
e. Improving productivity and sustainability of canal command areas – Pat-feeder and Khirther canals;
f. Fast development of Kachhi canal command area;
g. Partnering with private sector to evolve a mechanism for "ICT Based Extension Services and establish modern agriculture markets at strategic locations;
h. Ensuring availability of agriculture credit through a special arrangement with the SBP; and
i. Implementing Agriculture Policy for Balochistan;

For livestock, the proposed strategy aimed at numerous interventions ranging from institutional strengthening, research, improvements in extension services, programmes for breed improvements, production of fodders and forages, health management, rangeland development, credit facilities, insurance and marketing, etc. The target under livestock sector is to increase the share of livestock products in Pakistan from existing 10% to 15% by FY 2026.

The GoB shall consider taking the following initiatives:

a. Formulating Balochistan Livestock Policy;
b. Providing Livestock Extension Services through an ICT based call center service;
c. Setting up a Balochistan Livestock Marketing Company for establishing a central Livestock Market and Meat Processing Unit at a central location in Balochistan;
d. Undertaking Rangeland Development in collaboration with the Forest Department and international partners for re-vegetation and restoration of the rangelands;
e. Establishing Livestock city in Uthal in order to become a central market for the livestock byproducts;
f. Establishing animal disease free zone e.g., FMD Free Zone, in different places of Balochistan;
g. Developing an effective disease surveillance control and information system;
h. Improving existing institutions e.g., training institutions, laboratories, AI Centers;
i. Reforming existing Livestock Farms (Dairy, Poultry, Beef, Sheep, Cattle and Dairy Research Centers);
j. Introducing new breeds and animals through farming; and
k. Maintaining a livestock gene bank to preserve breeds of animals and enhance productivity.

Growth Pillar 6: Investing in Human Capital, Social Protection and Services

The proposed strategy recognises human capital as the driving force for economic growth in the province and envisages increased focus and investment for improvement in technical skills and knowledge. Increasing youth employability through training and development and promoting business startups shall be key instruments for enhancing the knowledge base of the human capital of the province. The targets set by the GoB under this pillar for human capital are improving the Human Development Index (HDI) from existing 0.473 to 0.700. The GoB shall invest efforts and resources in the following key strategy elements to strengthen the human capital of the province:

a. Ensuring equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university level education;
b. Substantially increasing the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship;
c. Strengthening and expanding the scope and outreach of TEVTA to provide training on skills required by CPEC and 4th Industrial Revolution covering areas such as construction,

engineering, mining, information technology, and hospitality etc., through Public Private Partnerships. Get technical and vocational training institutes accredited as skills /training imparting institutes;

d. Introducing a computerised monitoring system for performance management of public sector colleges;
e. Introducing market-oriented subjects and faculties especially the ones having potential scope under CPEC projects and online freelancing;
f. Undertaking performance based long-term management contracts with private sector for managing the new colleges under construction for establishing specialised institutes;
g. Increasing the provincial non-salary budgets of the colleges especially categorising and planning the budget allocated to SDGs and CPEC after evaluating realistic requirements and these may be linked to student performances;
h. Establishing board of intermediate at divisional level, to increase the competition and improve management;
i. Developing partnerships with Oil and Gas and other companies for private sector management of a few selected technical/vocational institutions especially for fields relevant to the provincial resource base such as mining, petroleum, mechanical, and civil, etc.
j. Conducting a need analysis for universities across Balochistan and strategise the development of new campuses based on the need analysis;
k. Setting up Higher Education Commission for the provinces to oversee the standards of teaching in colleges and universities and recommend additional grants for these institutions; and
l. HEC and Balochistan Education Department shall pilot Smart Classrooms at all levels of education to improve learning experiences.

The GoB is geared to improving the education sector of the province as it faces multiple challenges including access to school participation, school infrastructure gaps, learning outcomes and teacher proficiency. In order to address these challenges, the GoB has set the targets such as enrolment of 75% of out of school children and improving the basic infrastructure of schools including satisfactory building from existing 20% to 80%, availability of electricity from 25 % to 85%, drinking water facility from 59% to 90%, and toilet facility from 35% to 85%.

The GoB has also set the target to improve the Gender Parity Index from existing 61% to 85%. In order to achieve these targets, the following strategies shall be adopted by the GoB:

a. Reduce inter-district and gender disparities in education in Balochistan;
b. Double the quality of education at all levels of education by ensuring that all the students learn what they were intended to learn;
c. School expansion under community school model based on proper mapping of schools and out of school children against SDG4 targets and indicators;
d. Utilising existing capacity and making schools safe and child friendly;
e. Undertaking well planned upgradation of schools to reduce dropouts due to non-availability of higher level of educational institutes;
f. Gradually creating opportunities of schooling for children with special requirements and/or having any disability;
g. Engaging private sector under PPP suitable mode where private sector can construct schools and the GoB can pay rent for the buildings;
h. Adopting pre-service teachers' training programmes and encouraging existing teachers to undertake these programmes;
i. Strengthening the M&E framework for ascertaining the school performances on the basis of regular internal assessment and evaluation;

j. Encouraging institutional coordination between the NFE and the functional literacy programs; and
k. Introducing / raising quality of IT teaching in all high and middle schools in the province.

The strategy emphasises the development of health sector in the province as the existing indicators of the health sector do not show an encouraging picture. The biggest challenge faced by Balochistan in the heath sector is extending outreach and improving quality of service delivery in primary and preventive health care especially in the context of mother and child. In view of these challenges, the GoB has chalked out an integrated strategy for the health sector, which not only focuses on strengthening the existing health setup of the province through decentralisation, increasing outreach, establishing oversight and monitoring framework but also through engaging the private sector in facilitating improvement in different health sector components.

The key targets for the health sector include reduction in maternal mortality rates (under 5) from existing 78 deaths per 1,000 live births to 57 deaths per 1,000 live births, increasing number of skilled health resources attending births from existing 38.2% to 70%, and increasing proportion of women satisfied with modern family planning methods from existing 33.8% to 50% by FY 2026. The strategy elements for the health sector shall be:

a. Integrating the Civil Dispensaries, EPI and LHVs with the PPHI by transferring the administration and budgets of these entities to PPHI. PPHI to be tasked to upgrade the CDs to BHU levels and a minimum of one third of BHUs to BHU Plus level, by providing them the required grants for additional infrastructure and human resource;
b. Establishing links between TB, Malaria, and Hepatitis control programmes for integrated and evidence-based control at community levels;
c. Reorienting Health Department's role from HR management to health policy, financing, oversight and regulation body;
d. Constructing of Food Quality Check laboratories at the district level to ensure the quality of food and to minimise the health hazards;
e. Exploring possibilities of PPPs in different components of health sector especially in the areas such as medical education, specialised curative care, diagnostic services and community mobilisation campaigns;
f. Strengthening the Health Management Information System (HMIS) by improving the human and other resources and creating linkages with the District Management Information System (DMIS). Integrating all MISs of health sector and developing a dashboard for informed decision making;
g. Planning responsive food security programmes integrating with relevant line departments including agriculture, livestock, horticulture, and forestry.

The strategy emphasizes on poverty alleviation, social protection, and provision of basic services, gender equality and women's development as a priority. This shall involve introduction of social protection and poverty alleviation programmes for the poor, vulnerable and persons with disabilities and IDPs. The key targets include: reducing multidimensional poverty from existing 71.2% to 35.6% and increasing spending on social protection programmes from existing 1.64% of PSDP to 5% of total PSDP.

To protect the poor and vulnerable, the GoB shall:

a. Constitute a Council of Social Safety Protection and Poverty Alleviation by providing legal cover and developing a comprehensive policy framework to perform the function of apex body for all provincial initiatives. The council shall chalk out the five years Poverty Reduction Framework (PRF) by addressing the issues of targeting, outreaching,

duplication, programme packaging, monitoring and evaluating the SDGs indicators against the set targets related to poverty reduction and social protection;

b. Establish the Social Protection and Poverty Alleviation Fund to address the needs of the poorest of the poor through applying multidimensional approaches including:

- *Conditional Cash Transfers;*
- *Unconditional Cash Transfers; and*
- *Creation of Assets through graduation programmes.*

c. Engage and mobilize donors including the World Bank, the Asian Development Bank, The Foreign, Commonwealth and Development Office (FCDO- former UKaid/DFID), UNDP, and other bilateral donors in supporting above-mentioned initiatives for strengthening human capital in the province.

Strategies for Other Key Sectors of Economy

Along with proposing the Strategies for Growth Foundation and Growth Pillars, the BCDGS also analysed in greater depth the core development sectors including energy and power, water, gender, environment, religious affairs, social welfare/sports and youth affairs and disaster preparedness. For each of these sectors and core functional areas, the BCDGS provided detailed baseline highlighting the current status and provided future strategy, goals and targets in line with CPEC and SDGs.

Implementation and Fiscal Framework

The implementation of the Balochistan's Comprehensive Development and Growth Strategy (BCDGS) is the critical element in ensuring successful achievement of the strategy's objectives. The GoB is committed to prioritising the implementation arrangements for the BCGDS to ensure implementation of the strategy with institutional arrangements. The strategy is a live document, which will be reviewed and updated as the implementation proceeds in order to keep it flexible without compromising its overall spirit and main features.

Monitoring and Evaluation

In order to measure, track and improve the proposed Balochistan Comprehensive Development and Growth Strategy (BCDGS) 2021-2026, a practical Monitoring and Evaluation (M&E) guide and framework is suggested. The M&E framework outlines various roles and responsibilities in view of tracking progress and demonstrating results, monitoring progress both in physical and financial terms. The M&E Strategy shall allow the Government of Balochistan and implementing partners to:

a. Assess whether programme goals and objectives are being achieved using 4E's (Economy, Efficiency, Effectiveness, and Equity) and value for money parameters;
b. Outline specific process steps and tools to make informed decisions;
c. Devise methods for data collection, management analysis and data quality assurance;
d. Carry out periodic performance review for continuous improvement and outcome achievements; and
e. Plan and manage various M&E activities that must take place for tracking progress towards achieving results in a sustainable manner.

Specific objectives of the M&E Strategy are to:

a. Develop a strategic mechanism for continuous performance measurement and improvement system;
b. Strengthen the M&E culture within and intra departments;
c. Prepare strategy for successful change management and rational resistance minimisation;
d. Devise strategy for periodic review at various level;
e. Devise a mechanism of quality data collection, reporting and knowledge management;
f. Guide institutional capacity assessment and improvement;
g. Outline specific activities required for strengthening the organisational capacity to conduct effective M&E; and
h. Ensure greater utilisation of data available from official and semi-official sources.

The proposed M&E strategy shall be managed at three levels:

a. Small working groups/teams at project implementation level;
b. Quality Circles at project top management level (P&DD and Chief Minster Secretariat); and
c. Continuous Improvement Cell (Project Team level).

The core components of the proposed M&E strategy include the following elements:

a. Change Management: The BCDGS shall bring incremental changes in the current situation, process and design. These changes may face resistance from stakeholders including government employees. The P&DD shall ensure that all change resistance factors at the GoB level are appropriately assessed and managed so that the desired objectives of the BCDGS are effectively met.

b. Digital Hub: Digital hub is a physical co-workspace fixed or moveable, focused on vertical (P&DD provincial Level) and horisontal (Regional/District/Project level) connectivity and synchronisation of information. The GoB shall establish divisional level digital hub with the aim to measure real time project performance and corrective actions for improvement.

c. Quality Circles and Continuous Improvement Cells (CICs): In order to ensure effective implementation of the BCDGS, the CICs shall be formed at each department level. These QCs and CICs shall review the results framework, ADP, project performance and analyse the results with respect to the BCDGSs and the SDGs targets. At the provincial level, the M&E task force shall be formed, which shall oversee the performance of QCs and CICs, perform institutional capacity assessment, devise and review M&E results frameworks, devise mechanism for data collection, presentation and periodic performance review, and maintain survey and research data repository.

d. Result based M&E framework: A clear results-based M&E framework shall be established at department/programme/project level. The P&DD's M&E task force shall ensure that the standard protocols are used in development of M&E framework and key stakeholders are agreed to the framework. Each department/programme/project's M&E framework shall be designed in three phases. Firstly, conducting consultative meetings with the stakeholders to finalise ToRs for QCs and CICs, aligning them with SDGs requirements. Secondly, design M&E framework to achieve SDGs. Thirdly, devise a system of continuous performance measurement, review and improvement.

e. Data Collection, Management, Analysis and Reporting: Under the supervision of the Digital Hub lead, the M&E taskforce lead, the P&DD's MIS section, the allied

projects/programmes/departments shall jointly develop data collection, data management, data analysis and reporting protocols. The P&DD's MIS section and the Digital Hub will extend their support to the allied projects/programmes/departments for i) local database design ii), primary data collection software application, and iii) data synchronisation iv) data analysis and v) reporting.

CHAPTER 1:

BALOCHISTAN POLITY AND STATE OF DEVELOPMENT

1. Balochistan Polity and State of Development

1.1 History and Polity

Balochistan province has been at the forefront of major geopolitical events, facing a number of challenges, and struggling for development. The port access offered by Gwadar is an important component in China's emerging transportation network across Asia. Balochistan is the largest province in terms of land area comprising 44% of the national territory. In contrast, it is the smallest province in terms of population constituting about 6% of the total country's population[2]. It is also the most under-developed province of the country with the highest level of multi-dimensional poverty, which is widespread and deep rooted. About 70% of the population resides in sparsely populated settlements, scattered around water resources amid an arid and rugged terrain[3].

The province was partially included into British India at the end of the nineteenth century[4]. The British interests in Balochistan were primarily strategic, focusing on securing India's western frontier against Russian expansionism. To achieve their strategic interests, the British gradually fostered feudal order (alien to Balochistan's historical traditions) and strengthened dependence of local chieftains on the colonial administration[5]. At the time of independence, Balochistan lacked the type of representative institutions to which power could be transferred, by colonial authorities. Balochistan's accession to Pakistan was, therefore, not guaranteed by the type of political legitimacy that characterized the accession of the other provinces (with the exception of Kashmir).

Balochistan received provincial status in 1970 when the country's four constituent provincial assemblies became functional – about a quarter of a century after Pakistan's independence. Prior to this, it was being governed as an autonomous state comprising mainly four areas i.e. Tribal, Leased, British Balochistan and Kalat States. The Kalat States included autonomous states of Kalat, Kharan, Mekran and Lasbela which were being ruled by Khans, Nawabs and Jams until 1951. In 1951, these states joined to form Balochistan States Union until dissolution of one unit. The first elected provincial government was soon dismissed leading to straining of relationship between the province and the centre. These relations have in fact, remained stressed, both prior to and post 1972 with very brief interludes of representative governments. The relations, however, came under further stress after the assassination of Nawab Akbar Bugti in 2006, which is believed to have stimulated turmoil.

The state of development and participation in Balochistan remained much lower than the national average due to the underperforming administrative structure left behind by the British. Additionally, the macroeconomic framework adopted by the country during most of its history has resulted in income and asset distributional inequalities both within the province and between the provinces. Balochistan's relative underdevelopment vis-à-vis rest of Pakistan is most explicitly highlighted by the fact that a large proportion of its gas resources are transmitted for use outside the province. The security situation in certain pockets of the province remained volatile, which has been one of the hurdles in growth.

[2] Pakistan Bureau of Statistic, Population Census of Pakistan, 2017
[3] UNDP, Balochistan Comprehensive Development 2013-2020
[4] Scholz. F. (2002): Nomadism and Colonialism in Balochistan 1872 – 1972. Karachi: Oxford University Press.
[5] Baloch, (1958); A history of Balochistan. Karachi: Karachi Royal Book Company

1.2 Demography; Geography and Connectivity

Historically, Balochistan's geography and demography ha
ve dictated its development to a significant extent. The landmass which covers little less than half of the country's area inhabits only 6% of population, which leads to a pattern of thinly populated remote settlements having low access to services. The successive provincial governments of Balochistan have been pleading for reversing the decades old population-based revenue distribution formula amongst the provinces for distribution of divisible pool resources citing high cost of providing per unit of services to such demographics. The relatively sparse population of the province which was 12.3 million, as per 2017 census, is concentrated regionally and there are vast areas of unpopulated wilderness. The population is mainly concentrated in the north-east in a narrow corridor linking the Quetta-Pishin region extending to the border of eastern Punjab and the south-east bordering Karachi.

There are three major ethnic groups in Balochistan: Balochi, Brahui and Pashtun. Other smaller ethnic groups include Hazaras, Sindhis, Punjabis, and Seraikis. There is a significant population of Afghan refugees in Balochistan concentrated in the north and north-western districts. As per UNHCR Census of Afghans in Pakistan, a quarter of the Afghan refugees (769,268) were in Balochistan in 2005.

Balochistan has about 44% population under the age of 15 years, which signifies high dependency ratio but simultaneously, it offers a population bulge which can provide essential workforce to economy if adequately galvanised through education and appropriate skills. This entails higher pressure on the labour market in coming years and absorption of the workforce will be highly dependent on knowledge and abilities of the youth. Another important dimension is urbanisation; the overall urbanisation has increased in the province and the rate of growth of urban population during 1998-2017 significantly exceeded the growth rate of the provincial population. The urban to total population ratio in Balochistan is still 27.6%, while in Quetta urban population ratio is around 44%. There has been a rapid increase in urban population in Gwadar which has increased to 61% due to the development of a new port and the CPEC, which will link Gwadar with China through an economic corridor via Punjab, KP and GB. However, in other relatively more urbanised districts such as Lasbela and Sibi, the urban population is 49% and 48% respectively[6].

Connectivity has strategic dimensions for Balochistan; given its distance both from River Indus – a lifeline for the country, and the national trade and economic corridor, which runs parallel to the Indus. Balochistan is thus disconnected from the two major growth factors in the country. The province could not reap the benefits of its hydrocarbon resources because of non-viability due to large distances, which are now posing similar challenges for the take-off of Gwadar port and the mineral wealth of the province. While the road network has been slightly extended in the past, the road density is still just 0.09 km/sq. km[7]. This is less than half the national average and the lowest among Pakistan's four provinces. Lack of connectivity within the province as well as between the main areas of Balochistan, population concentration and surrounding growth poles remain a major development challenge. This lack of connectivity is derived from the British administrative system's establishment of a rail network system, which in principle catered to the Britain's colonial interests in the north-western border areas of the sub-continent[8].

[6] Population Census of Pakistan, 2017
[7] Balochistan Comprehensive Development Strategy (BCDS) 2013-2020
[8] Malik, M. B. K. (1961) Hundred years of Pakistan railways: Pakistan Western Railway, 1861-1961; Pakistan Eastern Railway, 1862-1962. Karachi: Karachi Royal Book Company

This idiosyncrasy aside, the province has huge locational advantages as well. It lies at the cultural and geographical crossroads of South Asia, Central Asia and the Middle East having over 10,256 km border with neighboring Afghanistan and Iran, and over 750 km of coastline, which makes it an ideal regional hub of transportation and trade. The scarcity of financial (not physical) resources reflects lack of integration with the growth poles, which surround Balochistan- Karachi, Rahimyar Khan, Sistan, Oman, UAE and Central Asia. Balochistan is adjacent to the Straits of Hormuz from where a large proportion of the world's oil is transmitted. In spite of this strategic location, the spread effects from the growth poles to the provincial economy have been limited. This is despite the fact that a sizeable population of the province, linked to local clans, resides in neighbouring regions. One of the challenges is to motivate the Balochistan residents in other regions and countries to invest in and transfer knowledge and technology to Balochistan. Simultaneously, the ongoing efforts to make Gwadar port fully operational must be intensified and this in turn will spur the process of integration of Balochistan's economy with surrounding regions.

1.3 Growth and Structural impediments

Balochistan's Gross Provincial Product (GPP) grew at a higher rate than Pakistan's GDP during FY89 to FY97. However, growth in Balochistan GPP decelerated in subsequent years as its growth rate, on an average, fell to 3.3% which was significantly lower than national GDP growth rate of 5.2% between 1990 and 2008 (See **Table 2.1** and **Figure 1**). During 2008 and 2016, Balochistan GPP grew on an average by 3.3% per annum which was almost close to the national GDP at 3.5%. In a more recent period, Balochistan's GPP growth rate was at 3.5%, which lagged behind the national GDP growth rate at 4.2% between 2014 and 2016[9].

Table 1.1: Overall National GDP and Provincial GPP Growth rates, 1999 to 2016

	1999-00 to 2007-08	2007-08 to 2015-16	2013-14 to 2015-16
Pakistan GDP	**5.2**	**3.5**	**4.2**
Punjab	4.9	3.3	4.1
Sindh	6.2	3.5	4.3
KP	5.6	5.3	4.6
Balochistan	**3.3**	**3.3**	**3.5**

Source: SPDC (2014), Social Development in Pakistan, Annual Review

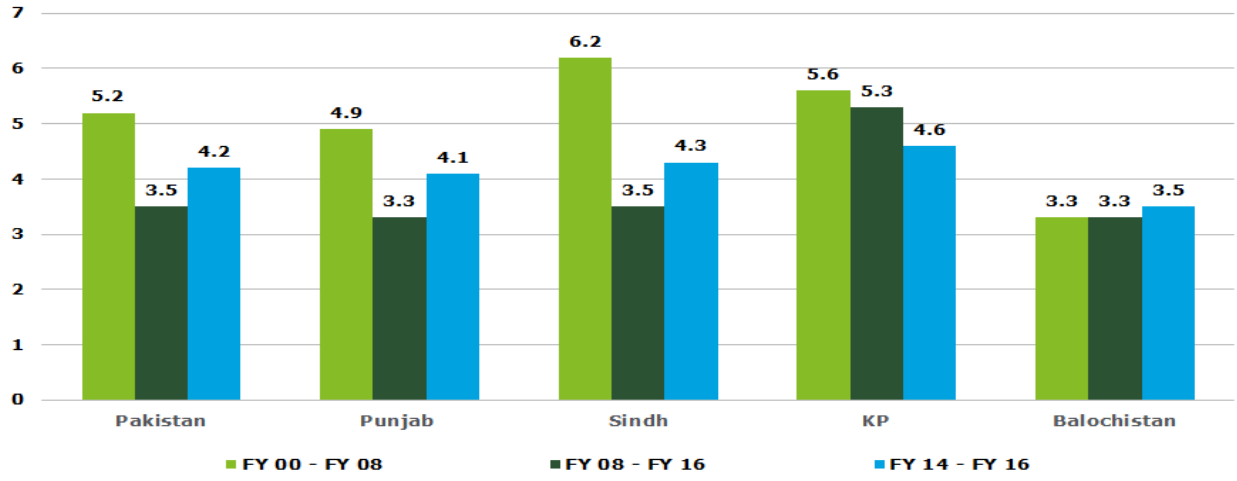
The main reason for lackluster growth in Balochistan is slow growth in agriculture as compared to other provinces. The agricultural sector in Balochistan's GPP has a much larger share than that of the other provinces. The share of agriculture in Balochistan's GPP has been around 26% in FY16 while it was 22% in Punjab, 14.9% in Sindh and 16.4% in KP. However, in recent past, the growth was largely driven by industry and service sectors which grew by 4.1% and 3.9% respectively compared with 2.2% in agriculture for the FY00 to FY08 (See **Table 2.2**). The more recent periods follow a similar trend.

Growth in commodity producing sectors has been dismal from FY14 to FY16. Mining and quarrying value added remained almost stagnant between FY00 to FY08 but bounced back in later periods with a growth rate of 3.1% in FY14 to FY16. Agricultural value-added growth fluctuated around 2% during the FY00 to FY16 but declined to 0.6% in FY14 to FY16.

[9]See World Bank 2011

Livestock remained dominant in Balochistan agriculture and grew by 4.2% and 2.9% respectively during FY00-FY08 and FY08-FY16 period. In the service sector, there has been a decline by 4.1% in the finance and insurance sector during FY08-FY16, though it bounced back to 6% in a more recent period. The growth in the electricity, gas and transport sectors has been spectacular with an average growth of 30.3% and 33.7% respectively during FY00-FY08 and FY08-FY16. The average growth rate of trade during this period remained encouraging at 3.7% and 6.6%. In overall term, Balochistan GPP grew at an average growth rate of 3.3% during FY00-FY16 and recorded a higher growth rate of 3.5% during more recent period of FY14-FY16.

Figure 1: National GDP and Provincial GPP Growth rates, 1999 to 2016 (%)



The shape of Balochistan's economy has experienced some structural changes. Agriculture continued to represent about one quarter of the GPP during the last 15 years (See **Table 2.3**); Mining and Quarrying sector's share decreased from 19% to 13.6%; large scale manufacturing share increased from 1.5% to 4%, while small scale manufacturing share remained stagnant around 1%. Construction share declined from 3.2% to 2.3%; Electricity and Gas Distribution share increased from 1.9% to 3.6%; Transport, Storage and Communication share declined significantly from 13.4% to 9.5%; Wholesale and Retail Trade share increased from 14.4% to 15.1%; Public Administration and Defense share rose from 7% to 11.7%; and community services share increased from 5% to 6.1% in this period[10].

Table 1.2: Balochistan Provincial GPP Growth Rates, 1999 to 2016

	FY00 - FY08	FY08 - FY16	FY14 - FY16
Agricultural Sector	**2.2**	**2.0**	**0.6**
Major Crops	2.7	5.6	-0.7
Minor Crops	3.6	3.3	-1.5
Livestock	4.2	2.9	3.3
Fishing	9.9	-5.0	3.3
Forestry	-7.1	-0.8	2.3
Industrial Sector	**4.1**	**3.8**	**3.9**

[10] Data has been taken from SPDC (2014), Social Development in Pakistan, Annual Review 2012-13, Karachi

Table 1.2: Balochistan Provincial GPP Growth Rates, 1999 to 2016			
	FY00 - FY08	**FY08 - FY16**	**FY14 - FY16**
Mining and Quarrying	0.1	1.3	3.1
Manufacturing	**27.9**	**6.2**	**5.2**
Large Scale	50.8	5.4	5.0
Small Scale	8.9	20.0	8.2
Slaughtering	3.9	4.4	3.5
Construction	-0.7	4.3	7.0
Electricity and Gas Distribution	30.3	33.7	3.8
Commodity Producing Sectors	**2.9**	**2.8**	**2.2**
Services Sector	**3.9**	**4.1**	**5.0**
Transport, Storage and Communication	3.5	1.7	4.7
Wholesale and Retail Trade	3.7	6.6	4.0
Finance and Insurance	24.7	-4.1	6.0
Ownership of Dwellings	-1.5	**5.5**	**4.0**
Public Admin and Defense	4.2	6.9	6.3
Social and Community Services	10.0	1.8	6.3
Balochistan GPP Growth (%)	**3.3**	**3.3**	**3.5**

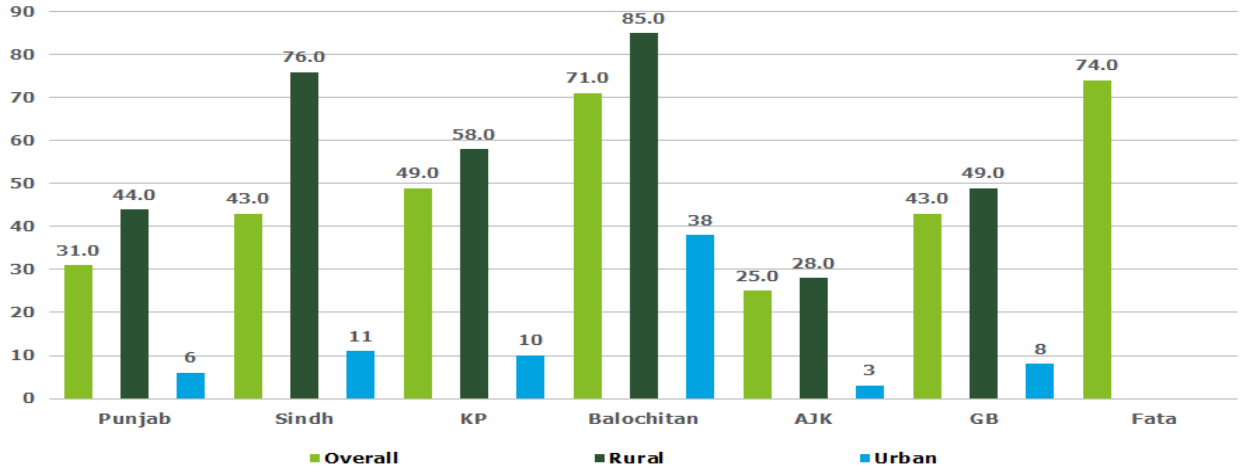
Source: SPDC (2014), Social Development in Pakistan, Annual Review

There have been positive developments in the GPP growth of certain sectors. The share of manufacturing sector improved from 1.5% to 4% along with Electricity and Gas Distribution share which rose from 1.9% to 3.6%. Nevertheless, Balochistan's growth performance has been lagging behind national average and from other provincial averages, which is a cause of national concern. This reflects the distributional unevenness because of the inequality within and among the provinces.

Table 1.3: Estimates of Structural Changes in Balochistan GPP over FY01 to FY16						
	FY01	**FY06**	**FY10**	**FY14**	**FY15**	**FY16**
Agricultural Sector	**27.3**	**30.4**	**26.4**	**28.0**	**27.6**	**26.4**
Major Crops	3.2	4.0	3.3	3.8	3.7	3.3
Minor Crops	9.2	12.7	9.2	11.8	11.7	11.1
Cotton Ginning	0.0	0.0	0.0	0.0	0.0	0.0
Livestock	9.5	11.1	11.6	10.5	10.5	10.4
Fishing	0.9	1.0	0.7	0.7	0.7	0.7
Forestry	4.5	1.6	1.6	1.2	1.0	1.1
Industrial Sector	**26.7**	**25.0**	**26.4**	**24.8**	**25.1**	**25.7**

Table 1.3: Estimates of Structural Changes in Balochistan GPP over FY01 to FY16						
	FY01	**FY06**	**FY10**	**FY14**	**FY15**	**FY16**
Mining and Quarrying	19.0	16.7	14.0	13.4	13.4	13.6
Manufacturing	2.6	5.2	7.3	6.1	6.1	6.1
Large Scale	1.5	3.9	5.8	4.1	4.0	4.0
Small Scale	0.2	0.3	0.5	0.9	1.0	1.0
Slaughtering	0.8	1.0	1.0	1.1	1.1	1.1
Construction	3.2	1.7	2.2	2.1	2.1	2.3
Electricity and Gas Distribution	1.9	1.5	2.9	3.2	3.4	3.6
Commodity Producing Sectors	54.0	55.4	52.8	52.7	52.6	52.1
Services Sector	**46.0**	**44.6**	**47.2**	**47.3**	**47.4**	**47.9**
Transport, Storage and Communication	13.4	11.0	13.3	9.5	9.6	9.5
Wholesale and Retail Trade	14.4	11.4	14.5	15.4	15.2	15.1
Finance and Insurance	0.3	1.0	0.9	0.6	0.6	0.6
Ownership of Dwellings	5.8	4.1	4.6	4.9	4.9	4.8
Public Administration and Defense	7.0	9.1	8.4	11.0	11.1	11.7
Social and Community Services	5.0	8.0	5.5	5.9	6.0	6.1
Balochistan GPP share (%)	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Figure 2: Multidimensional Poverty by Province/Region (%)



Source: Multidimensional Poverty in Pakistan 2015-16, Planning Commission, 2016

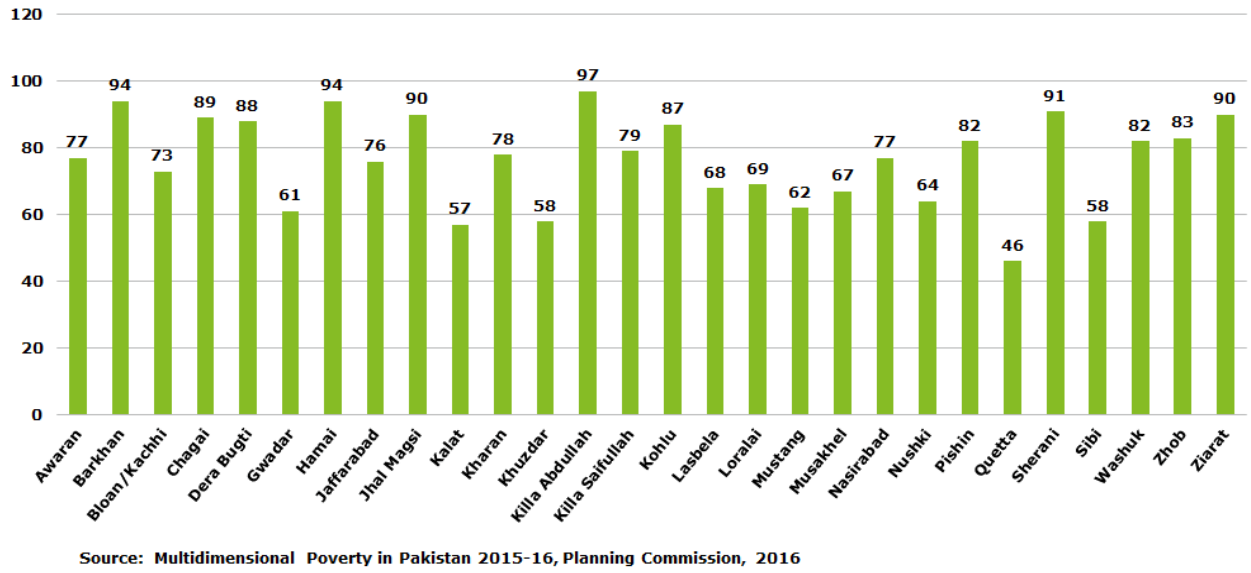
1.4 Widespread and Deep-Rooted Poverty

Balochistan's biggest development challenge is widespread poverty, which is deeply rooted across the province. While there are approaches to measuring poverty levels, Multidimensional Poverty Index (MPI) developed by the UNDP is an important measure to compute acute poverty at the national and provincial level. The MPI complements consumption-based poverty measures and reflects deprivations which individuals face in other dimensions such as education, health and living standard. At the national level, the headcount ratio of

multidimensional poverty was 38.8% in 2015. The main contributors to multidimensional poverty were years of schooling (29.7%) followed by access to healthcare facilities (19.8%) and children's school attendance (10.5%).

Estimates for the MPI suggest that multidimensional poverty was the highest in Balochistan at 71.2% in 2015 (See **Figure 2**). The proportion of people identified as multi-dimensionally poor in urban areas was significantly lower at 37.7% than in rural areas at 84.6%. Also, in all four provinces, poverty in rural areas remained significantly higher than in urban centers.

Figure 3: Multidimensional Poverty by District in Balochistan (%)

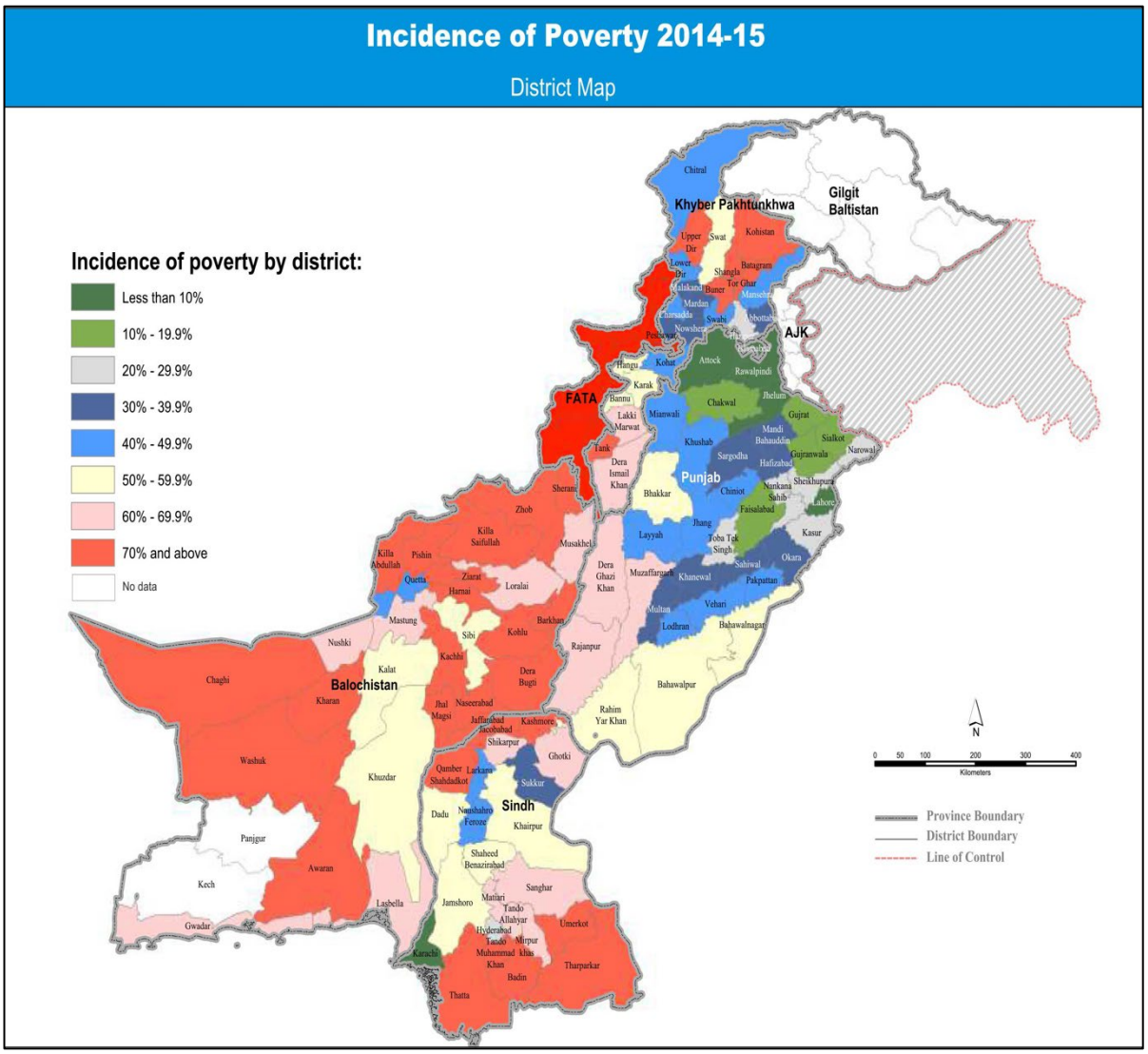


Source: Multidimensional Poverty in Pakistan 2015-16, Planning Commission, 2016

The district level multidimensional poverty estimates for Balochistan suggest that Killa Abdullah, Harnai, Barkhan, Jhalmagsi, Sherani and Ziarat have the highest MPI among the districts of Balochistan showing low levels of social development and exhibiting extremely high levels of poverty and deprivation (See **Figure 3**). Most districts of Balochistan have the highest levels of poverty incidence as compared to the rest of Pakistan (See **District Poverty Map**).

1.5 State of human development

The state of human development indicated by health, education, living conditions along with incomes and wealth is comparatively lower than the other provinces. The overall state of human development continues to fall behind the national indicators significantly. Although Pakistan, as a whole, is lagging behind in most of the Sustainable Development Goals (SDGs), the situation in Balochistan is worse.



The population comprising children aged ten years and older who have ever attended schools in Balochistan has remained significantly low at 39%[11] compared to the national average of 61% in 2018-19.

Net Enrolment Rates (NER), at primary level, refers to the number of students enrolled in primary schools aged 6 to 10 years divided by the number of children in the age group for that level of education. The NER for primary level (6 to 10) in Balochistan excluding Kachhi is 40% in comparison to national average of 66%.

Gender disparities are large, and the gap continues to widen in the province as compared to national level. Gender parity is at the core of the SDGs; the national gender parity index, GPI[12]

[11] See Pakistan Bureau of Statistics (2015), Pakistan Social and Living Standards Measurement Survey (PSLM) 2019-20 key findings.
[12] Planning Commission, Pakistan Millennium Development Goals Report 2013

(ratio of females to males enrolled) for primary education improved to 0.90 in 2011-12 from 0.85 in 2004-05. On the other hand, GPI at primary level in Balochistan deteriorated during the 2004-05 to 2011-12 from 0.66 to 0.58.

Pakistan Labour Force 2017-18 indicates that unemployment was 5.79% of the total workforce at national level; however, unemployment in Balochistan was lower at 4.09% comparatively. The quality of employment is worse in Balochistan both in terms of productivity as well as types of jobs available.

The projected increase of population from 12.344 million in 2017 to 17 million by 2026 poses a major challenge for policymakers in terms of improving education for better employability. According to Balochistan Economic Report 2008, the labour force in Balochistan could rise to 7.2 million in 2026 and based on the historic employment elasticity, creating additional 158,000 jobs annually for these workers should be possible with an annual growth rate of 6.5%.

1.6 Water Insecurity

Balochistan is the least water-secure province in Pakistan. The province is highly prone to climate change risk and is the least able to cope with water-related development challenges. The province is highly water scarce with arid to hyper arid climate and low precipitation levels. Agriculture and livestock are the lifelines of large majority of the people as such water shortages in the province determine the productivity and incomes. Despite developments in the water sector, population growth, urbanisation, mining and industrialisation are posing greater demands on water resources.

The increasing imbalance between supply and demand has led to shortages and unhealthy competition amongst end-users, thus causing severe environmental degradation in the form of:

a. Persistent increase in waterlogging and salinity in the Indus Basin Irrigation System (IBIS) area of Pat Feeder and Khirther canals;
b. Inefficient and ineffective irrigation management in minor irrigation schemes leading to loss of precious water;
c. Lowering of water table and mining of groundwater in the three over-drawn basins (Pishin-Lora, Nari and Zhob);
d. Neglect of *Sailaba* and rain fed *Khushkaba* farming systems with reduced recharge to the groundwater; and
e. Intrusion of saline water into fresh groundwater reservoirs in coastal areas and at certain inland locations.

Almost two-third of the total water resources come from the floodwater, which is the largest resource of water in the province. However, this is largely underutilised. In contrast, the groundwater constitutes about 4%, which is over-utilised due to lopsided incentive policy regime[13].
Although, water availability and quality have both continued to deteriorate in rural and urban areas. Groundwater availability continues to worsen in many parts of Balochistan as the progress has been primarily on the infrastructure side with the construction of the Kacchi Canal, Naulong Dam, RBOD III, and various phases of several small dams for conserving flood water. Variability in water availability is far higher than the national average and per capita water storage is only 20% of the (grossly inadequate) national average[14]. Thus, there is a dire need to address the water sector issues with the goal to improve water resources planning and system

[13] Balochistan Need Assessment Report, 2013
[14] World Bank - Pakistan: Getting More from Water, 2019

operations, improve flood/drought risk assessment, planning and mitigation, and increase transparency of, and access to water information.

1.7 Weak Private Sector and Constraints of Trained Manpower

One of the many important challenges to growth and development is the comparatively *small size of private sector and enterprises,* which itself is constrained by multiple limitations. The private sector growth is impeded due to insufficient financial and banking services, weak human resources and talent pool, and small markets.

As per World Bank's estimates, there are approximately 150,000 enterprises in the province and a large number of these are small and informal traders catering to local demand. Wholesale and retail businesses account for about 75% of the total enterprises whereas, in other provinces, it is around 50%. These enterprises do not carry any spin-off effects with either backward or forward linkages and nor do these create prosperity. These are predominantly individually owned informal businesses yielding one or two jobs. More importantly, such micro businesses are neither linked to finance, technology or any other resources given the small size of business. Most of the industry is located in Hub due to its proximity to Karachi while most of the rice mills are located in Jafarabad district. Most of the technological and financial resources are from the neighbouring provinces.[13]

The financial sector within Balochistan is considerably thin in terms of number of bank branches; presence of SMEs, microfinance and insurance services, the volume of credit disbursed and the number of borrowers.

Growth of private sector is also impeded by a lack of skilled labour and the non-availability of educated and professional workforce vital to modern economies. The labour force is largely illiterate and most of the skill sets are further restricted to few given markets making medium and large scale businesses non-viable due to non-availability of required talent.

1.8 Security Dimension

Security and development are closely linked especially in developing provinces like Balochistan. Threats to security can have socio-economic roots including competition over natural resources, spillover effects of environmental degradation, economic and social inequalities, political and economic migration and natural disasters.

Development has been defined as economic growth including well-being, human capabilities, opportunities and choice. On the other hand, security has been interpreted in a variety of ways: as individual, human and state security. These policy domains concern different actors and focus on distinct threats — internal and external. For over 20 years, development has been linked to security through the concept of human security.

The security landscape in Balochistan has been exceedingly complex. However, the Government's resolve and efforts are improving the security landscape constantly. High levels of intelligence and greater coordination among all the civil and military agencies has made the difference. In addition, the efforts for political reconciliation, and creating space for the alienated political forces is generally believed to be the ultimate way towards a peaceful and prosperous Balochistan.

1.9 Need for Balanced Development and Inclusive Growth

Balanced development is a precondition for inclusive economic growth to improve living standard of the people. Inclusive economic growth requires creation of employment opportunities and reduction in poverty through improvement in living standards. It includes empowering people through education and skill development. This requires having access to essential services in education by the poor. Balanced development entails strengthening of linkages between urban centers and rural areas and between more developed and less developed regions and equitable distribution of amenities of life and creation of decent employment for the citizens.

Connectivity is a strategic issue for Balochistan. The lack of connectivity has been a major constraint for growth and development of the mineral wealth of the province. The lack of connectivity within the province and between the main regions, where major population and surrounding growth poles in the province, emerges as a major development challenge for the Government of Balochistan.

The CPEC has brought multiple opportunities for economic growth and social development by enhancing regional connectivity and improvement in infrastructure, establishment of SEZs, and linking fast-growing regions to relatively poorer regions, which will create demand for development of urban infrastructure. Increased connectivity with the CPEC roads network will boost economic growth and bring prosperity in Balochistan as the corridor will pass through some of the poorest districts of the province which in turn will spur the process of integration of Balochistan's economy with surrounding regions of other provinces[15].

The CPEC can be a catalyst in attracting investment in urban development to create growth poles, which can serve as centers from which growth spread effects stimulate the surrounding economy of largely scattered population of Balochistan. In recognising the fundamental role of the CPEC for regional connectivity, Balochistan's Development and Growth Strategy is built upon connecting economic hubs with economic and trade corridors, in particular the CPEC, in order to increase access to local and international markets through reduced transportation costs.

[15] See Anwar, Talat (2015). *China-Pak Economic Corridor: Economic and Social Prospects*, Policy Brief, CPS Quarterly, January-March, 2015, Issue No.5, COMSATS Institute of Information Technology, Islamabad

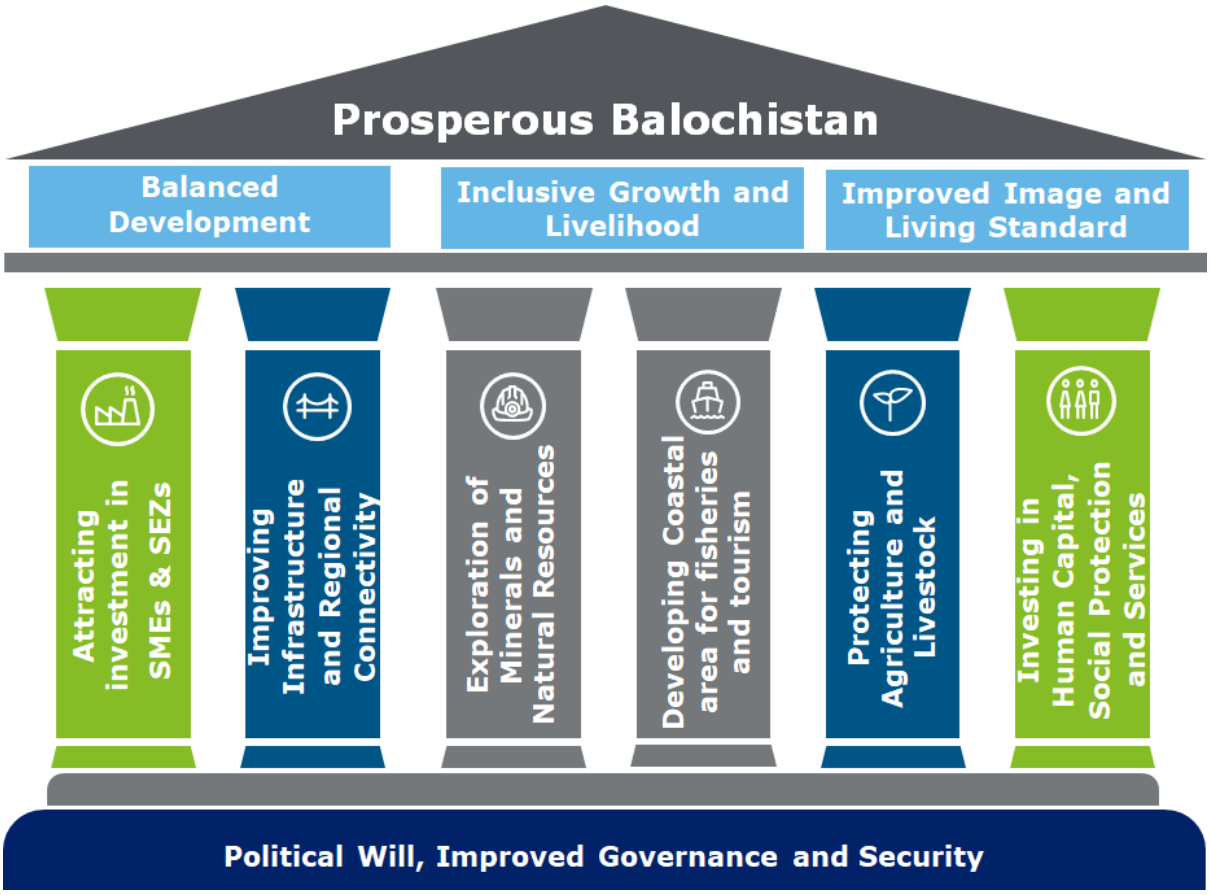
CHAPTER 2:

BALOCHISTAN DEVELOPMENT AND GROWTH MODEL

2. Balochistan Development and Growth Model

The Government of Balochistan is cognizant of the existing development status of the province and is geared for achieving inclusive and sustainable development and growth in all sectors of the provincial economy, creating opportunities for livelihood and improved living standard. In order to achieve this target, the GoB, based on a consultative process, has developed the Balochistan Development and Growth Model (The Model) which identifies a growth foundation and six (6) growth pillars for development (See **Figure 4**). The growth pillars have been developed by primarily taking into account the key potential growth sectors- the CPEC and SDGs. The Model envisages focused efforts and investment in the foundation and pillars to materialise three (3) key outcomes including Balanced Development, Inclusive Growth and Livelihood and Improved Image and Living Standard, ultimately facilitating in achieving the Goal of *"Prosperous Balochistan"*.

Figure 4: Balochistan Development and Growth Model



2.1 Growth Foundation

The Balochistan Development and Growth Model has identified the following growth foundation:

2.1.1 Growth Foundation 1: Political Will

The political setup or the state has been entrusted by the people with the responsibility of initiating and promoting economic growth. Political will is critical for an enabling policy framework for development. The mobilisation of technical and financial resources for initiation

and implementation of interventions and programmes, which drive economic growth and bring change in the lives of the people of Balochistan, are only possible with a sustained political will and continuity of policies.

2.1.2 Growth Foundation 2: Improved Governance

Governance refers to the administration of public institutions which would perform public affairs, manage public resources, and guarantee realisation of human rights and delivery of public service. *"It is imperative for the state to create, sustain institutional structures to improve social equity and address market failure."* (The World Bank Report, 1997). Governance is one of the most challenging issues in the context of Balochistan as it faces issues linked with capacity, legislation, accountability and security. It is important that improved governance practices and reforms are introduced to facilitate improvement in efficiency and effectiveness of government institutions and performance of public sector human resource.

2.1.3 Growth Foundation 3: Security

Peace and security are necessary ingredients for economic growth, to attract investment and to generate income. In order to promote development in Balochistan, it is essential to provide a conducive and peaceful environment to facilitate economic activity.

2.2 Growth Pillars

The Balochistan Development and Growth Model has identified the following six (6) growth pillars for development:

2.2.1 Growth Pillar 1: Attracting Investment in SMEs and SEZs

The Balochistan Development and Growth Model recognises industrial development as a top priority for the province. This shall serve as an initial step in shifting from an agriculture-based economy to an industrial-based and knowledge-based economy. It involves facilitating both large-scale and small-scale industries through improving the ease of doing business, enhancing access to skills, infrastructure and finance, establishment and development of special economic zones, provision of incentives to investors and facilitating innovation through business incubation and innovation labs/institutes.

2.2.2 Growth Pillar 2: Improved Infrastructure and Regional Connectivity

The Model envisions an integrated system of transportation with an objective of enhancing the connectivity not only within the province but also with other provinces and neighbouring countries. This shall include inter-city high speed roads and integrated road/rail network to connecting with national highways, airports and Gwadar Port. The overall strategy is to connect economic hubs with trade corridors (especially CPEC), enhancing access to local and international markets and minimising transportation costs.

2.2.3 Growth Pillar 3: Exploration of Minerals and Natural Resources

Balochistan has been endowed with one of the largest deposits of mineral and natural resources including, but not limited to, copper, gold, marble, chromite, coal, oil and gas. The development, extraction and processing of these mineral and natural resources have been identified as a priority for economic growth, combating poverty, and creating jobs in the province.

2.2.4 Growth Pillar 4: Developing Coastal Area for Fisheries and Tourism

Fisheries and Coastal development are globally recognised as a capital asset for generating significant economic, social and environmental benefits through appropriate policy and infrastructural developments. The Balochistan Development and Growth Model recognises the potential of this sector and envisages investment in coastal development and fisheries as a priority. Developing fish harbours, establishing fish processing zones, enhancing compliance with international standards, adoption of alternate methods for fish production and introduction of modern ICT technologies shall be key instruments for coastal development and improvement in fisheries sector. The Model also recognises the tourism potential of the province as a key enabler for triggering economic activity. Institutional development for promoting tourism, development of sites having tourism potential and enhancing visibility and image building of Balochistan shall be the key interventions for developing tourism.

2.2.5 Growth Pillar 5: Protecting Agriculture and Livestock

The Balochistan Development and Growth Model recognises the importance of agriculture sector for economy as it is one of the major contributors to the provincial GDP and also a major source of livelihood and income generation for the population dependent upon this sector. Livestock being a major sub-sector of Agriculture after crops has also been prioritised under the Model for development activities. Effective water usage through *sailaba* farming, use of high efficiency water systems, changeover to low-delta crops, effective extension services, availability of quality seeds and access to competitive markets, credit facilities, public private partnerships, livestock marketing and establishment of livestock farms shall be the key interventions to promote agriculture and livestock sectors.

2.2.6 Growth Pillar 6: Investing in Human Capital, Social Protection and Services

The Balochistan Development and Growth Model recognises human capital as the driving force for economic growth in the province and envisages increased focus and investment for improvement in human skills. Increasing the youth employability through trainings and development, institutional development and revitalisation to introduce industrial based curriculum and life skills training programs and promoting business startups shall be key instruments for enhancing the knowledge base of the human capital of the province. The model also recognises poverty alleviation, social protection, and provision of basic services, gender equality and women's development as a priority. This shall involve introduction of social protection and poverty alleviation programmes for poor, vulnerable, persons with disabilities, and IDPs, and introduction of innovative approaches for improving the service delivery of healthcare and education, gender mainstreaming, and provision of credit facilities for reviving and scaling up small business.

CHAPTER 3:

STRATEGIES FOR GROWTH FOUNDATION

3. Strategies for Growth Foundation

Based on the Balochistan Development and Growth Model, the GoB has outlined its prioritised strategies for each Growth Foundation for implementation of the Model through 2021-2026.

3.1 Growth Foundation 1: Political Will

3.1.1 The BCDGS provides the roadmap for development and growth of the province through a prioritised approach. Therefore, implementation of BCDGS shall be the top priority of the GoB.

3.1.2 It is important that all targets and interventions delineated by the BCGDS shall be monitored at multi-tier levels to ensure efficient and effective implementation as envisioned in the BCDGS. In order to facilitate monitoring and oversight, a real time Monitoring, Evaluation and Reporting (MER) system shall be developed with KPIs and specific dashboards for Chief Minister, Ministers and Secretaries of each provincial department having a portfolio of development projects.

3.1.3 The Chief Minister's Delivery Unit (CMDU) shall be mandated to keep the Chief Minister informed on implementation progress of the BCDGS. The P&D Department, keeping CMDU in loop, shall evaluate the outcomes and impacts of the projects implemented, carry out follow up, and coordinate to remove bottlenecks for smooth and timely implementation of the BCDGS.

3.2 Growth Foundation 2: Improved Governance

3.2.1 Introduction of civil service reforms shall serve as an instrument for improving governance at provincial level. The following reform initiatives shall be adopted:

a. Merit based recruitment through Balochistan Public Service Commission based on an open, transparent, competitive examination and interview process.
b. Review of promotion policy and introduction of criteria and weightage for training and skills.
c. Replacement of Annual Confidential Report (ACR) and introduction of Performance Evaluation Framework including goal setting and key performance indicators to gauge performance.
d. Adoption of need-based trainings of government officials.

3.2.2 The GoB has planned to initiate Quetta Smart City Project. Under this project, a comprehensive IT platform/decision center with detailed dashboards shall be developed for real time monitoring. Initially, this project shall be piloted for Quetta and subsequently it will be extended to other districts of Balochistan.

3.2.3 In order to support information dissemination to the public about the key initiatives of the GoB and progress of implementation, the BCDGS website shall be developed and shall be made part of the GoB's web portal.

3.3 Growth Foundation 3: Security

The GoB shall continue pursuing security improvement measures to create a conducive environment for investment. The security strategy shall include the following key elements:

3.3.1 Upgrading the existing capacity of intelligence system through the adoption and use of modern ICT based surveillance and security systems.

3.3.2 Upgrading physical infrastructure of police stations through improved telecommunication system, introduction of ICT for creation of databases of FIRs, Criminal Records, and recovered weapons etc., for internal as well as external stakeholders.

3.3.3 Training and capacity building of police and levies on community policing.

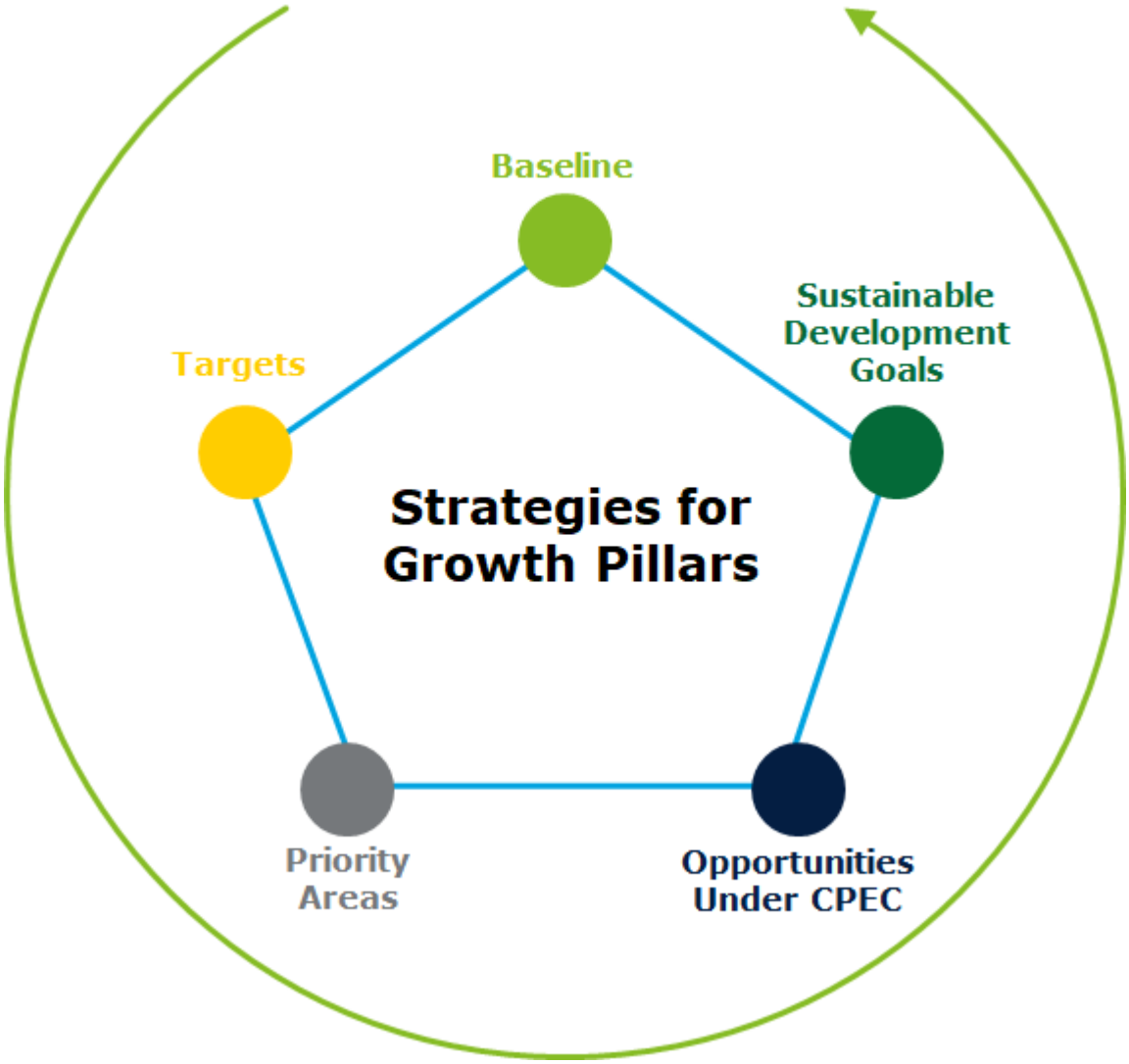
Budget 2021-2026

Table 3.1: Political Will, Improved Governance and Security		(Rs. in Million)				
Sr. No	**Strategy**	**FY 1, FY 2**	**FY 3, FY 4**	**FY 5, FY 6**	**Total**	**Proposed FA Portion**
1	Development of Real Time Monitoring and Evaluation System and Staff Training and ongoing M&E activities	2,751	6,032	11,412	20,195	10,097
2	Strengthening BPSC	88	77	69	234	-
3	Review of Performance Evaluation and Promotion Policies	50	-	-	50	-
4	Introduction of Smart City Governance Concept	250	800	1,000	2,050	-
5	Strengthening Intelligence Bureau	367	338	330	1,035	-
6	Installation of Surveillance Systems in Quetta	1,000	1,000	-	2,000	-
7	Upgrade of Police Station physical infrastructure and ICT	1,400	1,600	1,600	4,600	-
8	Training and capacity building of police and levies	500	415	-	915	-
	Total	**6,406**	**10,262**	**14,411**	**31,078**	**10,097**

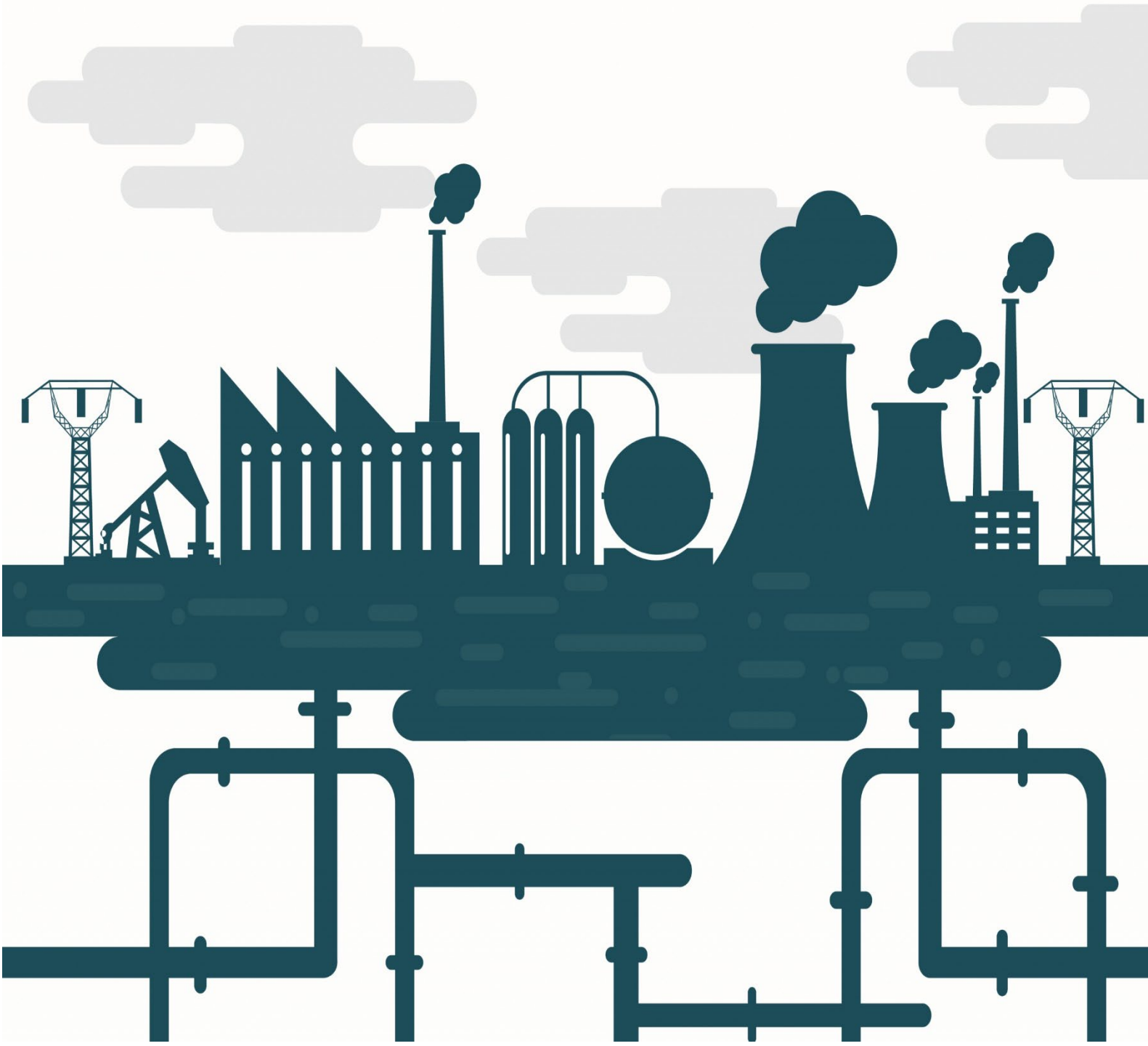
CHAPTER 4:
STRATEGIES FOR GROWTH PILLARS

4. Strategies for Growth Pillars

This Chapter includes detailed analysis and strategies for the six growth pillars identified under the Balochistan Development and Growth Model. The strategies are formulated based on a detailed baseline analysis of each sector relevant to the Growth Pillar followed by linkage with Sustainable Development Goals and China Pakistan Economic Corridor. The 12th Five Year Plan 2018 – 2023 issued by the Ministry of Planning, Development & Reforms, the Government of Pakistan, was also reviewed to devise strategies under the BCDGS 2021-2026. The analysis has facilitated in highlighting the key priority areas and targets for growth and development under each sector to be achieved by FY 2026. The priorities and targets are translated into workable strategies/interventions supported by financial budgets required for the implementation of proposed interventions.



Pillar 1: Attracting Investment in SMEs and SEZs



4.1 Pillar 1: Attracting Investment in SMEs and SEZs

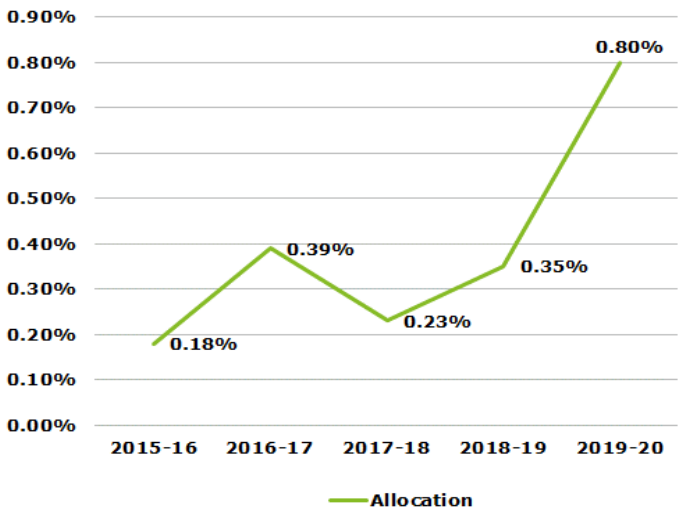
Baseline

4.1.1 The Industrial sector of Balochistan has always been a slow progression economy having a bare minimum budget allocation during the past decade; however, for the FY 2021-22, the budget allocation has been moderately increased as per PSDP i.e. 0.56% of the total budget (See **Figure 5**).

4.1.2 A total of 24 projects, both, new and on-going, are included in the FY 2021-22 with a budget allocation of 0.560%. Moreover, this sector in last 5 years has not received any FDI.[16]

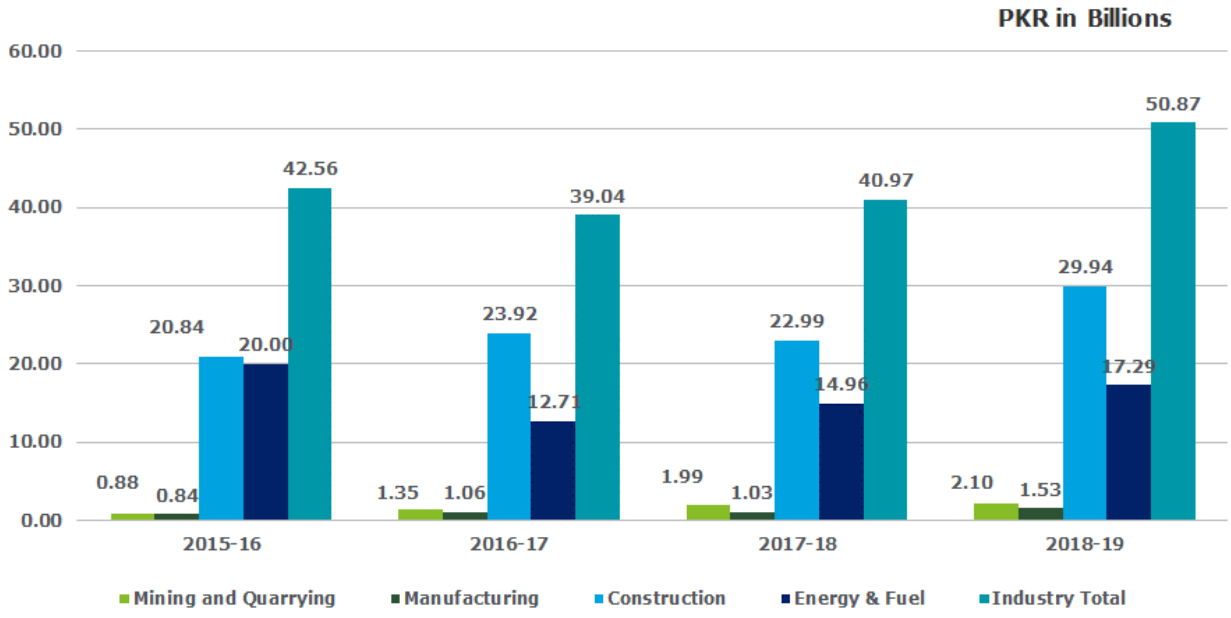
4.1.3 The depiction of trend is very uneven, but in terms of Provincial Share in GDP, the industrial sector contributes on an average of 26% of total Provincial GDP. Majority of this chunk is filled by the Mining and Manufacturing sector[17].

Figure 5: Percentage of Budget Allocation in Last Five Years



4.1.4 Shifting focus to a broader spectrum, the industry in Balochistan encompasses manufacturing, mining & quarrying, energy and fuel and construction.

Figure 6: Balochistan Total Industry Expenditure



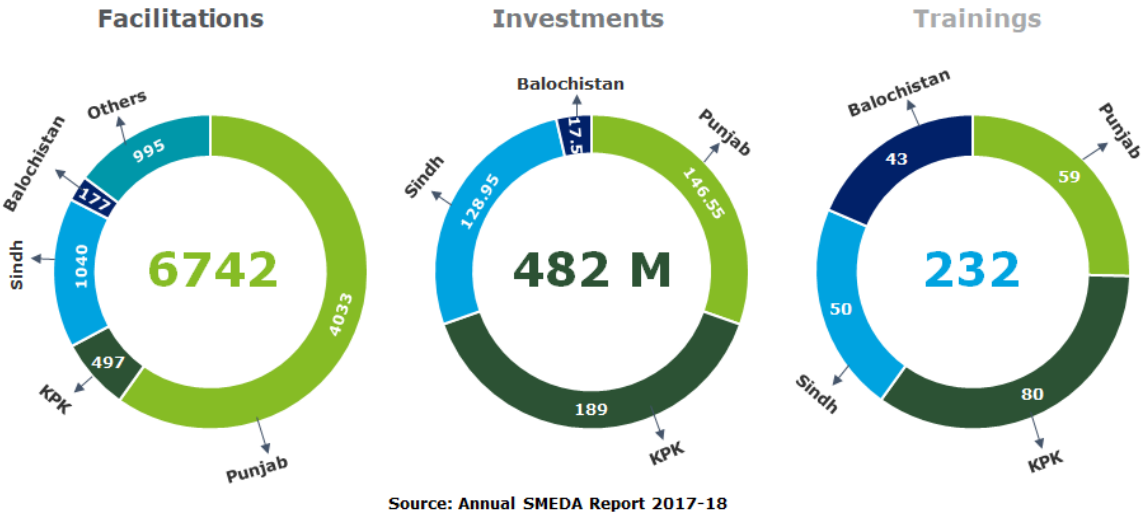
Source: Annual Budget Statement 2017-18 & 2018-19

[16] PSDP 2014-15 to 2018-19
[17] Institute of Policy Reforms, (IPR Brief), Growth of Provincial Economies. December 2015

4.1.5 Manufacturing sector has been perpetually neglected in terms of current and development expenditure although it constitutes a substantial chunk of the total industry sector. Majority of the expenditure is being diverted to either construction or energy leaving mining and manufacturing sector behind, both of which have a long-term sustainable growth potential as Balochistan is a mineral rich province. Since mining and manufacturing are partially inter-dependent, the extractions undergo multiple processes before production of final product. It is highly crucial to increase expenditure in mining and manufacturing to bring an overall increase in the combined output of industry sector.

4.1.6 SMEs are key players in the economy and the wider ecosystem of firms. Across countries at all levels of development, SMEs have an important role to play in achieving the Sustainable Development Goals (SDGs) by promoting inclusive and sustainable economic growth, providing employment and decent work for all promoting sustainable industrialisation and fostering innovation, and reducing income inequalities.[18]

Figure 7: Support to SMEs by SMEDA



Source: Annual SMEDA Report 2017-18

4.1.7 In Pakistan, SMEDA has been providing Business Development Services to SMEs through its network of helpdesks, across Pakistan such as prefeasibility studies, business guides and financing facilities. However, the small/medium scale business sector in Balochistan is also facing slow progress regarding provision of facilitations in form of aid, investment or trainings by SMEDA. In FY 2016-17, a total of 6,742 SMEs were provided with facilitation services across Pakistan. From this total, only 177 SMEs in Balochistan were facilitated ranking last amongst all the provinces, receiving investments only amounting to Rs. 17.5 million in contrast to the aggregate investment facilitation of Rs. 482 million nationwide. Likewise, with regards to workshops, programmes and training sessions lead by SMEDA on national scale to enhance labour skills and build capacity to utilise existing resources efficiently were conducted the least in Balochistan, with only 43 workshops and training sessions in FY 2016-17.[19]

[18] OECD Report | Enhancing the Contribution of SMEs in Global and Digitalized Economy 2017
[19] SMEDA Annual Report 2016-17

4.1.8 Divergence of funds and setting up strong institutions backed with sound and sustained policies to monitor and evaluate the channeling of funds is mandatory and a key factor in bringing this sector towards a trajectory of economic re-vitality.

4.1.9 The development of industrial estates is a positive step towards attracting industrial investment and job creation in the province. The GoB has established Lasbela Industrial Estate Development Authority (LIEDA) and Gwadar Industrial Estate Development Authority (GIEDA) as autonomous bodies, specifically for promotion of industrialisation in Balochistan. The following industrial estates are established by the GoB in Balochistan:

Table 4.1: List of Industrial Estates established in Balochistan

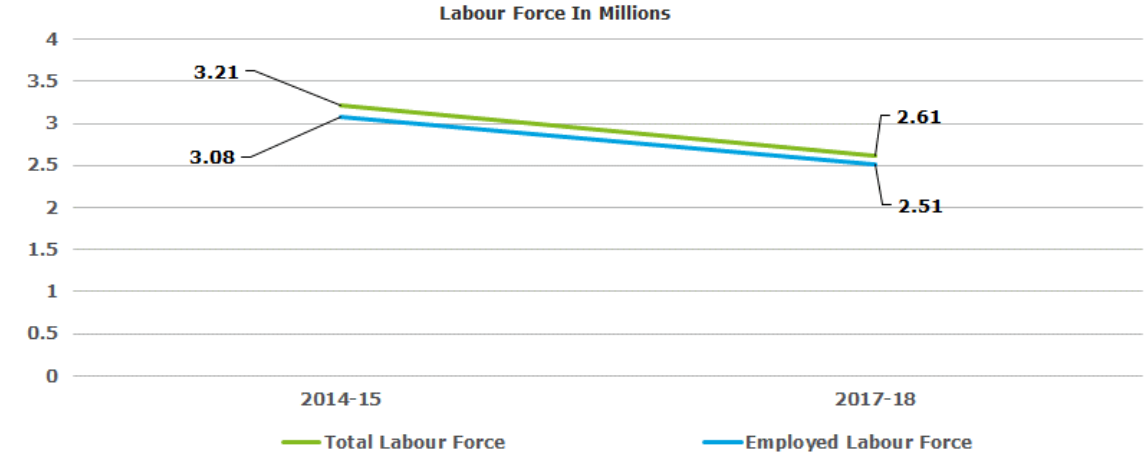
Sr. No.	Name of Industrial Estate	Location	Size (in acres)	Type of Industry
1	Hub Industrial and Trading Estate	18 km from Karachi; District Lasbela	1,189	Power generation and plastic industry
2	Winder Industrial and Trading Estate	80 km from Karachi; District Lasbela	230	Audio video, chemical, engineering, textile and home appliances
3	Special Industrial Zone (SIZ) Winder	80 km from Karachi; District Lasbela	166	Not specified
4	Uthal Industrial Estate – I	RCD Highway, District Lasbela	2,585	Food, beverages, handicrafts and light engineering
5	Uthal Industrial Estate – II	RCD Highway, District Lasbela	1,000	Not specified
6	Marble City Gaddani	Gaddani, District Lasbela	600	Marble processing
7	Gaddani Industrial Estate	Gaddani, District Lasbela	50	Ship breaking
8	Quetta Industrial and Trading Estate	Sariab By-pass, 13 km from Quetta	650	Food, beverages, handicrafts and light engineering
9	Industrial Estate Dera Murad Jamali	5 km from Dera Murad Jamali	100	Food, beverages, handicrafts and light engineering
10	Gwadar Industrial Estate	Gwadar	3,000	All types of industry

4.1.10 Lasbela Industrial Estate Development Authority (LIEDA) has commenced the development of Phase II of Hub Industrial and Trading Estate. Initially, 5,000 acres of land shall be allocated for this industrial estate under Phase II. As an initial step, LIEDA has developed a Master Plan for the development of 400 acres of land, which was to

commence in FY 2019-2020. Water supply (reservoir) has been completed with Rs. 350 million funded by the Federal Government.

4.1.11 Balochistan's total labour force (employed and job seekers), in FY 2017-18 was 2.61 million (4% of national scale) which had been reduced from 3.21 million in FY 2014-15 (5% of national scale). Total civilians employed in Balochistan from this pool sum up to 2.51 million in FY 2017-18, which decreased from 3.08 million in FY 2014-15.[20]

Figure 8: Balochistan Labour Force



Source: Labour Force Survey 2017-18

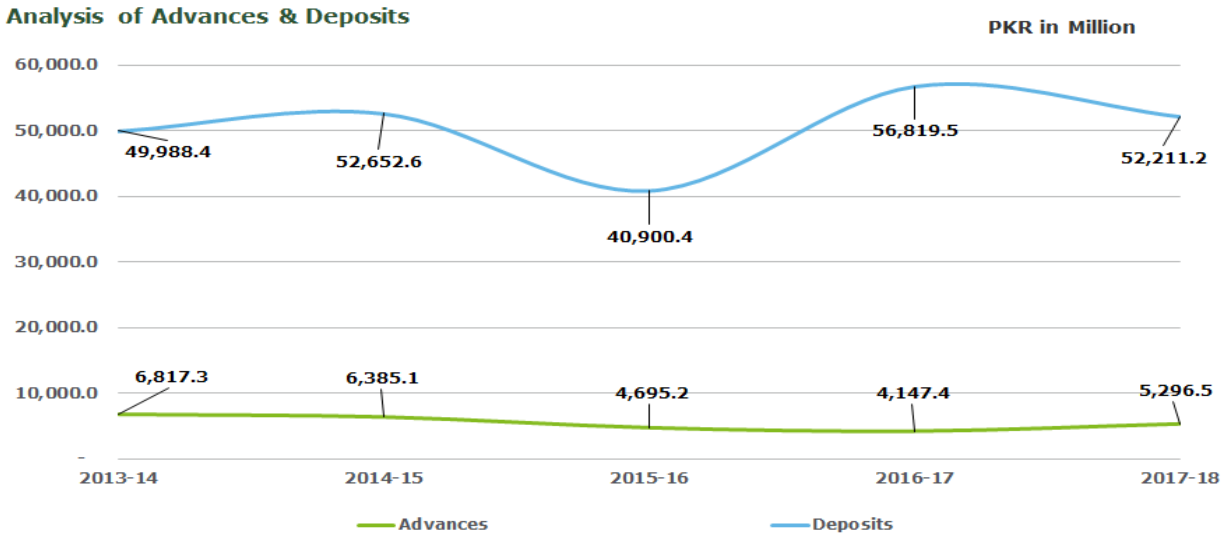
4.1.12 Manufacturing sector of Pakistan, in FY 2017-18, altogether employed 16.1% of total labour force elevating up from 15.3% in FY 2014-15 depicting a favourable rise; however, Balochistan, falls last among other provinces in employed labour force in manufacturing sector with only 5.55% of labour force allocated in total which, if quantified, amounts to nearly only 139,000 workers.[21]

4.1.13 Pakistan is ranked 136 among 190 economies in the ease of doing business according to the latest World Bank annual ratings. The rank of Pakistan improved to 136 in 2018 from 147 in 2017. Ease of Doing Business in Pakistan averaged 118 from 2008 until 2018, reaching an all-time high of 148 in 2015 and a record low of 85 in 2009. However, the World Bank, in its latest report, only provided ranks for the cities that are considered economic hubs of Pakistan including Karachi and Lahore.[22]

4.1.14 Rankings on national scale provided by the World Bank was based on the survey conducted in 2010 where Quetta was ranked at 12 amongst 13 ranked cities of Pakistan in terms of ease of doing business. This highlights the need for introduction of key interventions focused towards improvement in key indicators for ease of doing business that includes starting a business, dealing with construction permits, registering property, paying taxes, trading across border, and enforcing contracts.

[20] Labor Force Survey 2017-18
[21] Annual Report of Labor Force Survey 2017-18
[22] World Bank Flagship Report | Doing Business 2019 | Economy Profile Pakistan

Figure 9: Balochistan Private Sector Snapshot



Source: State Bank of Pakistan

4.1.15 The above analysis exhibits a massive gap in deposits and advances from the financial intermediaries which depicts the fact that private sector does not tend to reinvest due to low investor confidence and lack of focus on SMEs. Advances from banking sector in the form of loan or any financial facilitations are excessively low indicating the stagnation and immobility in prosperity of overall business sector inclusive of existing and new setups.

Special Economic Zones

4.1.16 Balochistan faced a number of problems that have restricted industrial development because of the lack of substantial investment, weak institutions, unskilled human resources due to limited vocational education, lack of modern technology, and high business cost. The CPEC provides a fast-tracked industrial development opportunity through development of Special Economic Zones (SEZs). SEZ is a strategic policy instrument for a rapid industrialisation and economic development. SEZ is defined as a separate zone, subject to its own tax system, which differs from the country's existing tax system. SEZ is administered by a competent authority and supported by high-quality infrastructure, regional connectivity, and uninterrupted energy supply. Shenzhen SEZ in China is one of the most successful SEZs which started in 1980, when China first opened up its economy from the central planning system. The Shenzhen SEZ, thus, served as an experiment to assess industrialisation experience of China under market-based reforms.

4.1.17 The idea of SEZ is not new in Pakistan. To boost the industrial sector in Pakistan, Industrial Estates (IEs) and Export Processing Zones (EPZs) were established in all the provinces since the 1960s. The first industrial estate called "Sindh Industrial Trading Estate" was established in 1963, whereas the first Export Processing Zone (EPZ) was established in 1989 at Karachi. In 2012, special incentives to enterprises were announced for SEZs. These SEZs are now in the development phase whereas few of them are operational. However, more initiatives regarding industrial development were announced under the China Pakistan Economic Corridor (CPEC) in 2015.

4.1.18 Federal, along with four provincial governments, identified 46 SEZs in 2015. Out of the 46 identified sites, 9 Priority Special Economic Zones (PSEZs) were selected initially under CPEC to start the process of industrial cooperation between the two countries. The federal government, in collaboration with China, is planning to facilitate relocation of Chinese firms along with the development of new industries in these 9 designated PSEZs. In December 2018, both countries also signed a MoU for the industrial cooperation and development in the sector of minerals, mines, petrochemicals, textiles, iron and steel through joint ventures and relocation of industries from China to Pakistan[23].

4.1.19 The GoB is committed to form a strong industrial base to begin a new age of development by attracting foreign investment for industrial cooperation and development in minerals, mines, petrochemicals, iron and steel sectors through joint ventures and relocation of industries from China to Pakistan.

Status of Special Economic Zones in Balochistan

4.1.20 The Mining and Minerals are the major potential sectors for investment in industrial sector in Balochistan. The GoB is fully cognizant of the need for industrial development in the province by allocating land for industrial parks *(an area zoned/planned for the purpose of industrial establishment)*. The construction of 200 acres in BSEZ has already been completed by the Department of Industries and Commerce with the help of the federal government funding. The GoB will need further funding from the federal government for construction of 800 acres in BSEZ since it is beyond financial and engineering capacity of the Industries Department.

Box 1: Incentives for SEZs

i. Exemption from all customs duties and taxes for all capital goods imported into the country for ten years.
ii. Exemption from all taxes on income for a period of ten years.
iii. One-time exemption from all taxes on income in relation to the development and operation of the SEZ for a period of five years.
iv. One-window facility by BOI and at Zone
v. Transparent procedures.
vi. Dry port facility.
vii. No sales tax on input goods including electricity/gas bills.
viii. Duty-free vehicles allowed under certain conditions.
ix. Duty-free import of machinery, equipment and materials.
x. Security arrangements.

4.1.21 Under the CPEC, Bostan has been identified as one of the nine priority SEZs in the country. It is located in district Pishin on the main CPEC western alignment. The development work on 200 acres has already been started through the federal PSDP of Rs. 400 million. All necessary allied facilities are available. Feasibility study has also declared it a suitable site for establishing SEZ.

4.1.22 Besides Bostan as SEZ, Khuzdar Industrial Zone has also been identified for development on 5000 acres of land. It is located at the junction of Gwadar-Ratto Dero-Quetta-Zhob. Land acquisition is under process. Site is suitable for mineral related industries. Feasibility study is yet to be conducted.

[23] "8th Joint Cooperation Committee of CPEC"

4.1.23 In addition, Turbat Industrial Zone, having 1,000 acres of land, has also been identified for this purpose. It is located on the main motorway. Agro-based industries such as dates processing units, and cement, and steel factories can be established. All allied facilities are available except gas. Feasibility study is yet to be conducted[24].

Salient Features of Bostan Special Economic Zone

4.1.24 The GoB allotted 1,000 acres land at an ideal location on the proposed western alignment of CPEC.

4.1.25 Proposed Bostan SEZ has basic facilities such as natural gas, electricity, streetlights and internal roads.

4.1.26 The site is well connected via National Highway at a distance of 86kms to Tehsil Muslim Bagh, an area blessed with one of the richest deposits of Chromite in the world. Therefore, Bostan SEZ is considered an ideal site for Chromite processing plants and allied industries.

4.1.27 The close proximity of the site and its connection through National Highway with Quetta Airport at a distance of 35kms makes it ideal for transportation.

4.1.28 The area is rich in apples/grapes orchards; hence, ideal for establishment of food industries.

4.1.29 The law and order situation coupled with presence of strong business oriented communities of Chaman (District Killa Abdullah) and Quetta may provide managerial and entrepreneurial support for establishment of industries and businesses at Bostan SEZ.

Types of Industrial Development at BSEZ

4.1.30 Based on the feasibility study, the following types of industries are expected to be developed in BSEZ:

- Fruit processing industry
- Agriculture machinery
- Motor bike assembly
- Chromite refining
- Cooking oil industry
- Electric appliances
- Halal food industry
- Ice and cold storage
- Ceramic industry

Transportation Planning at BSEZ

4.1.31 The GoB is cognizant with transportation planning which is required in the operation, provision and management of facilities and services for the modes of transport to achieve safer, faster, comfortable, convenient, and economical and environment friendly movement of people and goods.

4.1.32 Therefore, Bostan Industrial Area is designed to provide ample space for movement of traffic. In first phase, 200 acres area is designed by providing 45 meter wide major road

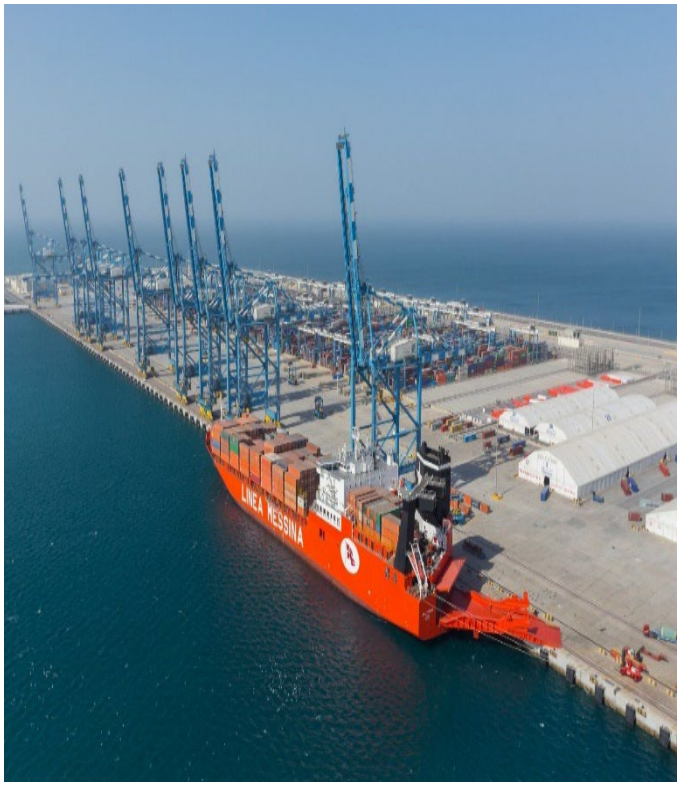
[24]Bostan SEZ Feasibility, Hybrid Technics Pvt. Ltd., 2018

and 25 meter wide arterial roads for easy movement of traffic and easy access to plots. A 24/7 traffic survey is required for actual number of trucks and cars to be logged to understand traffic flow, appropriate width and specification of roads and what arrangements can be made for trucking station within the zone to accommodate both China and Gwadar bound traffic.

4.1.33 Under the federal PSDP, Hub Special Economic Zone is being established. This will give boost to economic activities in Balochistan.

Gwadar Port

4.1.34 The development and operation of Gwadar Free Zone was handed over to the COPHC under an agreement between China Overseas Ports Holding Company (COPHC), Gwadar Port Authority (GPA) and Singapore Port Authority in 2013. COPHC has invested $250 million in the port renovation so far. Five new quay cranes, a 100,000 M2 storage yard, a seawater desalination plant with capacity of 220,000 gallons pure water/day, 2 sets of sewage disposal systems and cargo handling equipment have been installed and 80,000 M2 green space has been added to the port area. 400,000 tons of cargoes have been handled by Gwadar Port in 2017.



Gwadar Port berth

4.1.35 The Gwadar Free Zone is located in the northern part of Gwadar, about 7km away from the port. The planned development period is from 2015 to 2030 and is divided into four phases. The 923-hectare Free Zone includes an initial area (25 hectares) and the northern area (898 hectares). The initial area is located in the west of the existing port. Its main purpose is to play a pilot role in setting up industries and to increase cargo capacity for the port. The construction of the initial area includes a few projects: infrastructure, business center, trade exhibition hall, cold storage, and warehouse. By January of 2018, all those constructions have been completed. The Gwadar Free Zone was inaugurated, and the first International Expo was held in January 2018.

4.1.36 Around 30 companies have invested in the Free Zone with direct investment of about $474 million. With the construction of the free zone, the city of Gwadar will become a commercial hub of the region in the near future.

4.1.37 The project of Gwadar East Bay Expressway contract was signed in September 2015 and the construction started in November 2017. The construction period of the project was 36 months with the designed speed of 100 kilometers per hour, which is implemented by the China Communications and Construction Company (CCCC). After

inauguration, the project will become the main channel for the cargo distribution of Gwadar Port and a vital communication line to connect the Free Zone in southern and northern areas of Gwadar.

Sustainable Development Goals

4.1.38 The Sustainable Development Goals directly relevant to Industry and Trade are Goal 8: Decent Work and Economic Growth and Goal 9: Industry, Innovation and Infrastructure.

SDG 8 – Decent Work and Economic Growth

4.1.39 The targets of SDG 8 primarily demand focused interventions for generating employment opportunities for the public in general and youth in particular through sustained and inclusive growth of industrial sector contributing positively towards provincial GDP. The historical provincial GDP growth for Balochistan has remained at 3% from FY 2000 to FY 2008, dropping to 1.7% from FY 2008 to FY 2013 and then recovering to 2.7% from FY 2014 to FY 2015. The contribution of the industrial sector in the overall provincial GDP has remained around 26% from FY 2000 to FY 2015[25] making it the third largest sector after agriculture and services. In order to achieve a 7% growth target by 2030 for Provincial GDP as per SDG 8, the GoP needs to prioritise its efforts for industrial development and job creation. The strategy to be adopted for this purpose shall therefore be focused towards enhancing productivity, technological advancements and innovation, access to credit and human capital development. Detailed indicators and targets for SDG 8 to be achieved by Balochistan are provided at **Table 8 of Appendix A**.

SDG 9 – Industry, Innovation and Infrastructure

4.1.40 SDG 9 also guides towards inclusive and sustained industrialisation through promoting industrial infrastructure, enhancing connectivity and integrate innovation via increased research and development interventions focusing on manufacturing and small-scale enterprises. As per Balochistan Development Need Assessment (Part III – GDP: Performance and Structure), the share of Balochistan's Total Manufacturing Value Added in National Manufacturing Value Added was only 7.5% in FY 2010-11. The Large-Scale Manufacturing (LSM) holds 59% share in FY 2010-11 while Small Scale Manufacturing (SSM) holds 16% share in Manufacturing Value Added leaving behind 25% which is contributed by Slaughtering. The share of Balochistan LSM in National LSM Value added was 6.3% and share of Balochistan SSM in National SSM was only 4%. The above figures indicate that an effective and comprehensive strategy is required to be adopted by the GoB for achievement of targets delineated by SDG 9 and for the development of industrial sector through provision of a conducive environment for organisational development (such as economic zones) allied facilities such as roads and other basic utilities and skilled labour force for enhancing productivity. Detailed indicators and targets for SDG 9 to be achieved by Balochistan are provided at **Table 9 of Appendix A**.

[25]Social Development in Pakistan Annual Review 2012-13, SPDC and Growth of Provincial Economies, Institute of Policy Reform (IPR) Brief 2015

4.1.41 It is imperative that the GoB shall endorse the SDG targets and incorporate linkage of SDGs in provincial planning in order to promote industrialisation and to create employment opportunities for the people of Balochistan.

Opportunities under CPEC

4.1.42 The Government of Balochistan identified nine locations to set-up SEZs: Bostan Industrial Zone, Dasht Industrial Zone, Turbat Industrial Zone, Industrial Zone at the Junction of Qilla Saifullah, Zhob and Loralai, Gwadar Industrial Estate, Lasbela Industrial Estate, Dera Murad Jamali Industrial and Trading Estate and Winder Industrial and Trading Estate. From the above, Bostan Industrial Estate has been prioritised to be developed as Special Economic Zone under CPEC.

Bostan Special Economic Zone

4.1.43 As per the Bostan SEZ Feasibility Report, the key features for Bostan Special Economic Zone include:

i. 1,000 acres of land allocated at the proposed western alignment of CPEC;
ii. Proposed SEZ is free of any encumbrances;
iii. Availability of allied facilities like natural gas, electricity, streetlights, and internal roads;
iv. Potential for establishment of food industry due to good quality of food growing in the area;
v. Potential for chromite processing and allied industry due to connectivity with national highway with 86 km distance from chromite rich Tehsil Muslim Bagh; and
vi. Close proximity and connection with national highway with a distance of 35 kms from Quetta Airport.

4.1.44 The following industrialisation potential has been identified under BSEZ Feasibility:

Table 4.2: List of Potential Industries under BSEZ

Sr. No.	Sector	Potential Industries
1	Minerals	▪ Ferrochrome Plants ▪ Cement Plants ▪ Chrome Chemical Plants ▪ Chrome Magnesite Bricks Plants ▪ Manganese Mining, Processing and Export ▪ Ceramics
2	Automobile	▪ Auto Parts Manufacturing ▪ Motorbike Assembly

Table 4.2: List of Potential Industries under BSEZ		
Sr. No.	**Sector**	**Potential Industries**
3	Agriculture	▪ Apple Treatment Plants ▪ Date Processing Plants ▪ Fried/ Dried Onion plants ▪ Cold Chains, Cold Storages ▪ Cut Flower Production ▪ Plants to manufacture equipment for Green House Framing/ Tunnel Farming ▪ Apricot and Olive Oil Extraction Plants ▪ Green House Farming/ Tunnel Farming ▪ Fruit Nurseries, Fruit Packing Houses ▪ Canned Fruits with Syrup Processing Units ▪ Tomato Paste Manufacturing
4	Livestock	▪ Slaughterhouses ▪ Cold Storages

4.1.45 The above potential of Bostan Special Economic Zone can be materialised through introduction of investor friendly policies and facilities at the SEZ on a timely and prioritised basis.

Development of Gwadar and establishment of economic zones

4.1.46 Gwadar Port projects mainly include East Bay Expressway, Gwadar International Airport, construction of Breakwater, dredging of berthing areas and channels, integrated development of Gwadar city/region and development of related infrastructure for Free Zone and EPZs, Gwadar.

4.1.47 At present, the following areas have been allocated as free zones and export processing zones in the industrial locations of Gwadar. Land has already been earmarked/acquired for these purposes:

a. Gwadar port free zone: 2,280 acres
b. GIEDA industrial zone: 3,000 acres
c. EPZA export processing zone: 1,000 acres

4.1.48 Infrastructure is being developed for these industrial zones, which includes access roads, internal roads, water, gas, power, custom facilities, fencing, security, some warehouses, office and other allied infrastructure.

Priority Areas

4.1.49 The GoB recognises that promoting industry and trade in the province shall not only facilitate in increasing the overall output of the province in terms of Provincial GDP but also benefit the well-being and socio-economic status of the people of Balochistan. Accordingly, the GoB has prioritised specific areas for developing Industry and Trade sector, which are indicated in the ensuing paragraphs.

4.1.50 The ease of doing business in Balochistan shall be improved through public administrative reforms by removing unnecessary regulatory tiers and simplifying procedures, introduction of information technology-based solutions and one stop shops for business registration. The computerisation of land records as adopted by other

provinces shall also facilitate in improving the results of indicators for registering a property. Increased connectivity of business hubs with ports for cross border trading shall reduce the transportation costs for import and export of goods.

4.1.51 There is a need to boost the SME sector of the province through targeted interventions and creating a conducive environment through improving access to skills, infrastructure and finance. The skill shortage among the workforce and poor management practices limits the adoption of innovation and productivity of SMEs. Enabling infrastructure such as establishing and developing industrial and economic zones, startup incubation coupled with funding and provision of ICT infrastructure play a vital role in nurturing and facilitating SMEs. Availability of finance is key to facilitate SMEs in scaling up their operations. It is important for the GoB to engage with SBP for introducing flexible financing schemes for the private sector in general and specifically for SMEs.

4.1.52 The development of existing industrial estates and establishment of new industrial estates on priority basis shall provide the required platform for industrial investment in the province. This shall also require readiness of local labour force to be employed in these industries. Therefore, the GoB shall invest in training and development for creating job ready human resource.

4.1.53 Business startups can prove to be the drivers of innovation and growth of the business sector of Balochistan provided region specific strategies for business incubation and funding support are available for such ventures. The GoB recognises this opportunity and intends to facilitate business startups through establishing new business incubation centers and facilitating existing ones through extending funding support.

Targets

4.1.54 GoB has set the following targets for Pillar 1 to be achieved by FY 2026:

Table 4.3: Baseline and Targets – Pillar 1

Description	Baseline	Targets
Manufacturing Employment	138,050 *(existing number of labor employed in Manufacturing Sector)*	420,000 New Jobs by FY 2026
Average Hourly Earnings per hour	Rs. 118.24	Rs. 177.24
Unemployment Rate	4.09%	2.86% (30% Reduction)

Target 1: Manufacturing Employment as a proportion of total employment

4.1.55 The manufacturing employment in Balochistan is 5.55% (i.e. 138,050) with male employed persons of 4.54% and female employed persons of 1.01%[26]. The GoB intends

[26] Pakistan Labor Force Survey 2017-18

to increase the manufacturing employment through proposing key interventions in the industrial sector and creating 420,000 jobs by FY 2026.

Target 2: Average hourly earnings

4.1.56 The average hourly earnings of employees in Balochistan are Rs. 118.24 per hour[26]. The GoB intends to increase the average hourly earnings of employees in Balochistan and achieving a target overall average earnings of Rs. 177.24 per hour by FY 2026.

Target 3: Reduction in Unemployment Rate

4.1.57 The GoB intends to reduce the existing unemployment rate of 4.09%[26] in the province by 30% by the end of FY 2026.

Strategy

4.1.58 The GoB shall reassess the ease of doing business in Balochistan in order to determine the current standing of the province against key indicators of ease of doing business i.e. starting a business, dealing with construction permits, registering property, paying taxes, trading across border, and enforcing contracts. This shall facilitate the GoB in prioritising the efforts for improving the ease of doing business across the province.

4.1.59 The availability of tax incentives shall be a triggering factor for local and international investment in BSEZ and Gwadar Free Zone. The GoB shall coordinate with the Federal Government for notification of tax holidays and exemptions on custom duty on imports of machinery and equipment for both developers and business units of BSEZ, Hub SEZ and Gwadar Free Zone. Additionally, exemptions on sales tax on services shall be considered.

4.1.60 Given the fact that construction of 200 acres in BSEZ has already been done, the GoB shall expedite to engage private sector / the Federal Government for the development of 800 acres in BSEZ since it is beyond the financial and engineering capacity of the Industries Department of the province.

4.1.61 BSEZ will need to be developed according to the international standards in order to attract foreign investments. It would be prudent to invite international investors to construct this industrial zone. The developer may also be allowed to generate and sell electricity to the factories as the sale of electricity would significantly improve profitability of international investors. In this context, the GoB shall take the following actions:

a. Attract international investments. The Public Private Partnership 2018 Act has already been promulgated and detailed rules and regulations are being finalised by the GoB. International investments would bring in quality construction into the Pakistani market besides encouraging local contractors to learn the latest techniques for construction of industrial zones.

b. One of the best ways of transforming benefits to Balochistan population is to establish local partnerships with foreign investors. In this way, acquiring technology knowledge and promoting investments shall result in higher level benefits.

c. The GoB shall encourage investors from other provinces to invest in BSEZ, which shall benefit them as well as the local population. It takes up to three years for manufacturer to be functional and become profitable if a factory is based in a city like Karachi. A factory in Balochistan will take double the time to become operational. Hence, the GoB shall exempt all projects in the SEZs for 10 years. Reduced setup cost which is being provided by SEZ in terms of reduced custom duty, sales tax and a '10-year relief' in income tax is a major incentive for manufacturer who shall encourage investors to setup units in SEZ.

d. TVETA Balochistan shall be engaged to extend trainings based on industrial labor force needs of BSEZ / Hub SEZ and other industrial estates and projects to be implemented under CPEC.

4.1.62 The GoB shall facilitate the completion of Phase II of Hub Industrial and Trading Estate through provision of 5,000 acre of land to LIEDA and ensuring availability of allied utilities (water, electricity and gas).

4.1.63 Strengthen organisations' capability and capacity of Industry and Commerce Department through a comprehensive stocktaking of industrial data and information of the province for the purpose of research and analysis to aid decision-making and policy development.

4.1.64 Revitalise the Balochistan Small Industries Corporation by converting it into a Small Enterprise Development and Finance Institution in partnership with private sector for providing project development and financing support to small enterprises, service industry as well as trading units. It shall also promote and establish small industrial zones throughout the province.

4.1.65 The GoB shall develop Small Industrial Zones (SIZs) at Pishin for Horticulture, Taftan and Chaman for trade facilities and Khuzdar, Chaghi and Muslim Bagh for mineral development.

4.1.66 The GoB shall establish Incubation Centers at divisional headquarter level with the investment of private investors on an incremental basis. These centers will be state of the art to provide technical skills blended with latest Information Technology and digital support. The main recipient of these centers will be youth and once the youth attain desired skills, they will come up with a business plan. The said business plan shall be financed by MFIs (interest free or subsidised interest rate). The centres shall be managed by private investors and TEVTA shall regulate and facilitate them by creating enabling environment through introducing policies which promote growth and development of youth at large in Balochistan.

4.1.67 The GoB shall establish a venture capital fund with the partnership of private sector to attract investment in startups of new businesses. The GoB shall establish the fund with the total amount of Rs. 100 million, contributing 50% share as matching fund and the remaining 50% shall be contributed by private sector from their corporate social responsibility fund. The key private sectors include oil and construction companies, banks, multinational companies engaged in different projects under CPEC. The fund shall be regulated by autonomous governing board representing experts and leaders of private institutions, TEVTA, departments of Finance, Planning and Development and representatives from the Council of Social Safety Protection and Poverty Alleviation

Balochistan. The detail TORs and SOPs will be developed in consultation with experts from all relevant stakeholders.

4.1.68 In order to facilitate credit and financing to SMEs and startups, the GoB shall coordinate with SBP for introduction of a credit guarantee scheme. The credit guarantee scheme shall be extended to all underserved areas of Balochistan for revival of economic and business activities. Philanthropist organizations / civil society organizations be partnered with for implementing successful microcredit models.

4.1.69 SMEDA and BBOIT task shall be to carry out and publish feasibility studies for the development of allied industries related to CPEC and existing local industries e.g. rubber and other allied petrochemical industry, ceramic and cutlery industry for minerals etc.

4.1.70 The GoB shall establish a Technology Park at Quetta to provide infrastructure and incentives to encourage development of technology-based companies. This technology park shall engage with entrepreneurs, universities, knowledge networks, venture capitalists and industry professionals to form a knowledge eco system to facilitate competition of local organisations and human capital in both domestic and international markets.

Budget 2021 – 2026

Table 4.4: Industry and Trade

Sr. No	Strategy	FY1, FY 2	FY3, FY 4	FY5, FY 6	Total	Proposed FA Portion
1	Assessment of ease of doing business in Balochistan	100	-	-	**100**	100
2	Development of BSEZ on remaining 800 acres of land (Initial investment cost)	2,800	-	-	**2,800**	2,800
3	Setting up of Technical Training Institute at BSEZ	500	500	-	**1,000**	-
4	Facilitation in Completion of Phase II Hub Industrial and Trading Estate through provision of 5,000 acre of land to LIEDA and provision of utilities *(Initial investment cost)*	-	1,350	2,650	**4,000**	-
5	Strengthen the organizational capability and capacity of Industry and Commerce Department	80	-	-	**80**	-
6	Development of SIZs at Pishin for Horticulture, Taftan and Chaman for trade facilities and Khuzdar, Chaghi and Muslim Bagh for mineral development	-	420	840	**1,260**	-
7	Credit Guarantee Scheme for financing of SMEs and startups in coordination with SBP / philanthropist / civil society organizations	600	760	1,250	**2,610**	2,610
8	Engaging BOI and SMEDA for conducting feasibility studies	100	100	-	**200**	200
9	Establish Incubation Center at divisional Headquarter Level	-	204	102	**306**	-
10	Establish Venture Capital Fund in collaboration with Private Sector	205	225	245	**675**	-
11	Construction of Technology Park at Quetta	-	204	-	**204**	-
12	Throw forward of the schemes (PSDP 2021-22)	961	841	601	**2,402**	-
	Total	**5346**	**4,604**	**5,688**	**15,637**	**5,710**

Pillar 2: Improving Infrastructure and Regional Connectivity

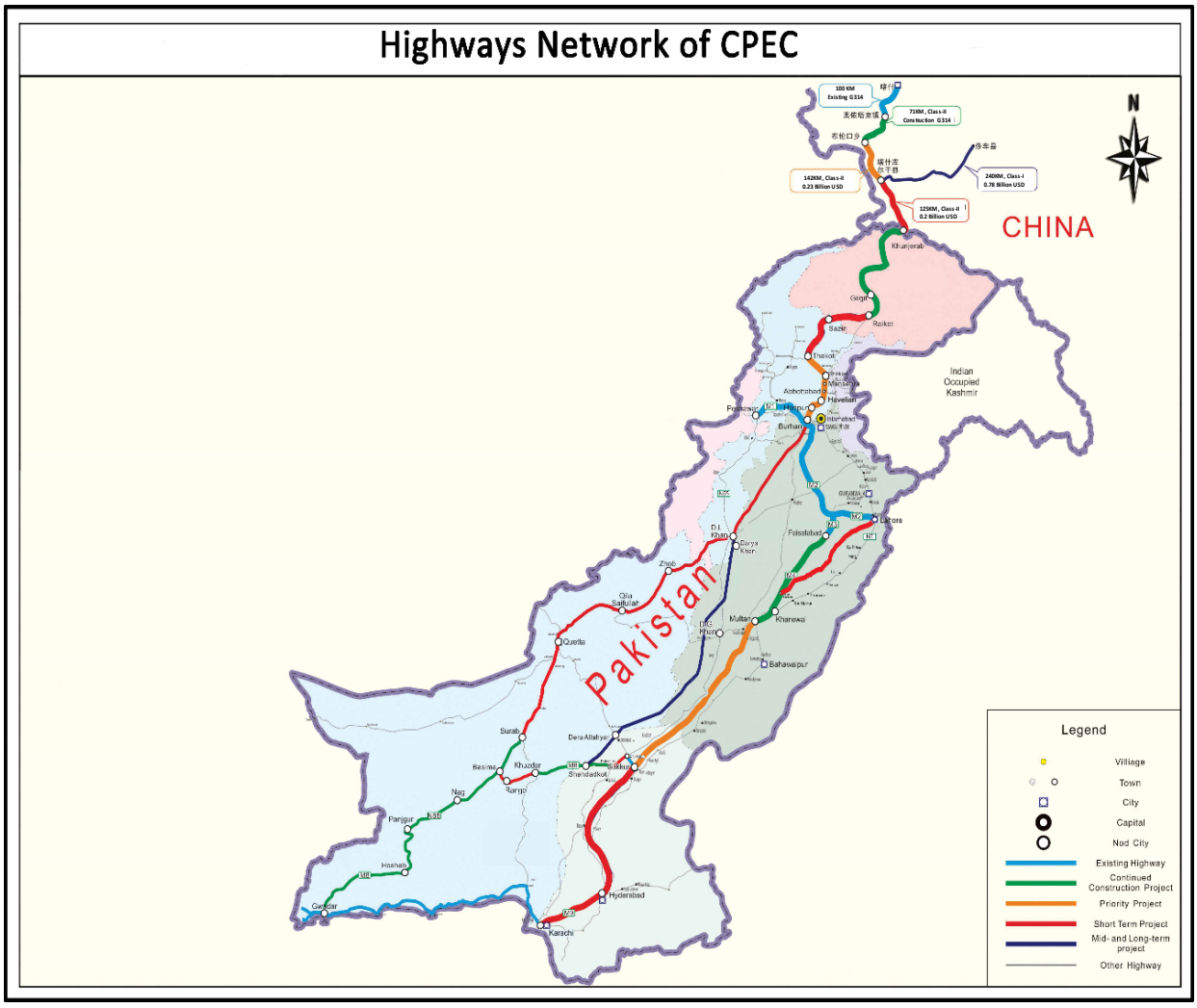
4.2 Pillar 2: Improving Infrastructure and Regional Connectivity

2A: CPEC and Urban Development

Baseline

4.2.1 China Pakistan Economic Corridor (CPEC) is a mega project between Pakistan and China with an initial $46 billion agreement equivalent to 20% of Pakistan's GDP with approximately $28 billion worth of fast-tracked "Early Harvest" projects. Later on, the overall CPEC portfolio extended to $60 billion with $35 billion Foreign Direct Investment (FDI) in the energy sector by Chinese investment companies and the remaining $25 billion public investments financed either through commercial or government-to-government loans from Chinese entities for infrastructure projects or grants for social sector projects. Connectivity, via CPEC, will increase economic activities, enhance provincial[27] and national GDP growth rate and create employment opportunities across the country.

Figure 10: Highways of Network of CPEC



[27] Anwar, Talat (2015). *China-Pak Economic Corridor: Economic and Social Prospects*, Policy Brief, CPS Quarterly, January-March, 2015, Issue No.5, COMSATS Institute of Information Technology, Islamabad

Source: CPEC Maps – www.cpec.gov.pk

4.2.2 Connectivity has strategic dimensions for Balochistan. Lack of connectivity has been the main challenge for the takeoff of Gwadar port and the mineral wealth of the province. Lack of connectivity within the province and between the main regions where population concentrates and growth poles surrounding the province, remains a major development challenge.

4.2.3 Increased connectivity with CPEC roads network will boost economic growth and bring prosperity in Balochistan since the corridor will pass through some of the poorest districts of the province, which, in turn, will spur the process of integration of Balochistan's economy with surrounding regions of other provinces (See **Figure 10**).

4.2.4 The CPEC will be a catalyst to bring in investment in urban development for creating growth poles, which can serve as centers from which growth spread effects stimulate the surrounding economy of Balochistan's scattered population.

4.2.5 Historically, growth of relatively large urban settlements has been rare in Balochistan. Except Quetta and Gwadar in recent years, the growth of urban settlements has largely been a response to changing trade routes and transportation systems.

4.2.6 Urbanisation has been proceeding sluggishly in Balochistan. As per 2017 census, 23.9% population was urban. The districts in which the urban population exceeds 30% are Dera Bugti, Jafarabad, Kech, and Khuzdar. It exceeded 61% in Gwadar whereas Lasbela has 49%, Sibi has 48%, and Quetta has 44% urban population. Rate of growth of population in these districts significantly exceeds the provincial average.

4.2.7 Balochistan is the least urbanised province of Pakistan; however, the rate of urbanisation is accelerating. Out of 12.3 million population of Balochistan, 3.4 million people were urban residents as per national census. Balochistan faces a range of challenges in urban development including lack of adequate institutions and suitable infrastructure – water, sanitation, housing, transportation as well as adequate education and health services. Other than Quetta, most of the urban centers in the province are basically small towns, which have overgrown in last few decades through spread of informal housing and bazaar areas having full coverage of amenities. Over the last decade, urbanisation has taken pace in Gwadar, Lasbela and Sibi. There is now a strong case for undertaking a planned upgrade and development of bigger towns for creating growth poles in a manner that triggers growth in the semi-sedimentary population in the hinterlands as well.

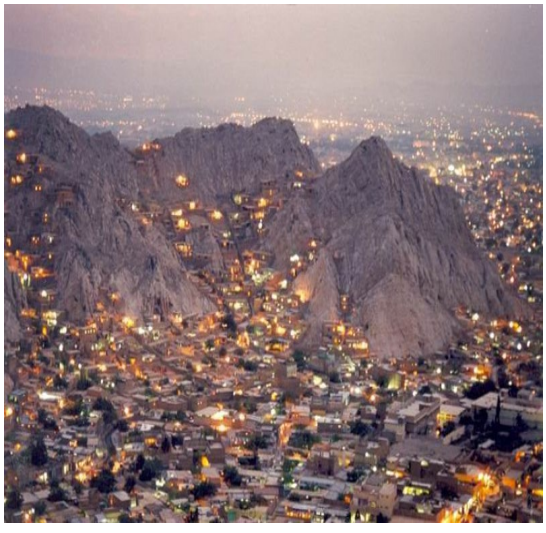
Table 4.5: Balochistan District Population, 2017

Sr. No.	Districts	Rural	Urban	Total Population
1	Awaran	87,670	34,341	**122,011**
2	Barkhan	159,380	12,176	**171,556**
3	Chagai	209,689	16,319	**226,008**
4	Dera Bugti	213,302	99,031	**312,333**
5	Gwadar	101,915	161,599	**263,514**
6	Harnai	72,463	24,554	**97,017**
7	Jafarabad	355,808	158,005	**513,813**
8	Jhal Maksi	141,400	7,825	**149,225**
9	Kachhi	202,598	34,432	**237,030**
10	Kalat	339,774	72,458	**412,232**
11	Kech	606,980	302,136	**909,116**

Table 4.5: Balochistan District Population, 2017				
Sr. No.	**Districts**	**Rural**	**Urban**	**Total Population**
12	Kharan	111,497	44,655	**156,152**
13	Khuzdar	525,071	277,136	**802,207**
14	Killa Abdullah	608,236	149,342	**757,578**
15	Killa Saifullah	280,071	62,743	**342,814**
16	Kohlu	196,924	17,426	**214,350**
17	Las Bela	295,048	279,244	**574,292**
18	Lehri	101,438	16,608	**118,046**
19	Loralai	332,462	64,938	**397,400**
20	Mustang	231,332	35,129	**266,461**
21	Musakhel	152,879	14,138	**167,017**
22	Nasirabad	393,947	96,951	**490,898**
23	Nushki	132,410	46,386	**178,796**
24	Panjgur	236,061	80,324	**316,385**
25	Pishin	593,339	143,142	**736,481**
26	Quetta	1,274,494	1,001,205	**2,275,699**
27	Sherani	153,116	-	**153,116**
28	Sibi	71,145	64,427	**135,572**
29	Sohbatpur	187,671	12,867	**200,538**
30	Washuk	154,334	21,872	**176,206**
31	Zhob	264,296	46,248	**310,544**
32	Ziarat	157,016	3,406	**160,422**
	Total	**8,943,766**	**3,401,063**	**12,344,829**
Source: Population Census of Pakistan, 2017				

Quetta; building a leading capital city

4.2.8 Quetta has the highest population individually as compared to other districts of the province. The urban population of Quetta is 44%[28].



Quetta City

4.2.9 Socio-economically Quetta is better developed with 65% of households living in their own dwelling units; 40% of the population has access to tap water, 97% of households utilise gas for cooking purpose. The 75% of households are connected to underground drainage system[29]. While agricultural production is limited, Quetta is in the centre of fruit hub; and mineral deposits are also extensive in the region. Despite being the most populated region and hub of the economy, Quetta has to go far to graduate into a city, which encapsulates the knowledge and technology for leading other regions in the province.

[28] Population Census of Pakistan 2017
[29] Pakistan Social and Living Standard Measurement Survey, 2019-20

Pishin; a horticulture hub

Band Khushdil Khan, Pishin

4.2.10 Pishin's population is 736,481 as per the Population Census 2017. Pishin's economy benefits from partial integration with Quetta. The trading sector is well developed and more than a third of the workforce comprises commercial workers; skilled agricultural workers constitute another quarter but manufacturing skilled workers represent only 4% of the workforce. Trade accounts for about 40% of the district gross value added followed by agriculture (14.5%) and transport, storage and communication (8.5%). This seems low, especially compared with other northern districts[30].

4.2.11 The social development indicators show that 90% of the houses own their dwellings. A total of 55% of the households have access to tap water and 65% of the houses are connected to the underground drainage system[31].

Lasbela; strengthening industrial base

Hub Power Plant, Hub Tehsil, Lasbela

4.2.12 Lasbela is one of the most developed districts of Balochistan. According to the World Bank estimates, Lasbela has the highest per capita product value in Balochistan. Here, manufacturing accounts for well over a third of district product, the highest in the province.

4.2.13 LIEDA operates 7 industrial estates in the district and has commenced phase II of Hub Industrial Estate. These plans will all be contingent upon the availability of additional electricity and water in the region. There is a need to prioritise construction of the dams and the power plant to speed up growth in the district. Despite being one of the provincial growth poles, socio-economic indicators remain weak. The 66% of the households own their dwellings, 40% rely upon gas for cooking, 29% houses have tapped water, and 45% of births take place at home. Literacy levels are comparatively low as Lasbela ranks at Number 16 among all the districts of Balochistan in terms of literacy. The area has suffered from drought as well heavy rains and floods leading to loss of life (both human and livestock and collateral damages).

[30] Balochistan Comprehensive Development Strategy 2013-2020
[31] Pakistan Social and Living Standard Measurement Survey, 2019-20

Kech (Turbat); a dates' hub

Punnu Fort , Kech (Turbat)

4.2.14 Kech (Turbat) is the largest city of Makran division having an airport and connected by road to Gwadar in south, Panjgur and Awaran in north and north-west. The district population is 909,116 is as per Population Census 2017. According to the World Bank estimates, about 17% of district product was in the manufacturing sector, 25% in the trade sector and 22% in agriculture[32].

4.2.15 The overall social sector indicators in the district are weak as 54.75% of houses have roofs made of bamboo/wood and 40.85% houses have roofs made of T-R/Girder. Tap water is available to only 11% of the population and 26% of the population use gas as fuel for cooking[33]. Turbat town has universal access to electricity but villages in the district largely lack this access.

Gwadar; building a port city

Gwadar City

4.2.16 The establishment of Gwadar port city is seen a major event in the recent development history of Pakistan (and Balochistan). It is being developed as a major outlet for international trade through CPEC. Gwadar's population is 263,514 as per Population Census 2017. Before the start of development under CPEC, the local economy is dominated by agriculture including fisheries large part of which is taken to Karachi for both local market and exports and there is very little value addition which is happening in Gwadar.

4.2.17 The physical and social infrastructure is being developed gradually. Tap water is available to 82% of the population and cooking is carried out on gas by 42% of the household[33]. A Master Plan for the development of Gwadar Free Zone (2017-2018) has been developed.

Loralai; a Minerals Hub in North

[32] Balochistan Comprehensive Development Strategy 2013-2020
[33] Pakistan Social and Living Standard Measurement Survey, 2019-20

4.2.18 Loralai has an existing population of 397,400 as per the population census, 2017. A large part of labour force, about 40% is in agriculture and 31% consists of unskilled workers. This is a mining district and about a third of the gross district product is generated in the mining sector; agriculture accounts for a quarter of district value added; manufacturing and trade is roughly equivalent at about 12% each. Private sector credit was concentrated in mainly agriculture and manufacturing.[34]

Chamalang Coal Mine, Loralai

4.2.19 Coal, Marble and Fluorite are minerals produced in the district, whereas, occurrences of Glass sand, Talc are also reported. Gypsum and Anhydrite is also found in large quantity. Coal is the major mineral of the district and is mainly found in Duki and Chamalang.[35]

4.2.20 Social sector statistics are poor. The 72.83% of the houses have wooden or bamboo roof. Only 30% of households have access to tap water and 19% use gas as the fuel for cooking. About 68% of houses own their dwelling[36].

Khuzdar; a midway agriculture span

4.2.21 Situated right in the center of the province, Khuzdar is very well a connecting point of not only roads but also cultures as it connects Bela with central Balochistan and connects Makran with the central and eastern districts. A concentrated attention on Khuzdar can further help it grow into a center point for Balochistan and major driver of its economy would be Agriculture including livestock.

Olive Farms, Nall Tehsil, Khuzdar

4.2.22 Khuzdar's population is 802,207 as per Population Census, 2017. The labour force consists of agricultural workers and unskilled labourers and the unemployment rate stands at 18.8%, which is among the highest in Balochistan. According to the World Bank estimates, its gross district product was Rs. 32.2 billion in FY11 – third highest among Balochistan's districts[34]. About a third of district product originates in agriculture, 14% in manufacturing, 12% in community and personal services and less than 10% in trade.

[34] Balochistan Comprehensive Development Strategy 2013-2020
[35] District Development Profile, 2011, Planning and Development Department, GoB
[36] Pakistan Social and Living Standard Measurement Survey, 2019-20

4.2.23 Despite having a significant share of gross provincial product, Khuzdar remains one of the most credit deprived regions in the province. In 2012, the bulk of Khuzdar's outstanding credit was allocated to manufacturing (41%) and trade (37.6%). The agriculture sector's share in outstanding credit was 16%, despite the fact that agriculture's share in gross district product was 45%. Large variety of major and minor crops, vegetables and fruits are grown in the region. Livestock exceeds two million according to the 2006 census. Mineral deposits in the district include chromite, manganese minerals, lead, zinc and marble. Large manufacturing units are few including ginning factories and flour mills. Apparel embroidery and carpet knitting is widespread as a household industry[34].

4.2.24 Social sector indicators are poor; 98.68% of houses are made of mud. 7% of households have access to tap water and 5.77% of households use wood as a main cooking fuel and the majority of households have two or four rooms[34].

Nasirabad; strengthening a crops centre

4.2.25 Nasirabad together with Jafarabad is the granary of the province and one of the canal command area districts. Its population is 490,898 as per population census, 2017. About three-fourth of the labour force is in agriculture. According to the World Bank estimates, about 54% of gross district product (at constant 2000 prices) is from agricultural. Community and personal services accounted for about 11%, transport sector 8% and manufacturing only 3.6% of gross district product in 2011. Nasirabad is essentially a crop growing region and major crops include wheat, barley, mustard, lentils, fodder, rice, fruits, onion, potato, melons and sugarcane[37].

4.2.26 Nasirabad's social development statistics are extremely weak with 73.72% of the houses are made of mud, only 14% of the population has access to tap water, 10% of the population uses gas as the main cooking fuel and 41% of households have two or more rooms each[38].

[37] Balochistan Comprehensive Development Strategy 2013-2020
[38] Pakistan Social and Living Standard Measurement Survey, 2019-20

Sibi; developing a mineral city

4.2.27 Sibi's population is 135,572 as per the population census 2017. One-fifth of the workforce, in the district, is unskilled and about a third is in agriculture. Agriculture's share in gross district product of Sibi was about 21% in FY 2011 followed by trade (16%), community services (13% each), and manufacturing (8%) while that of mining was even lower 6.4%.[37]

A Rail Bridge, Near Sibi

4.2.28 Despite being a historical city, social indicators are very weak. Only 0.29% of homes have cemented/concrete roofs and 66.99% of houses are made of mud in the district. However, tap water is available to 46% of the Sibi population and 42% have access to gas for cooking purposes, about 49.36% of houses have more than 2 rooms each[38]. A wide range of major crops, fruits and vegetables are grown in the area. Coal, marble, gypsum and limestone deposits and coal extraction is significant (about 50,000 million tons annually). Food manufacturing and leather manufacturing have been established.

Killa Abdullah; a Gateway for Trade

4.2.29 Killa Abdullah is the border district of the province and the headquarter city is Chaman – the trade route to Kandahar in Afghanistan. Its population is 757,578 as per population census, 2017. About one-third of the labour force is in trade-linked activities and a quarter is in agriculture. The unemployment rate is high at over 25%. According to the World Bank estimates, about 29% of gross district product (at constant 2000 prices) is on account of trade, 14.7% agriculture, 12% community and personal services.[37]

Friendship Gate, Chaman, Killa Abdullah

4.2.30 The overall district social development statistics are weak – 95.54% of the houses are made of mud. Only 18% of the population has access to tap water, 3% of the population use gas as the main cooking fuel and 54.77% of households have two or more rooms each.

PSDP Allocations for Urban Planning and Development

4.2.31 The provincial PSDP allocations for urban planning and development has not been receiving adequate funding in the provincial outlays in the past but now this sector is being allocated more funds. The budget allocation increased from Rs. 0.31 billion in

2014-15 to Rs. 1.15 billion in 2018-19. The total Number of Projects increased from 16 to 48. However, the sector has not received priority attention at the provincial level during the last five years. The PSDP allocations for urban planning and development remained significantly low in the range of 0.62% to 1.63% between 2015 and 2021. There is presently a throw forward of Rs.9.7 billion which is likely to require more than 7 years or so for completion. This implies that there will be little space to undertake new schemes, which may be economically more viable.

Table 4.6: PSDP Allocations (Urban Planning and Development Sector)

Year	Allocation (Rs. in Million)	% of Total PSDP	Total Number of Projects	Throw forward Rs. in Million	Number of New Projects
2014-15	312	0.62%	16	4,202	1
2015-16	415	0.76%	19	5,851	2
2016-17	81	0.11%	22	5,745	3
2017-18	1,014	1.18%	32	8,015	11
2018-19	1,152	1.31%	48	9,789	24
2019-20	3,662	3.39%	70	4,782	63
2020-21	1434	1.21%	13	3726	1
2021-22	3,089	1.633%	38	7,255	31

Sustainable Development Goals

SDG 11 - Sustainable Cities and Communities

4.2.32 In Balochistan, 23.9% of total population lived in the urban areas in 2017. This proportion keeps growing every year as more people migrate to the cities in search of better job opportunities and better lives. The growing population density in the cities intensifies the planning challenges regarding housing issues, waste management and security issues. The SDG11 emphasizes the need for inclusive development planning and improved management of cities and human settlements. The targets under this goal emphasise on ensuring sustainable and inclusive urban planning, affordable housing and developing the slums in the cities ensuring safety in the urban areas, improving the transport system and road safety, increasing the efficiency in waste management and preservation, protection and conservation of national and cultural heritage.

4.2.33 The SDG11 indicator 11.1.1 has a target to decrease proportion of urban population living in slums, informal settlements or inadequate housing by 50% of present value by 2030 (**Table 11 of Appendix A**). Similarly, targets for other indicators are set.

Opportunities under CPEC

4.2.34 The following projects relevant to urbanisation are being implemented under CPEC:

New Gwadar International Airport

4.2.35 It is a project being funded under the Chinese Government Grant with co-funding of the Government of Pakistan. The cost of the project is RMB 1520 + Rs. 14.47 billion (Government of Pakistan share). Since signing of the grant agreement in May 2017, the design and work plan have also been agreed based on which the construction work has started. The new airport's aerodrome reference Code will be 4F having runway width of 45-meter and 3,685-meter long, suitable for Airbus A-380 and Boeing- 747 & 777 etc. operating on international and domestic routes.

Construction of Breakwaters, Project Cost $123

4.2.36 It is a mix of the Chinese government concessional loan and grant. The draft business plan has been received from Chinese (COPHCL) and is under review by MoP&S and GPA.

Dredging of Berthing Areas and Channels, Project Cost $27

4.2.37 It is the Chinese government concessional loan. The draft business plan has been received from the Chinese (COPHCL) and is under review by the MoP&S and the GPA. The draft MoU for joint technical and commercial feasibility has also been prepared and is being vetted by concerned ministries.

Development of Free Zone, Project Cost $32

4.2.38 It is the Chinese government concessional loan. Tax exemptions for port and Free Zone notified in Finance Bill 2016. It is a 100% private investment inside Free Zone to be operated by COPHCL. The 1st phase has been completed and was inaugurated in January 2018. There has been a significant progress and response from investors. The Gwadar Free Zone investment guidelines have been published. The first Gwadar Expo was held in January 2018. A number of industries will start construction work in the Free Zone soon.

Necessary facilities of fresh water treatment, water supply and distribution, Project Cost Rs. 11.2 billion

4.2.39 It is being financed from the federal PSDP. In Phase-1, drinking water pipeline has been laid from Swad Dam to Gwadar. The second phase work laying of pipeline from Shadi Kaur dam is in progress. The project has been designed to support supply of fresh water to Gwadar.

Pak China Friendship Hospital, Project Cost $100

4.2.40 It is a Chinese government grant. The grant request has already been sent by the EAD to the MOFCOM. Feasibility study has been completed by the Chinese team to add 100 beds from existing 50 for subsequent extension to 300 beds. LOE has been signed in April 2018.

Technical and Vocational Institute at Gwadar, Project Cost $10

4.2.41 It is a Chinese government grant. The GPA has acquired 18 acres land and infrastructure of old Gwadar Degree College for establishment of Pak-China Technical and Vocational Institute. The onsite feasibility study of the project has been carried out in January 2017 by the China International Engineering Company. LOE between the EAD and the MOFCOM signed in April 2018.

Gwadar Smart Port City Master Plan

4.2.42 MoU was signed in November 2015. LOE was signed in August 2015. The Chinese Fourth Harbour Design Institute was nominated for preparation of the Gwadar Smart City Master Plan. The plan has been prepared and phase-wise execution is due to start.

Development of Gwadar University (Social Sector Development)

4.2.43 The Chinese side will identify a leading Chinese university for collaboration with University of Gwadar on marine and maritime related subjects along with others.

Priority Areas

4.2.44 The Government of Balochistan plans to undertake a prioritised development of all the district headquarter cities starting with Quetta, Pishin, Gwadar, Lasbela, Kech, Loralai, Sibi, Khuzdar, Nasirabad and Killa Abdullah at first place, and it would then be rolled out to the other headquarter cities. Urbanisation strategy is being used as a means for promoting development across the region as the cities/towns in each district are the regional hubs of administration, markets and industry (most importantly manufacturing and utilities). The overall size of the economy in these headquarter cities is quite small. The district gross product of these cities is dominated by agriculture and as such, their growth will hinge on integrating their economy to the economy of the district and linking all urban growth poles to each other as well as to growth poles surrounding Balochistan.

4.2.45 Urban master plans are already being developed for 30+ cities. Under the BCDGS, a key component would be housing schemes especially for poor and low- income groups to contain the growth of slums. This leads to subsidisation of public land, and provision of finances on easy terms for construction of low-cost housing units. Such a planned approach would require a robust partnership with private estate developers and active involvement of local communities especially the women stakeholders at both the planning and execution stage. Another cross-cutting constraint across all the urban centres is weak institutions with the exception of Quetta. The Town Municipal Committees, which are the major town management organisations, are extremely weak both in terms of finances and organisational capacities. These are managed by mostly lower grade employees having little technical expertise of urban management and services. Institutional upgrade would thus remain central to urban development.

4.2.46 The ten district headquarter cities have been selected for upgrade of municipal infrastructure and institutions in phase-1 in the province and their development is expected to trigger economic activities in the surrounding region. At present, there is a little data available for these cities and as such, their economic status is being examined

through district economic data. As these cities begin to grow and house greater populations and undertake economic activities, there would be greater chances for dedicated city data collection on the pattern of other major cities in the country.

Table 4.7: Gross District Product (World Bank Estimates)

District	Agriculture	Mining and Quarrying	Manufacturing	Electricity and Gas distribution	Construction	Wholesale and Retail Trade	Transportation Storage and Communication	Finance, Insurance and Real Estate	Community Social and Personal Services
Quetta	3.2	2.2	11.3	10.7	0.7	42.5	7.1	8.0	13.5
Pishin	14.5	-	1.6	0.2	0.9	38.3	8.7	3.0	12.9
Lasbela	28.7	4.0	36.5	3.3	0.6	16.9	6.5	2.2	12.3
Turbat	22.3	6.0	17.2	2.2	0.8	24.9	12.5	1.8	11.7
Gwadar	26.2	7.2	14.7	-	0.8	27.6	7.9	0.6	12.2
Loralai	26.6	35.6	12.3	-	0.7	13.1	12.3	0.4	12.4
Nasirabad	53.7		3.6	1.5	0.9	7.1	8.4	0.4	10.7
Khuzdar	32.4	0.8	14.0	0.6	1.4	9.9	8.4	0.3	12.2
Sibi	20.8	6.4	8.4	13.2	1.0	15.9	4.9	4.0	13.3
Killa Abdullah	14.7	1.6	4.1	4.9	1.0	28.9	13.5	4.8	12.9

Targets

4.2.47 The following targets are set for urban development and infrastructure under Pillar 2 to be achieved by FY 2026:

Table 4.8: Baseline and Targets – Pillar 2 (CPEC and Urban Development)

Description	Baseline	Targets
Houses made of Mud Bricks/Mud with wood or Bamboo roofing	60%	45%
Access to Basic Services		
– Tap Water Availability	33%	50%
– Electricity	81%	95%
– Usage of Gas for cooking	25%	50%
– Availability of Toilet	31%	50%

Target 1: Reduction in houses made of Mud Bricks/Mud with wood or Bamboo roofing

4.2.48 More than 59% of the houses in Balochistan are made up of Mud Bricks/Mud with 63% of wood or Bamboo roofing[39]. Provision of low-cost housing units, water and sanitation facilities and road transport facilities shall contribute in reduction of population of urban areas living in slums and improving convenient access to basic facilities. The GoB has set a target to improve housing conditions by reducing the percentage of houses made up of Mud Bricks/Mud with wood or Bamboo roofing by 45% by FY 2026.

Target 2: Enhancing access to basic services/utilities

4.2.49 The situation in relation to provision of basic services such as water, electricity, gas and washrooms to the people of the province is not encouraging. The existing data as per PSLM 2019-20 shows that the tap water availability in Balochistan is at 28%, electricity availability is at 87% (lowest among provinces), gas usage for cooking is at 28% and flush toilet availability is at 41%. The GoB aims to enhance the access of basic utilities including water, electricity, gas and flush toilet to the people of the province. The targets set for 2026 are tap water availability to 50% of the population, electricity provision to 95% of the population, flush toilet availability to 50% of the population and gas availability for cooking to 50% of the population.

Strategy

4.2.50 Emphasising the need for inclusive development planning and improved management of cities and human settlements as envisaged in SDG11 targets under this goal, the emphasis would be on:

- Ensuring sustainable and inclusive urban planning;
- developing affordable housing and slums in the cities ensuring safety in urban areas;
- Improving transport system and road safety;
- Increasing efficiency in waste management and preservation; and
- Protecting and conserving national and cultural heritage.

4.2.51 One of the most important components of the strategy for urban development is to prioritise and complete the on-going schemes for which more than 50% physical work has been completed.

Initiating Work on New Projects

4.2.52 Gradually developing cities as growth poles in Balochistan would be the most significant component of the strategy. Except for Quetta, which has dedicated Municipal Corporation, Development Authorities and a Water and Sanitation Authority, the remaining district head quarter cities have very weak institutional set ups. The Municipal Committees have weak staff, weak systems, low budgets and also these have been relegated to handle only residual subjects such as sanitation, streetlights etc. The water supply schemes are undertaken by the PHED department and for urban development, the UP&D development has been created. With a view to strengthen management of urban and municipal functions and regulations, there is a need to bring greater clarity into the roles and there is also a need to evolve overarching regional development bodies for undertaking long term planning and development of urban

[39] Pakistan Social and Living Standards Measurement Survey (PSLM) 2019-20

centres in the region for ensuring their economic connectivity with the rural hinterland. Under this, the GoB has a strategy to:

a. Reorienting and restructuring various Development Authorities (DAs) like QDA, GDA and BDA etc., for a holistic regional planning and development. These DAs shall focus on urban development of major towns and will simultaneously attend to the development in their respective area of jurisdiction through integrated planning. In this context, the GoB has a strategy for:

   - Undertaking restructuring of all major urban municipal bodies for improving the staffing and systems and to provide technical support to these bodies to perform their functions well. Currently, there is shortage of technical expertise including planners, engineers and urban managers in these institutions.

   - Creating a Municipal Fund to provide dedicated operational funds on sustainable basis. However, with gradual growth of the cities, improved infrastructure and services, the Municipal Institutions would be encouraged to concentrate on recovery of user charges. This can also, be gradually improved by increasing the involvement of communities in planning, decisions and implementation for greater ownership.

b. After completing master planning of cities, starts implementation on these plans in phases. A development index shall be developed to assess development ranking of the districts for better implementation of the prioritised areas of urban development. Strengthening the urban planning and management institutions further by modernising management and especially the regulatory mechanisms relating to zoning and building controls.

c. Initiate designing and implementing smart city projects by building in-house technical capacity, establishing technical institutions to support and develop smart technologies.

4.2.53 Upgrading the existing water and sanitation systems in the cities through adequate investments. The city roads will be rehabilitated and necessary planning will be undertaken for decongesting the city markets by earmarking land for the wholesale markets and bus stops etc., in the outskirts of cities. Relocation of markets, including livestock and agriculture markets shall create the required space for improving the downtown areas by widening roads, pavements and improving drainage system.

4.2.54 Giving adequate attention to infrastructure upgrade planning for water treatment as well as for treatment of wastewater.

4.2.55 Supporting the implementation of the Prime Minister Housing Authority (Naya Pakistan Housing Authority) Scheme and provincial housing scheme(s) to facilitate provision of low-cost housing to poor communities. Private investors may be partnered to share the burden of resources and gain expertise from the private sector.

4.2.56 Strengthening property rights and improving efficiency of land titling and registration. This is important for gradually developing vibrant land markets in the cities and removing distortions, which shall greatly facilitate urban growth as well as growth of real estate. Reducing levels of public land ownership through auctions, using proceeds

to finance critical infrastructure and engaging in reform of public land development agencies.

4.2.57 Engaging with the GoP for supporting international road transport by accession to and implementation of relevant international road transport agreements and conventions, as ratified by the Government of Pakistan.

4.2.58 Engaging with the GoP to promote road safety through the adoption of the UN endorsed Safe System Approach (including improvements to road safety leadership and management, safety infrastructure, speed management and safety of vulnerable road users, vehicle standards regulation, road user behaviour, and post-crash response).

- Engaging with the GoP for road user charges which will reflect the priorities of the transport policy, address the externalities of road users and tolls will only be levied at specific roads if a viable alternative exists.

- Engaging with the GoP for the road safety study, and up gradation of accident data in developing the Federal National Road Safety Plan.

4.2.59 Engaging with the GoP for enhancing maritime security for all maritime zones and implementation through a new port security force on the pattern of the airports security force and coordinate with the GoP in establishing an independent regulator as a national / provincial maritime authority to manage maritime issues.

4.2.60 Engaging with the GoP for promotion of coastal port harbour facilities including freight and passenger shipping service concessions and coordinate in supportive port and navigation infrastructure and regulatory oversight and the public sector shipping lines to address strategic trade arrangements and provision of ferry services.

Budget 2021-2026

Table 4.9: Urban Planning and Development		Rs. in Million				
Sr. No.	**Strategy**	**FY 1, FY 2**	**FY 3, FY 4**	**FY 5, FY 6**	**Total**	**Proposed FA Portion**
1	Develop Master Plans of Major Cities	50	75	100	**225**	-
2	Implementation of Cities' Master Plans	4,000	6,000	8,000	**18,000**	-
3	Reorientation of QDA and GDA	66	77	69	**212**	-
4	Designing and Implementing Smart City Projects	500	400	500	**1,400**	-
5	Institutional development of 9 TMCs	200	450	600	**1,250**	700
6	Water, Sanitation and Internal City Roads for 9 Cities	500	1,000	1,000	**2,500**	-
7	Rehabilitation of Existing Infrastructure	700	0	0	**700**	-
8	Infrastructure Dev - Phase II Cities	0	500	2,000	**2,500**	-
9	Municipal Fund	300	550	4,000	**4,850**	-
10	Throw forward of schemes (PSDP 2021-22)	2902	2539	1814	**7255**	-

Table 4.9: Urban Planning and Development		Rs. in Million				
Sr. No.	**Strategy**	**FY 1, FY 2**	**FY 3, FY 4**	**FY 5, FY 6**	**Total**	**Proposed FA Portion**
	Total	**9,218**	**11,591**	**18,083**	**38,892**	**700**

2B: Road and Transportation Infrastructure

Baseline

4.2.61 Sustainable development needs a reliable and affordable transportation and logistics sector. An efficient transportation network is a key to sustainable development. An efficient transportation network can enhance exports competitiveness. The country's GDP growth prospects augur well over the CPEC planning and implementation period. The sector currently provides about 3 million jobs and expects to reach about 3.6 million over the next few years.

4.2.62 Poor infrastructure is the most binding constraint to growth especially for regions like Balochistan. Therefore, development and maintenance of essential physical infrastructure is an important ingredient for sustained economic growth. The Government of Balochistan has been historically assigning high priority to infrastructure building. There is, however, a growing clarity that given the specific context of Balochistan, a strategy is required for developing the infrastructure in a more planned manner. This section puts across the GoB's strategy on physical infrastructure with focus on the road network, water, water supply and wastewater, housing and energy.

4.2.63 Balochistan faces the remoteness as major obstacle for development, both within the province as well as with bordering provinces and countries. The connectivity in Balochistan determines its productivity, linkages with markets, availability of labour, finance, and transactions as well as the service delivery, all of which are preponderantly dependent on the transport. An efficient transport infrastructure is believed to not only enhance productivity, but it will also enhance the rate of return on formation of both physical and human capital (the World Bank 1994). Balochistan thus requires high levels of effective investments in the transport sector. Such investments can only be made possible through intelligent fiscal management including well-planned borrowings from multiple sources including international donors.

4.2.64 Vast areas of Balochistan are considered best served by rail transportation, which can provide comparatively cheaper connectivity. However, railway connectivity is only present in the north of Balochistan while rest of the province, unfortunately, does not have the network. Developing a robust railway network in the province can be a strategic intervention for the long-term development of the province. This particular investment hinges on the development of Gwadar port as a transit trade route to generate the type of transit freight traffic which can make this investment commercially viable.

4.2.65 Until the last few years, 90% of Balochistan's passenger traffic and 95% of freight traffic use road network including the national highways and the provincial roads. Balochistan's roadwork[40] was about 33,588 km in length by 2012. Out of this, more than 60% (20,221 km) were shingle (unpaved) roads. The overall road density of the province is 0.09 road length per square km, which is much lower than other provinces and works out to be almost half of the national average. Other than this low density, there is a huge backlog of road maintenance and roughly 70% to 90% of the networks are in a state of disrepair. Transport cost increases as road surface quality deteriorates.

[40]Communications & Works Department, the GoB

The maintenance budgets have remained low and generally receive very little attention at all levels of provincial policy making.

Sustainable Development Goals

Sustainable Cities and Communities

4.2.66 In Balochistan, 23.9% of total population lived in the urban areas in 2017. This proportion keeps growing every year as more people migrate to the cities in search of better job opportunities and better lives. The growing population density in the cities intensifies the planning challenges regarding housing issues, waste management and security issues. The SDG 11 emphasises the need for inclusive development planning and improved management of cities and human settlements. The targets under this goal emphasise on ensuring sustainable and inclusive urban planning, affordable housing and developing slums in cities, ensuring safety in the urban areas, improving transport system and road safety, increasing efficiency in waste management and preservation, protection and conservation of national and cultural heritage.

4.2.67 The SDG11 indicator 11.1.1 has a target to decrease proportion of urban population living in slums, informal settlements or inadequate housing by 50% of the present value by 2030 (See **Table 11 of Appendix A**). Similarly, targets for other indicators are set.

Extending Roads / highway network

Basima Khuzdar Road N-30

4.2.68 The project located in District Khuzdar is aimed at constructing a 2-lane highway from Basima to Khuzdar (106 km) with an estimated cost is Rs. 19.2 billion. The project was approved by ECNEC on April 12, 2017 and the construction work has been started. The procurement of civil work is under process. The PSDP has taken the project.

Gwadar East-Bay Expressway, Project Cost Rs. 17.36 billion

4.2.69 The project is a mix of the Chinese Government oncessional loan and grant. The cost was approved by the ECNEC on October 02, 2019. The project will complete in FY 2022-23.

4.2.70 A number of new roads and highway projects have been included in the Federal PSDP, which will not only open up many areas but will also accelerate pace of development in various parts of Balochistan. Some of the projects are:

- Construction of Dual Carriage Way from Sui to Kashmore Linking Sukkar Multan Motorway (Feasibility)
- Dualisation & Improvement of Existing N- 50 from Yarik - Sagu - Zhob including Zhob Bypass (210 km)
- Rehabilitation/Upgradation and Widening of Quetta - Dhadhar Section of N-65 (118.322 km)
- Dualisation of Khuzdar-Kuchlak Section of National Highway (N-25) 330 Km
- Construction of Hoshab – Awaran – Khuzdar Section of M-8 Section2, Awaran – Naal 168 KM
- Construction of Jhal Jhao –Awaran road

- Dualisation & Rehabilitation of Karachi - Quetta - Chaman Road (N-25) (460 km) – BOT

4.2.71 The GoB acknowledges the critical role of the infrastructure in providing impetus for growth and development and thus prioritises to allocate a large part of the development funds to road sector investments.

4.2.72 **NHA Allocation:** Balochistan has the most extensive network of national highways with more than 08 national highways totaling about 3,600 kms, which comprise approximately 37.7% of the total length of national highways in the country. In addition, Balochistan has 962 kms of motorways, constituting 37% of the total length of motorways in the country. The NHA portfolio in the Federal PSDP 2021-22 comprises of 10 ongoing and 07 new projects with a total cost of Rs. 574.2 billion. For these 17 projects, Rs. 33.8 billion have been allocated.

Priority Areas

4.2.73 Over the past five years, the provincial road portfolio received appropriate priority in the provincial budget. The budgetary allocation increased from Rs. 9.9 billion in 2014-15 to Rs. 45.6 billion in 2021-22 (**Table 5.10**). Some of the areas that need focused attention are discussed in the following paragraphs:

Table 4.10: Road Sector Budget Allocations as % of Total PSDP Allocation FY 2014-15 to FY 2021-22

Year	Allocation (Rs. in Million)	% of Total PSDP	Total Number of Projects	Throw forward (Rs. in Million)	Number of New Projects
2015-16	10,855	19.91%	500	34,470	211
2016-17	9,607	13.50%	495	38,772	166
2017-18	16,934	19.69%	562	28,918	276
2018-19	20,193	22.88%	925	49,260	567
2019-20	24,611	22.76%	581	44,492	416
2020-21	27581	23.18%	623	46515	388
2021-22	45,696	25.15%	873	49,436	550

4.2.74 Two-third of the road network in the province of about 20,221 kms is shingle roads. This is an oversized portfolio requiring huge amounts of investment, time and implementation capacity and adequate maintenance subsequently. Also, within the provincial roads, a portfolio of high priority roads, which connect the economic and administrative centres, markets and major settlements, needs to be adequately identified. These economic corridors shall accordingly require a prioritised attention and simultaneously the shingle roads need to be paved through well-considered prioritisation.

4.2.75 The maintenance and repair of the entire road network continues to be neglected with adverse consequences on the condition of the roads. This persistent and systematic neglect may ultimately lead to the collapse of the road sector assets resulting in heavy stress on resources and as such requires serious attention. The existing yardstick for maintenance is visibly below the benchmark and requires revision after technical review. Simultaneously, the overall management of the maintenance portfolio needs to be made more scientific and transparent for exhibiting quantifiable improvements.

4.2.76 Geo-mapping the status of roads, especially the remote rural access roads as well as updating the geo-location of the settlements, has been a neglected area. This affects the provincial government's ability to undertake rural roads development in a more organised manner. Lack of adequate road infrastructure imposes economic and social burden on rural communities in multiple ways and inhibits their ability to earn better livelihoods and restricts access to a range of public services especially health, education etc., which need to be addressed by an appropriate response.

4.2.77 The overall ability to manage road sector and to undertake road infrastructure development through different partnerships such as through BOT methods etc. requires technical capacities within the department. In addition, the department requires technological upgrades to be able to undertake systematic planning through greater use of technology such as use of GPS and GIS etc.

4.2.78 Within the institutional and capacity strengthening component, the ability to develop a mechanism for regular updating of schedule of rates based on market, a more scientific monitoring of road construction and quality parameters with improved contract administration are some aspects which require strengthening.

Targets

4.2.79 The GoB has set the following targets for Roads Sector under Pillar 2 to be achieved by FY 2026:

Table 4.11: Baseline and Targets – Pillar 2 (Road and Transportation Infrastructure)

Description	Baseline	Targets
Road Density	0.09km/sq.km	0.2 km/sq.km
Shingle Roads	60%	25%

Target 1: Increasing Road Density

4.2.80 Improvement in existing road structure and development of new roads and highways shall substantially contribute in enhancing access to transportation facilities, increasing road density and reduction in transportation costs. The GoB has set a target to increase the road density from existing 0.09 km/sq.km[41] to 0.2 km/sq.km by FY 2026.

Target 2: Reduction in shingle roads

4.2.81 Around 60% of the Balochistan's road network (20,221 km) consists of shingle (unpaved) roads[41]. The GoB is committed to improving the existing road infrastructure through converting these shingle roads to paved roads. The GoB has set the target to reduce the shingle roads in the province by 75% (i.e. 5,055 km) until FY 2026.

[41] Balochistan Comprehensive Development Strategy (BCDS) 2013-2020

Strategy

4.2.82 Given the critical role of regional connectivity in development of the province especially after the initiation of the CPEC, the GoB recognises the need to complete the ongoing schemes. The strategy is to prioritise to allocate adequate resources to complete the ongoing portfolio of over 318 schemes with adequate resources.

4.2.83 Additionally, prioritise to allocate adequate resources to the new schemes (567) in order to minimise delay in completion of schemes and avoid construction inefficiencies and wastages.

4.2.84 Given the importance of regional connectivity and the size of road sector requirements, the GoB acknowledges the need to look out for new ways and means for building affordable and sustainable roads. This requires policy, institutional and planning reforms including the following:

a. Soliciting Technical Assistance for supporting planning through modern technological and ICT tools; improving procurement capability and, ability to outsource various components relating to engineering designs, traffic studies, maintenance surveys, environmental safeguards and quality checks etc. Developing an Asset Management Plan for provincial and rural roads for undertaking institutionalised and planned rehabilitation.

b. Evolving legal and institutional framework for PPPs including developing the capacity to undertake partnerships with the private sector for investment in the sector. This is likely to be a slow process restricted to a small component relating to one or two viable corridors initially; however, with improvement in the economy, the portfolio can be expanded for commercially viable and partially viable road corridors.

c. Geo-mapping both shingle and black-topped roads with database to enable informed decision making.

4.2.85 Developing a Road Sector Master Plan for:

a. High Priority Roads that provide connectivity to all the major economic and administrative hubs;
b. Converting shingle roads into paved roads in phases; and
c. Priority Plan for Rural Access Roads.

4.2.86 Engaging with International Development Donors for a comprehensive investment programme based on the Roads Master Plan for economic corridors, existing shingle roads and prioritised rural access roads, and undertaking the following:

a. Construction of 2,500 km of high-profile economic corridors through donor financing;
b. Conversion of 3,000 km of shingle roads/ rural access roads through donor financing, and
c. Conversion of 5,000 km of shingle roads into paved roads through provincial own financing.

4.2.87 Undertaking a planned maintenance of 5,000 km of roads assets based on Asset Management Plan through own financing and involving private sector on suitable PPP mode.

4.2.88 Engaging with the GoP and the NHA for completing the existing CPEC portfolio on priority basis. Emphasis may be placed on the completion of CPEC link connecting Gwadar-Hoshab-Basima-Khuzdar to Ratto Dero. Being an important CPEC link for connecting Gwadar to the Eastern and Central route, it requires high priority financing.

4.2.89 Involve partners in undertaking construction of 600 km from Gwadar to Nokandi in order to improve the connectivity with mineral deposits;

4.2.90 Following up on rail transport, under which three new railway lines were envisaged. First the Gwadar-Panjgur-Quetta Link; second, Link from Quetta to Peshawar, which would reduce the distance by 400 km and link Balochistan with western China; and third the Gwadar-Panjgur- Dalbadin segment of 515 km, which is important for transport facility for minerals.

Budget 2021-2026

Table 4.12: Road and Transportation Infrastructure		Rs. in Million				
Sr. No	**Strategy**	**FY 1, FY 2**	**FY 3, FY 4**	**FY 5, FY 6**	**Total**	**Proposed FA Portion**
1	Conversion of Shingle Roads to Paved Roads with Donor Support (3000 km)	2,000	3,000	8,000	**13,000**	10,000
2	Conversion of Shingle Roads to Paved Roads with own financing (5000 km)	2,000	4,000	8,000	**14,000**	-
3	Maintenance of Existing Roads (5000 km)	1,000	2,000	4,000	**7,000**	-
4	Priority Eco Corridors (Up Gradation/New 2500 km with Donor Support)	1,800	2,500	10,000	**14,300**	20,000
5	Development of Master Plans	100	-	-	**100**	100
6	Capacity Development for Planning and Procurement	50	90	130	**270**	270
7	Asset Management Plan	70	-	-	**70**	70
8	Institutional Framework for PPPs (Road Specific)	11	24	40	**75**	75
9	Throw forward of schemes-(PSDP 2021-22)	19775	17303	12359	**49436**	-
	Total	**26,806**	**28,917**	**42,529**	**98,251**	**30,515**

Pillar 3: Exploration of Minerals and Natural Resources

4.3 Pillar 3: Exploration of Minerals and Natural Resources

Baseline

4.3.1 The mineral resource sector of Balochistan has long been a focus of the provincial and federal governments as a potential source of growth. Still, the contribution of the mining sector of Balochistan is very small as compared to the available mineral potential. Unlike other developing regions with good mineral endowment, Balochistan has not been able to exploit adequately its geological potential. Balochistan has more than half of the national prospective geology for minerals, yet it contributes just over one-fifth to national mining GDP and leads only in the production of coals, copper, lead-zinc barite, and chromite. To date, only 39 out of the 50 minerals are being exploited under some 1610 licenses and only nine of them account for over 95% of the total volume.

Saindak Copper Gold Deposits

4.3.2 Saindak copper gold deposits are located in Tethyan metallogenic belt in Chaghi 35 km away from Pakistani border town Taftan and 325 km away from the city of Dalbandin.

Saindak Copper and Gold deposits at Saindak was discovered in 1961 by the Geological Survey of Pakistan (GSP) and subsequently reconnaissance survey from 1972 to 1973 preliminarily defined the East Ore Body (EOB), North Ore Body (NOB) and South Ore Body (SOB). The Government of Pakistan established Saindak Metals Limited (SML) formerly known as Resource Development. The Company completed the exploratory drilling work by drilling 74 holes for SOB, 40 holes for EOB and 21 holes for NOB from 1974 to 1977. According to reserve calculation and assay analysis of the above three ore bodies, the reserves of NOB were 28 million tons@ 0.44% copper, SOB 111 million tons@ 0.44% copper and EOB 273 million tons @ 0.34% copper. The deposits of SOB were found more promising to be mined first.[42]

4.3.3 On September 23, 1990, a contract was signed between MCC China and SML (RDC) Pakistan in Beijing for development of Copper Gold Deposits at Saindak and MCC submitted basic design for South Ore Body (SOB) to be exploited as open pit mining for mineable ore 78.522 million tons with 0.434% copper and 0.476 g/t of gold.

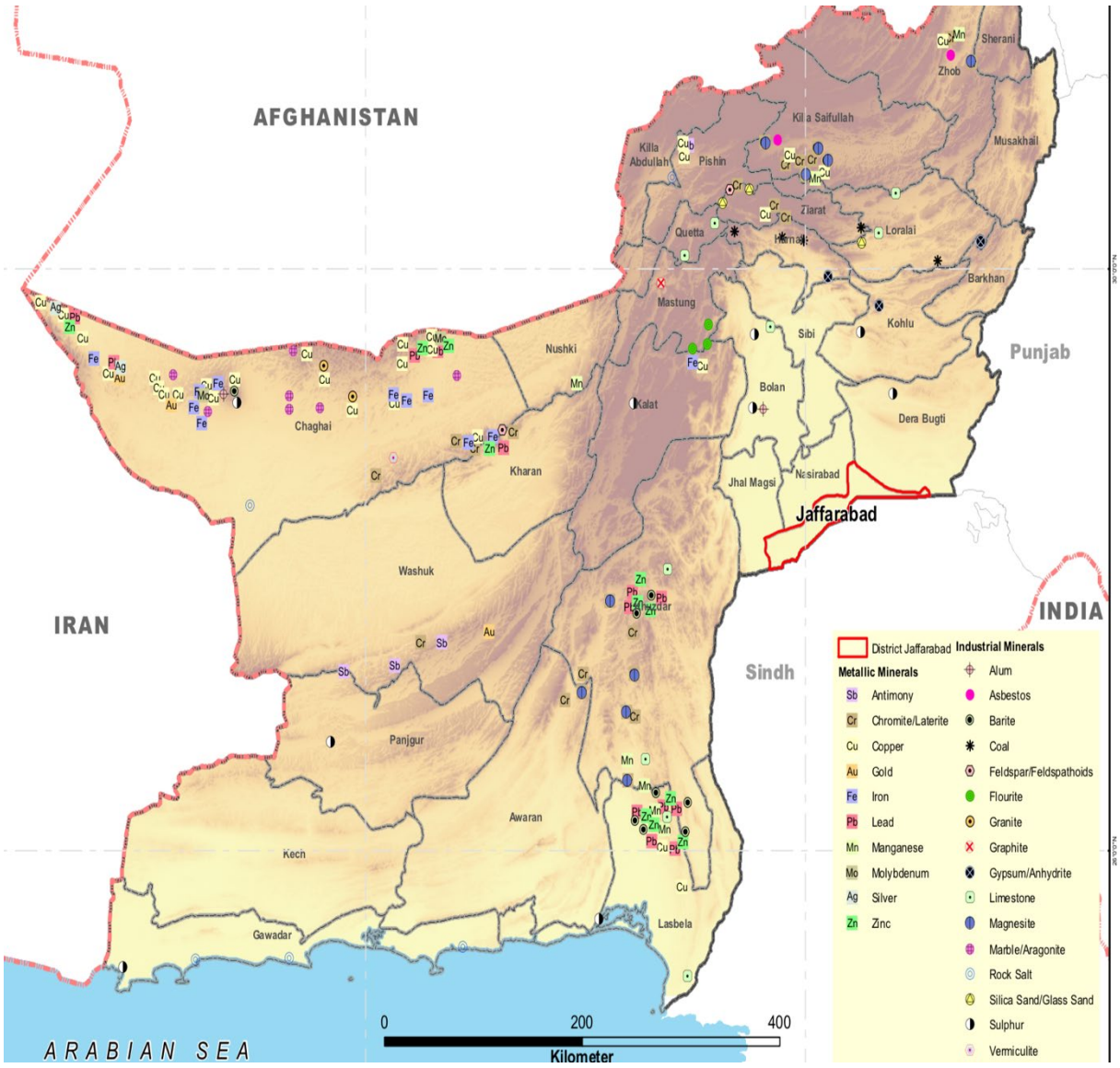
4.3.4 In pursuance to the aforesaid contract, the MCC completed pre-stripping work of SOB, construction of project, training of SML's employees and carried on successful trial production for 3 months and thereafter in the year 1996 handed over the Project to SML. However, due to various reasons, such as shortage of working capital, lack of skilled labour and depressed copper prices etc. The project remained shut down from 1996 to 2002. During project closure, from 1996 to 2002, the Government of Pakistan had been paying Rs.300 million annually for salary of employees and static maintenance of the plant and machinery and there was apprehension of destruction of plant and machinery. The Federal Government decided to lease out Saindak project through international bidding to a private company for operation.

4.3.5 M/s MCC participated in bidding process and succeeded in obtaining lease and signed the contract for rehabilitation of Saindak Project for ten years. The MCC successfully rehabilitated the project and started commercial production. On expiry of the first lease term, the contract with the consent of the GoB was extended for five years till October

[42] Saindak Metals Limited

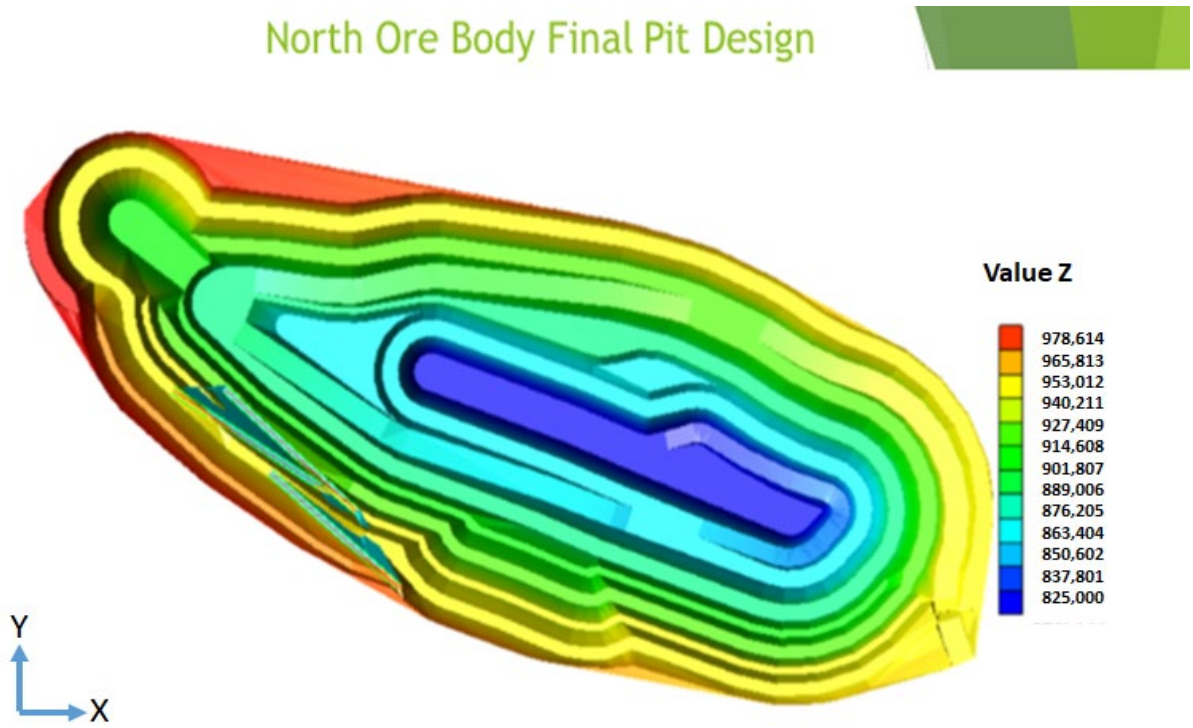
31, 2017, which has now further been extended till October 31, 2022 for development and exploitation of NOB.

Figure 11: Minerals Map of Balochistan



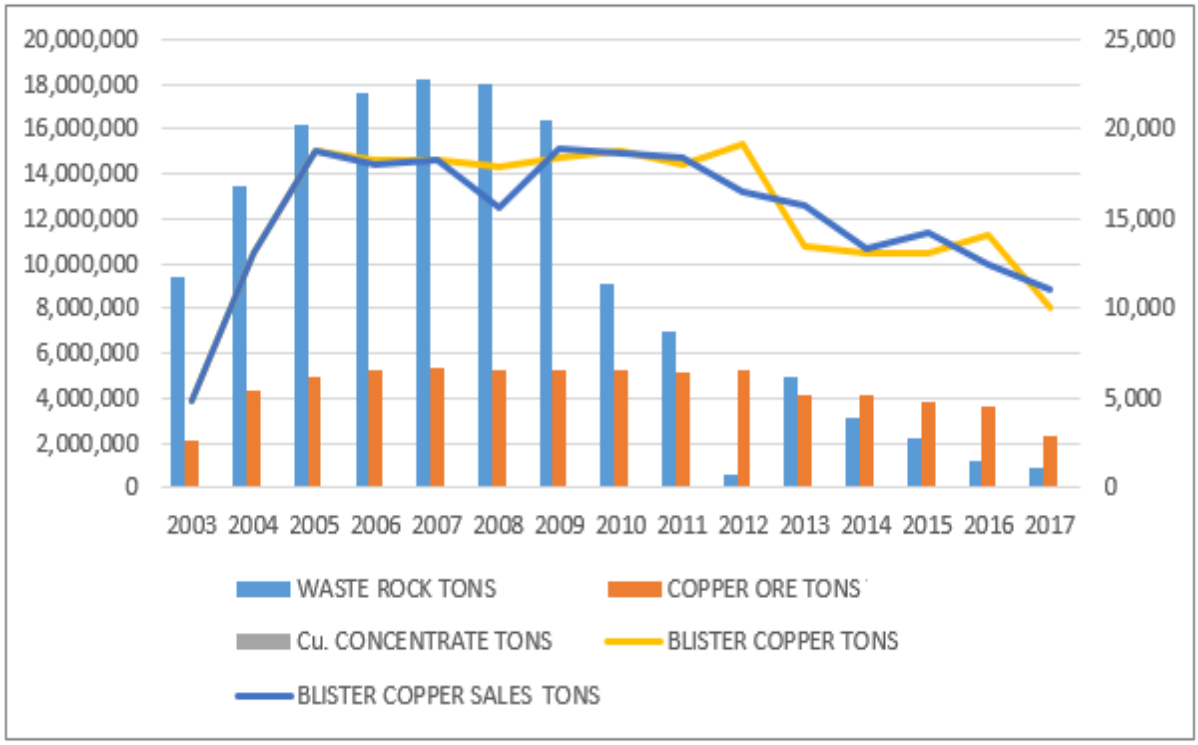
4.3.6 In December 2014, Kunming Prospecting Design Institute of China Nonferrous Metals Industry submitted the detailed geological survey report of north ore body to MRDL/MCC and ENFI China. They drilled 64 exploratory holes (18000m). On December 2015, MRDL submitted the feasibility study report for open pit mining of north ore body. The estimated total resources are 46.4291 million tons, the average grade of copper is 0.37% quantity of associated gold is 6,346 kg and the average grade of gold is 0.14 g/t. After geological modeling and pit designing, the indicated and inferred ore quantity become 10.308 million tons. The average copper grade is 0.38% and gold is 0.22 g/t. The preproduction/pre-stripping started in the 3rd quarter of 2017.

Figure 12: North Ore Body Final Pit Design



4.3.7 The detail of ore extraction, production of copper concentrate, blister copper and sales of blister copper of SOB from 2003-2017 is placed below:

Figure 13: SCGP Production and Sales from 2003-2017



Source: SML

Table 4.13: Progress and Achievements from August 2003 To December 2017	
Production of blister copper	229,394.94 Tons
Sale of blister copper	227814.78 Tons
Sale of gold	659,353.425 Ounce
Sale of silver	1,006,994.151 Ounce
Total Revenue	US $ 2023.383 Million
SML 50% profit share and lease rent	US $ 305.444 Million
Royalty paid to GoB by MRDL	US $ 80.486 Million
Presumptive tax paid by MRDL	US $ 21.201 Million
Development Surcharge	US $ 10.114 Million
GoB (5% of net profit) by MRDL	US $ 5.501192 Million
Corporate social responsibilities paid by SML	Rs. 579.557 Million
GoB (Payment of 30% share under AHBP) by SML	Rs. 4,368.761 Million
"SML from its profit share refunded RS. 13,500 Million to GoP against investment of GoP."	

Source: SML

4.3.8 The contract with MRDL has been extended for further five years from November 01, 2017 to October 31, 2022 but the recoverable deposits of these ore bodies will only sustain the project up to the mid of 2021. Total remaining ore of NOB and SOB is 9.15 million tons including NOB: 5.802 million tons with 0.377% Cu, 0.218 g/t Au and SOB: 3.348 million tons with 0.463% Cu, 0.453 g/t Au.

4.3.9 Highlights of Saindak Project operation:

i. Further Exploration of East Ore Body (EOB) and submission of Pre-Feasibility Report.

SML has three ore bodies i.e., South Ore Body (SOB) North Ore Body (NOB) and East Ore Body (EOB). During the geological exploration period between 1974-1976, SML formerly known as RDC drilled 40 exploratory holes in EOB.

In the period between 2007 and 2008, the MCC drilled16 exploratory holes (10,595m).

On January 2019, MRDL submitted Design Scheme of Supplementary Geological Exploration for Saindak East Ore Body to SML. As per the plan, 23 holes of 7,551 metres had to be drilled. The exploratory drilling was started on March 01, 2019 and was completed on May 21, 2019.

Due to mineralisation conditions, the exploratory holes were increased up to 46 of 10,875.25 metres including 7 holes of 1,590 meters for rock mechanic study. The core logging, sample preparation and chemical analysis of samples has been

completed at Saindak central Laboratory by MRDL and the pre-feasibility study report also submitted to SML on August 22, 2019.

ii. Induction and Preparation of Exploration Team

The SM board in its 134th Meeting approved three Geology/Mining Software's along with hiring of professionals i.e, mining engineers/geologists, financial expert and software engineer for training and operating the software; it is now in the process of tendering. SML is expecting to establish a well-equipped exploration team for geological modeling, pit designing and development/exploitation of existing ore bodies of Saindak in addition to being, utilised in rest of the country.

iii. Exploration of Copper/Gold/Molybdenum deposits of Chigendiq Mashkicha near Durbancha area Chagai district

Copper/Gold/Molybdenum deposits of Chigendiq Mashkicha near Durbancha are located about 32 km NW of Nokundi Chagai District Balochistan. Exploration of the said area started by Saindak Metals Limited (SML) through geological survey of Pakistan (GSP). This project is mainly situated in Chagai magmatic Arc, which is one of the potential segments of porphyry copper gold rich Tethyan Metallogenic belt. IP survey was performed by the Geological Survey of Pakistan. It shows scattered resistivity highs in the near surface and high chargeability down to depth of more than 300 metres. Based on these geophysical results, three exploratory holes of 1330 feet each were drilled. Then logging, mineralogy, alteration zones associated with porphyry system, petrography and geochemistry for copper gold molybdenum and silver performed. The ore minerals observed include, pyrite, chalcopyrite, magnetite, molybdenite, galena etc. The alteration zones of a typical porphyry system are also present including propylitic and potash, while some phyllic and argillic alteration has also, been observed.

Some samples were randomly selected for geochemical analysis, the percentage of copper from 0.013 to 0.9%, gold varies from 0.2-3.08ppm, silver varies from 0.4-0.6ppm while molybdenum varies from 6.5-290ppm.The prospecting license of the said leased area has been expired and the SML already applied for ML License in 2016 but still waited. This project needs further exploration.

iv. Dasht-e-Kain Porphyry Copper Gold Molybdenum Deposits

Dasht-e-Kain is located at a distance of 48 km northwest of Chagai village in the Chagai Arc, very close to the Pakistan-Afghanistan border.

At Dasht-e-Kain, the host rock tonalite porphyry is centered by potassium silicate alteration and followed outwardly by quartz sericite and porphyritic alterations. There is a moderate to weak K-zone and the hypogene mineralization has developed in two phases, the first phase produced pyrite, chalcopyrite, enargite and pyrrhotite and the second one introduced magnetite, molybdenite and chalcopyrite.

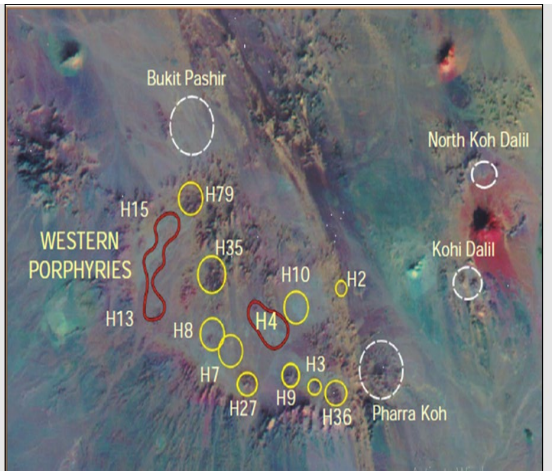
During 1978-82, the Geological Survey of Pakistan carried out initial exploration and produced a geological and geochemical/geophysical IP anomaly maps. Three bore holes have been drilled in western stock. Average copper values in quartz sericite zone vary from 0.1-0.17% and in the potassium silicate zone from 0.25 to

0.54%. The breccia pipe zone in the eastern stock contains surface values up to 4.5% copper, but not drilled.

These preliminary results are very encouraging for further exploration. In 2007, prospecting License (PL) was granted to Saindak Metals limited (SML), in 2009 SML submitted exploration scheme in MMDD Balochistan which was approved. But unfortunately, the PL license was cancelled in 2010.The case is in the court.

Reko Diq Porphyry Copper Gold Deposit

Figure 14: Reko Diq Porphyry



4.3.10 Reko Diq porphyry copper gold system is located in the North-West of Chagai district, a sparsely populated area among the border of Iran and Afghanistan, southwest of Pakistan situated about 70 km north-west of Nokundi.

4.3.11 The Chagai Arc is one of the metallogenically most important mountain belts in Pakistan has many economic metal deposits including porphyry deposits of (Cu, Ag, Mo) as per geological survey of Pakistan, discovered in 1978, total ore reserves are about 5.9 billion tons @ 0.41% copper and 0.22 g/t of gold. These reserves are the world largest undeveloped porphyry copper gold deposits. Reko Diq is a large (10x10km) volcano-magmatic complex at western Chagai belt. About 48 porphyry Cu-Au centers were recognized by BHP, TCC during exploration in (EL-5) from 1993-2010 including, H4 Tanjeel, Western Porphyries H13 H14 and H15 of Reko Diq copper gold deposits.

4.3.12 In August 2010, TCC submitted detailed feasibility report of western porphyries with the mineable proved ore as 2.2 billion tons.

4.3.13 The initial mine development plan envisages that, in the processing plant, about 110,000 tons of ore per day will be processed through flotation process, and a 680 km concentrate pipeline will transport the product from the mine site to the port of Gwadar to a dedicated marine terminal facility at the port, for storage and transfer, to shipping vessels for supply, to smelters throughout the world.

4.3.14 The proposed processing plant would produce approximately 600,000 tons of copper concentrate a year, which will contain 28-31% copper and 7-22 g/ton gold that translates to about 200,000 tons copper and 250,000 ounces of gold per year. The commercial mining operations are anticipated for more than 56 years.

Lead Zinc Ore Deposits

4.3.15 Major lead-Zinc ore deposits are found in Khuzdar and Lasbela Districts, Gunga, Duddar, Surmai which are estimated over 160 million tons. The Gunga deposit is located at about 3.5 km south-southeast of the village Gunga. It is accessible from

Khuzdar by travelling 11 km to the southeast on road. Based on drill hole data, total ore reserves are estimated at 30.51 million tons of which 22.7 million tons are Sulphide and the balance 7.81 million tons are oxide ores.

4.3.16 The Duddar lead zinc ore deposits are located in Kanraj valley Lasbela district of southern Balochistan. The area is 135 km away from Karachi. In 1988-1998, GSP conducted geological exploration which proved reserves of 6.38mt and inferred reserves 3.43mt with 11.34% Zinc and 2.01% lead have been established.

4.3.17 On November 03, 2003, the governments of China and Pakistan signed an agreement on the development of the Duddar lead-zinc mine project of Balochistan. In February 2004, ENFI completed the feasibility study report and on June 25, 2005, the Duddar lead zinc mine project started officially. The total geological reserves are 8.29 million tons with mining production capacity of 1500 t/d, 0.5 million tons'/a. mine service life is 18 years. The total investment is $106.5 million.

Table 4.14: Production, Sales and Revenue Achievements from 2014-2018

Production	Ore produced = 582,100 tons Concentrate produced = 515,100 tons
Sales Revenue	The sales of 8,600 tons Pb concentrate and 69,900 tons of Zn concentrate become 78.2168 million US$
Investment	82.0353 million US$ completed
Tax payment	5.0447 million US$

Source: MCC, PMDC

Table 4.15: Mining Production Plan

Year	Tons
2018	350,000
2019	450,000
2020	550,000

Source: MCC, PMDC

Coal

4.3.18 Balochistan has known coal reserves discovered in 1877 during railway line construction of Sibi- Harnai. Currently, mining is active in major eight fields, confined geologically to the Ghazij formation, which has been mapped by the Geological Survey of Pakistan. The production and productivity of the mines are low due to a number of factors including the mine ownership is highly fragmented. Due to chronic underinvestment, mines are generally operating with rudimentary and worn-out equipment, using inefficient manual and semi mechanised long-wall mining methods. The fields form relatively narrow belt structures disturbed by faulting and folding with considerable dips. The coal is in several, relatively thin seams, which complicates access, mining, support and ventilation activities. Storage losses due to weathering and formation of fines are common. The aging of mines results in production at distances up to 1,150 metres. This increases production costs as access, ventilation, roof support,

transport, haulage and repair and maintenance become more difficult. Mines pose health risks to workers and mining camps often lack health facilities and drinking water.

4.3.19 Coal resources are necessary due to increasing energy demand in Balochistan due to increase in population. It is necessary to create the technology to use the mixed lignite, sub-bituminous and bituminous coal because majority of the reserves are sub-bituminous to bituminous coal in Balochistan. Due to present field work/research of senior professionals, the revised and updated total coal reserves of Balochistan becomes 458.72 million tons including measured, indicated, inferred and hypothetical reserves.

4.3.20 Presently, brick makers utilise over 80% of local coal while cement makers, who blend it with imported coal to reduce the cost of production, consume the rest. Coal is the cheapest source of thermal energy used in industrial sector. It has the potential to replace other expensive fuels such as furnace oil. The quality of Chamalang coal is better than the rest of coal mined from different coalfields in Balochistan.

Table 4.16: Annual Coal Production from Balochistan

Location	2015	2016	2017	2018
		Tons		
Sorange	132,983	161,954	206,575	81,213
Degari	40,504	31,564	35,655	32,897
Sinjdi	69,806	99,223	91,135	63,941
P.I.Z Quetta	104,324	101,468	75,443	33,062
P.I.Z Sibi	43,589	52,801	52,724	29,062
Mach	131,109	147,855	129,332	98,872
Abegum	24,713	16,173	4,433	1,975
Shahrag	199,863	206,044	247,269	111,482
Harnai	161,439	216,670	168,098	120,491
Duki	353,971	476,524	269,294	185,764
Chamalang	88,650	27,894	10,217	494
Total	**1,350,951**	**1,538,170**	**1,290,175**	**759,253**

Iron ore

4.3.21 Basic raw material for iron and steel industry is iron ore, which can lead to our growing economy. Balochistan has huge reserves of iron ore, which can fulfill the growing demand for domestic iron and steel industry as well as sustain large external trade.

4.3.22 Iron ore deposits are found in Dilband in district Mastung, Chigendik, Pachin Koh, Chilghazi, Pezu in district Chagai and some iron ore deposits are also found in Lasbela-Khuzdar ophiolite belt, which needs further exploration.

Table 4.17: Iron Ore Reserves (million tons)

Location	District	Reserves	Iron content %	Type
Chilghazi	Chagai	23.36	10-55	Magnetite
Pezu	Chagai	66	30-34	Hematite
Pachin Koh	Chagai	45-100	48.35	Magnetite
Chigendik	Chagai	5	67-82	Magnetite
Dilband	Mastung	150-250	40-60	Hematite

Source: MMDD, GSP, ME&PD, BME

4.3.23 Iron ore of Chagai and Mastung districts is used in production of pig iron, which is further used in production of steel, industrial finishes, polishing compounds and sponge iron industries.

Marble

4.3.24 Marble including onyx reserves in Balochistan are found in Khuzdar, Kalat, Loralai, Lasbela, Ziarat and Zhob. In Chagai district, it is found in Siah Chang, Mashkichah, Patkok, Chilgazi, Zardkan, Jhulli, Zeh and Buttak and is being mined since 1950. The high cost of electricity, shortage of skilled labour in local markets and lack of industrial zones in Quetta for this industry is a major bottleneck for the sector growth. The manufactured material is used locally, as products are not compatible for export.

4.3.25 The marble and granite sector in Pakistan is severely underdeveloped due to primitive and inefficient mining practices using unskilled labour who wastes much of resource at mines and produces a product which has been highly degraded through poor blasting practices. Beyond the mining techniques, additional problems relate to poor processing technologies, inconsistency of quality of products and small product lots (units of shipping) that are not appropriate for many larger construction projects.

4.3.26 A weak marketing strategy has limited many producers in realising new growth opportunities, and poor infrastructure has limited access to some of the province's better resource areas. The latter constraint has been partially overcome by industry clusters such as Hub where water and power are available, but the disposal of considerable waste material needs attention.

4.3.27 Pakistan Stone Development Corporation (PASDEC) has proposed for providing machinery and soft inputs in the form of technical assistance in 20 existing quarries in Balochistan on a cost-sharing scheme for equipment and technical assistance through extension services.

4.3.28 For its vast applications and uses, onyx marble has great demand in the international market. The onyx marble from Chaghi can meet international standards and needs, if it is processed efficiently.

4.3.29 Out of the country's total 1,095 units, Balochistan has only 60 small marble processing units. Marble sector must comprise a large number of mainly decentralised production units, which would mine a large variety of marble packs. A basic characteristic of these business units' structure must be vertical for production (quarrying of marble, cutting and processing as well as the production of end-products). These business units in the sector must have modern production facilities at their disposal and produce a diversified range of end-products both in standard as well as in special dimension formats.

4.3.30 Disorganised and mismanaged scheme of things, poor technology and shy investment in marble sector are the main reasons for low growth in this sector in Balochistan. The sector needs to be organised on modern lines in the province. The induction of modern technology in marble sector will increase efficiency of processing units. Under the policy, private sector shall be given incentives for making investment in the marble sector. The government must also ensure the security to investors and technology up-gradation through public and private sectors interventions.

4.3.31 Around 80 types of marble are available in Balochistan alone and due to its proximity to Karachi and Gwadar ports, the province has an edge over rest of the country. The stones being produced in Balochistan are of fine quality and of the standard of stones

found in Italy. Exports can easily go to over $200 million per annum, if incentives are provided to marble sector in Balochistan particularly in the field of value-addition.

Table 4.18: Yearly Rock/Mineral Production in Balochistan (Tons)

Sr. No.	Mineral	2012	2013	2014	2015	2016
1	Barite	107,387	84,405	151,260	155,173	104,036
2	Basalt	749	680	-	1,001	776
3	Chromite	83,932	57,027	52,416	88,516	46,402
4	Marble - Ordinary	750,047	775,213	786,838	183,160	1,955,270
5	Marble - Onyx	68,719	43,189	16,933	7,535	20,232
6	Coal	1,164,736	124,989	1,994,676	1,984,269	1,721,828
7	Lime stone	1,057,818	1,065,252	1,021,559	1,113,674	934,267
8	Iron ore	176,239	115,191	107,289	137,530	117,410
9	Copper blister	17,833	15,742	13,276	14,281	14,497
10	Shale	1,681,993	1,660,223	1,715,684	1,511,982	148,398
11	Clay	25	25	5	-	-
12	Conglomerate	91	74	47	-	-
13	Diorite	78	25	23	-	-
14	Dolomite	132	115	100	-	-
15	Fluorite	228	313	221	5,932	107,169
16	Gabbro	61	222	49	-	-
17	Granite	172	101	65	50	50
18	Magnesite	110	231	-	32,943	20,347
19	Gneiss	63	54	28	-	
20	Pumice	1,940	2,523	1,251	3,278	3,471
21	Quartzite	84	58	48	-	-
22	Rhyolite	51	37	31	-	-
23	Serpentine	1,066	210	203	822	453
24	Ordinary stone	6,745	3,485	2,730	630	5,792

Source: MMDD, SML

Barite

4.3.32 Barite is generally known as barium sulphate. The main deposits of barite in Balochistan found at Bankhri (Lasbela), Kudni, Hunurki, Duddar (Lasbela), Gunga (Khuzdar) Koh-e- Sultan (Chaghai). Barite was first discovered in 1956, and investigated in 1960s-1970s, at Gunga, district Khuzdar – the single largest deposit originally estimated to contain 14.50 million tons of reserves (source BME). Now, the 300km long Khuzdar–Lasbela belt alone has been identified hosting reserves of about 11 million tons and inferred reserves of 40 million tons of barite.

4.3.33 Bolan Mining Enterprise, a joint venture of the Government of Balochistan and Pakistan Petroleum Ltd, has a barite mine-lease spread over 316 acres in Gunga produced 1.2 million tons of barite from last five years and operates a grinding/milling plant which provides oil drilling barite.

Chromite

4.3.34 Chromite is a critical component of a range of specialty steel products and is used in chemical industry and as a refractory. Chromite occurs in many locations in Balochistan, where the mineral occurs as small pods in ultramafic rocks. The highest grade of chromite ores is available in Balochistan especially in Muslimbagh. At present, chromite ores are being mined from Muslimbagh, Khanozai, Nisai, Gawal, Wad and Sonaro areas of Balochistan,

4.3.35 Balochistan chromite ranges between 28%-56% producing both metrological and refractory grades of chromite. Chromite is being mined by open pit as well as underground mining method from the ultramafic rocks mainly from Muslimbagh Killa Saifullah District and Khanozai area of Pishin District of Balochistan. Most of the chromite is of metallurgical grade with Cr2O3 averaging 54% and a chrome to iron ratio of 2.6:1. Mostly the upgraded ore is being transported to Karachi for export.

Limestone

4.3.36 Limestone is used in manufacture of cement, lime, soap, paper, bleaching powder and glass etc. The occurrence of limestone in Balochistan extends from the coastal region near Karachi to as far north as the Chagai and Zhob. In most places, the limestone is exposed near the railway tracks or road, making its utilisation easy. These rocks generally contain over 80% calcium carbonate, less than 5% silica and less than 1% iron oxide making them suitable raw material for the manufacture of cement. The reserve tonnage of limestone is in billions.

Table 4.19: Annual Revenues (Rs.) collected by GOB from Minerals

Sr. No.	Heads	2013-14	2014-15	2015-16	2016-17	2017-18
1	Saindak	713,471,610	624,968,213	554,421,397	629,611,819	593,867,059
2	Duddar	-	-	50,000	141,173,963	312,190,209
3	Chamalong	7,871,383	1,437,502	14,526,995	2,682,487	4,665,301
4	Minerals Royalties	409,792,250	448,799,144	464,943,133	569,721,969	628,502,145
5	Other	87,043,920	124,528,330	67,741,537	86,649,583	104,906,257
	Total	**1,218,179,163**	**1,199,733,189**	**1,101,683,062**	**1,429,839,831**	**1,644,130,971**

Note: As per MMDD GOB, Total Rs: 2.79 billion collected revenues during FY 2018-2019

Sustainable Development Goals

SDG 8 – Decent Work and Economic Growth

4.3.37 Mining can generate new economic opportunities for citizens and members of local communities including jobs, training, and business development relating to mining operations, associated service providers, or new local economies linked to the mining. Detailed indicators and targets for SDG 8 to be achieved by Balochistan are provided at **Table 8 of Appendix A**.

SDG 9 – Infrastructure, Innovation and Industrialisation and SDG 12 Responsible Consumption and Production

4.3.38 Mining can help drive economic development and diversification through direct and indirect economic benefits and by spurring the construction of new infrastructure for

transport, communications, water and energy. Mining also provides materials critical for renewable technologies and the opportunity for companies to collaborate across the supply chain to minimise waste and to reuse and recycle. Detailed indicators and targets for SDG 9 and SDG 12 to be achieved by Balochistan are provided at **Table 9 and Table 12 of Appendix A**.

SDG6 – Clean Water and Sanitation

4.3.39 Mine development requires access to land and water presenting significant adverse impacts on lands and natural resources which can be mitigated or avoided. Detailed indicators and targets for SDG 6 to be achieved by Balochistan are provided at **Table 6 of Appendix A**.

SDG7 – Energy Access and Sustainability and SDG13 – Climate Action

4.3.40 Mining activities are energy and emissions intensive, presenting opportunities for greater efficiency as well as expanding access to energy. Detailed indicators and targets for SDG 7 and SDG 13 to be achieved by Balochistan are provided at **Table 7 and Table 13 of Appendix A**.

Opportunities under CPEC

4.3.41 The following projects, related to mining sector, can help boost economic activities in Balochistan:

a. Upgradation plant for Nokundi iron ore +64% Fe for steel mill. Saindak project iron concentrate will also be used for upgradation of Nokundi iron ore plant
b. Establishment of mini steel mills in Mastung and Chaghi Districts.
c. Construction of cement plants in Quetta, Kalat, Mastung, Loralai, Lasbela, Barkhan, Bolan, Sibi, Harnai and Kohlu.
d. Construction of modern pulverised coal based thermal power stations in Quetta (100MW), Loralai (60 MW), Sibi (50 MW) and Harnai (50MW).The quality of coal is subbituminous, A Chinese company has also prepared feasibility report for construction of a powerhouse for Sharug/Harnai coalfields.
e. Establishment of Ferro Chrome plant in Khuzdar and Muslim Bagh.
f. Establishment of Marble cities in Chaghi, Khuzdar and Loralai.
g. Establishment of Barium Chemical Compounds industry in Khuzdar.

Priority Areas

The GoB recognises the potential of mining sector of the province and has set the following priorities for the development of this sector:

4.3.42 The GoB shall engage in the development of available mineral resources through utilising the experts of private sector and with the objective of increasing the revenue from minerals sector.

4.3.43 Setting up minerals processing industry to engage in value addition of different mining products, so that minerals are processed into finished or semi-finished products. At present, most of the minerals are extracted in raw form in the province with very little value addition in the provincial economy.

4.3.44 Establishment of dedicated economic zones to be established under the Special Economic Zone Act, 2012 at district level to develop upstream industry. These may be set up in Muslimbagh, Quetta, Mastung, Khuzdar, Chaghi, Dilband, and Loralai where significant development activity in mining exists.

4.3.45 Establish an Oil and Gas development corporation to oversee provincial O&G resources and expeditious development of the sector. Following the 18th Amendment, there is now shared ownership of Oil and Gas (O&G) resources, between the federal and provincial governments.

4.3.46 Engage in capacity development of existing staff of MMDD on modern mining practices and technologies to enable them in realising huge potential of the province in the mining sector.

4.3.47 Strengthen data availability on mineral resources to facilitate policy development and carrying out geo-physical, geo-chemical and geological studies.

Targets

4.3.48 The GoB has set the following targets for Pillar 3 to be achieved by 2026:

Table 4.20: Baseline and Targets – Pillar 3

Description	Baseline	Targets
Mining Revenue	Rs. 1.46 billion	Rs. 5 billion per year
Job Creation in Mining Sector (Labor Force)	74,000	81,400

Target 1: Increasing Mining Revenue

4.3.49 In FY 2020-2021, the revenue of the GoB from mining sector stood at Rs. 534.5 million but for FY 2021-2022 it increased to Rs. 1.46 billion[43]. The GoB has set a target of revenue from mining at Rs. 5 billion per year for the strategy period. Investing in mining sector shall certainly increase its contribution towards GPP. Expediting the development and exploration process in the regions of deposit concentrations. Provision of extraction facilities through technological advancements to aid in long-term revenue generation and achievement of desired target.

Target 2: Job creation

4.3.50 The GoB has set an ambitious target of reducing unemployment rate of 4.09%[44] in the province by 30% by the end of FY 2026. The employed Labour Force in the Mining Sector currently stands at 2.95% (approximately 74,000 persons)[44]. The GoB has set the target to increase the labour force in the mining sector by 10%. Establishing training facilities and increase in the overall mining activity by engaging in new projects will create a space for jobs and employment in various sub-sectors of mining. This shall certainly contribute in achieving the target for reducing employment by 2026.

Target 3: Greater Reform Agenda

4.3.51 The laws which govern the mining sector need to be rearranged so as to facilitate the above targets and to promote investment facilitation, lying out a corporate base for mining engagements, and improve transparency and disclosure to public access and to deliver to the ends of governance. Consolidation of various acts and rules, which govern

[43] MMDD GOB
[44] Pakistan Labor Force Survey 2017-18

the mining sector, into a single unit of Law/Act to create ease of doing business as well as removing the complications from the process shall form one of the core activities.

4.3.52 The Balochistan Mines and Mineral Development policy 2019 has been approved by the Government, which is now being put in operation. The policy sets out vision for the department and targets to achieve accelerated mining industry growth, development of mining infrastructure through the province, adopting, implementation and ensuring the OHS covenants both national and international to be actually observed, making available all the required facilities to the mine workers and owners and to equate the due effect of mineral sector towards shaping the provincial economy.

4.3.53 The sectoral planning has attained ever-increasing importance and significance. The mines department has set out to develop the first ever sector plan for the mines and minerals department in the province. The 5-year plan will look at the things through a calculated prism. This will scientifically reinforce the targets of the economic growth strategy.

Strategy

4.3.54 As per Aghaz-e-Haqooq-e-Balochistan package agreed by the GoP and the GoB and 18th constitutional amendment, the ownership of Saindak project needs to be transferred to the GoB on expiry of contract agreement between the GoP (SML) and MCC China in 2022. The GoB plans:

a. To revise the original contract of 2001 signed by the GoP (SML) and MCC China.
b. To strengthen the provincial technical expertise in SCGP, decreasing foreigners and increasing nationals up to the complete transfer of technology.
c. To establish a copper refinery as well as copper industry to be interlinked with CPEC.
d. To start production of pyrite as well as magnetite concentrate, 90000 t/a, 75000 t/a respectively on regular basis to be used for planned mini steel mill at Nokundi.
e. To install molybdenum concentrate plant.
f. To declare SCGP as training institute of Mining and Metallurgy discipline.

4.3.55 Capitalise over the inherent possession of natural minerals to enhance long-term self-sustainability by expediting the development of Dilband, Pachinko, Chilghazi and Lasbela iron ore deposits along with upgrade. This will also help in establishing ferrochrome industry whereas both the items required to run this industry are amply available in the mineral deposits of the province. This will accelerate capitalising on the indigenous basis through international demand.

4.3.56 Encourage private extraction firms by providing them with incentives to aid in development and extractions. Private entities shall bring in expertise previously not available and new enhanced techniques of extraction. There is enough potential to develop Reko Diq mine under JVs with multinational companies as it is reported to have a reserve of 420 million pounds of copper.

4.3.57 Expedite a decisive resolution of the world largest undeveloped porphyry copper gold deposits of Reko Diq, which can be a game changer for the economy of Balochistan.

Accelerating litigation processes to ensure future prospects to prosperity employment generation.

4.3.58 Facilitate engagement of private sector for value addition of minerals. The following are some of the key projects:

a. Mini steel mills and upgradation plant in Chagai Districts (Nokundi). The Saindak iron concentrate will be used for upgradation of iron in proposed Nokundi mini steel mill.
b. Mini steel mill and upgradation plant in Mastung, USSR technology is proposed for upgradation of Dilband iron ore.
c. Cement-manufacturing plants at Quetta, Kalat, Mastung, Loralai, Lasbela, Barkhan, Bolan, Sibi, Harnai and Kohlu. The raw material for cement manufacturing plant is available in the said areas of CPEC route.
d. Modern pulverised coal based thermal power stations in Quetta (100MW), Loralai (60 MW), Sibi (50 MW) and Harnai (50MW).
e. Ferro chrome plant in Khuzdar and Muslim Bagh.
f. Marble cities in Chagai, Khuzdar, and Loralai.
g. Barium chemical compounds industry in Khuzdar.

4.3.59 Incentivise private investors by offering Public Private Partnership to expedite the development. Provision of financial facilitations over favorable conditions could act as a driving force towards development.

4.3.60 Establish Oil and Gas development authority to take part in provincial Oil and Gas resources for extraction and development. Undertake capacity expansion assessments and commence exploration activities to identify potential areas for extraction and utilise the resources in the most efficient manner.

4.3.61 Prompt availability of geo-physical, geo-chemical and geological survey reports for prospective investors. Private sector expertise may be utilised to collect and host the data creating opportunities for private sector towards the contribution of economic prosperity. Private sector will bring innovative techniques to overrun the antiquated methodologies and create job opportunities for the unemployed.

4.3.62 Convert Geo-Data Center, MMDD into one window "Geo-Data/MMDD and Investment Center" with following functions:

a. Providing basic information to investors
b. Approval and issuance of PL, EL and Mining licenses
c. Regulator of mining sector
d. To Establish a new website with updated status of Minerals/Mining in Balochistan

4.3.63 Complete and operationalise Mines Training and Rescue Centers at Muslim Bagh, Khuzdar, Soorani, Mach and Shahragh to stimulate inclusive growth amongst mineworkers and to enhance their skillsets and knowledge bank.

4.3.64 Amplify central role of the GoB in devising a mechanism to ensure mining industry-academia interaction to keep up with new knowledge and technological development with mining international mining practices.

4.3.65 Collaborate by arranging training and skill development initiative of DGMM and arranging seminars/conferences/workshops on regular basis. The capacity-building programme would be too crucial as the work involved in mining sector is complex, technical and scientific.

Budget 2021-2026

Table 4.21: Mining and Natural Resources		Rs. in Million				
Sr. No	**Strategy**	**FY 1, FY 2**	**FY 3, FY 4**	**FY 4, FY 5**	**Total**	**Proposed FA Portion**
1	Feasibility study (PPP) Establishment of Mini Steel Mill at Chaghi and Mastung	100	-	-	**100**	-
2	Feasibility studies (PPP) Cement Manufacturing Plant at Quetta, Kalat, Mastung, Loralai, Lasbela, Barkhan, Bolan, Sibi, Harnai and Kohlu	200	200	-	**400**	-
3	Feasibility studies (PPP) Establishment of Coal based Thermal Power Station at Quetta, Loralai, Sibi and Harnai	-	200	-	**200**	-
4	Feasibility study (PPP) Establishment of Ferro Chrome Plant at Muslim Bagh and Khuzdar	-	-	200	**200**	-
5	Establishment of Marble City at Khuzdar, Loralai and Chaghi	300	600	-	**900**	-
6	Feasibility study (PPP) Establishment of Barium Chemical Compound Industry at Khuzdar	-	-	300	**300**	-
7	Establishment of Mines Training and Rescue Centers at Muslim Bagh, Khuzdar, Sooranj, Mach and Shahragh	100	100	-	**200**	-
8	Convert Geo-Data Center, MMDD into one window “Geo-Data/MMDD and Investment Center”	50	-	-	**50**	-
9	Establish Balochistan Oil and Gas Development Authority	700	1,100	7,000	**8,800**	-
10	Reko Diq Project	500	2,000	4,000	**6,500**	-
11	Throw forward for schemes (PSDP 2021-26)	2192	1918	1370	**5480**	-
	Total	**4142**	**6,118**	**12,870**	**23,130**	**-**

Pillar 4: Developing Coastal Area for Fisheries and Tourism

4.4 Pillar 4: Developing Coastal Area for Fisheries and Tourism

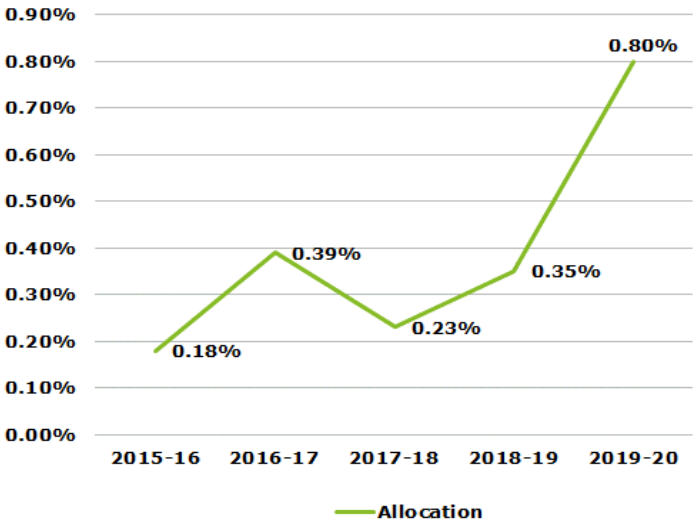
4A: Fisheries

Baseline

4.4.1 Full potential of the Fisheries sector is yet to be exploited by Balochistan, as it possesses a natural stretch of 1,129 km long coastline[45] feasible for a long-term sustainable development of coastal area and fishing activities.

4.4.2 This sector alone is capable of contributing up to a major proportion of GPP generating significant and sustainable economic benefits in terms of social, financial and institutional aids. However, this sector in the last five (5) years has barely received any attention concerning development expenditures and PSDP allocations.

Figure 15: Percentage of Budget allocations in 5 years



4.4.3 The trends from the last five (5) years depict a gradual increase in the overall budget allocations and spending. However, by far, the sector has not received an aggregate of 1% in the past years, which mitigates any factor inclining towards growth of this sector.

4.4.4 Generally, the coastal zone of Balochistan is divided in three (3) zones. Zone 1 extends to 12 nautical miles (NM) falling under the supervision of the provincial government where small-scale fishing is carried out. Zone 2, the Buffer Zone, falls under the Federal jurisdiction stretching from 12 to 20 nautical mile. The third and the largest zone elongates to a stretch from 20 NM to 300 NM also falling under the Federal domain. Since the latter two (2) zones fall under Federal Authority, the government of Balochistan only has the right to exercise its powers within 12 NM.[46]

4.4.5 Operating within the current capacity Balochistan has managed to develop eight (8) fish landing stations with a total catch of 153,155 metric tons on an annual basis. From this total only 10% of the fish caught on the coast is consumed locally whereas, the rest is transported to hinterlands and Karachi for sale and export purposes. Currently, there are only 10 fish processing plants along the coastline, operated by the private sector that process around 23,000 MT of fish without value addition.[46]

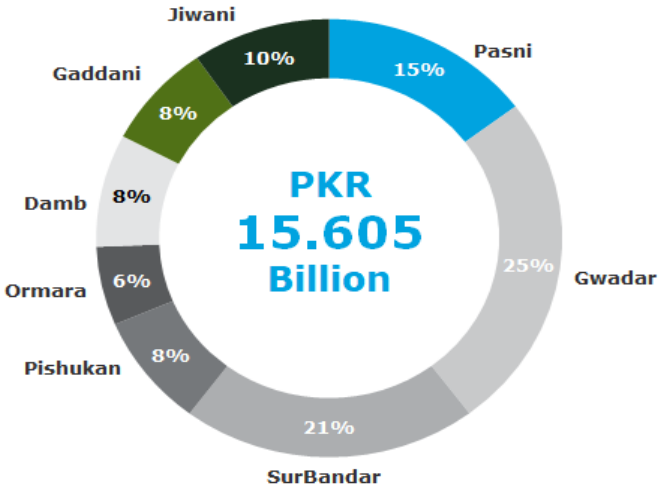
[45] Balochistan Fisheries and Coastal Development Department
[46] Balochistan Coastal Development Authority

Table 4.22: Total Fish Landing and its Valuation on Balochistan's Coasts for FY 2018			
Sr. No	**Stations**	**Quantity M/Tons**	**Value (Rs. in Million)**
1	Pasni	29,036	2,305
2	Gwadar	31,947	3,996
3	Sur Bandar	19,730	3,190
4	Pishukan	16,905	1,502
5	Ormara	14,601	941
6	Damb	13,299	1,380
7	Gaddani	11,630	1,178
8	Jiwani	16,005	1,556
	Total	**153,155**	**16,048**
Source: Fisheries and Coastal Development Department			

4.4.6 In terms of share, Gwadar contributes the most towards fish catch quantity and valuation.

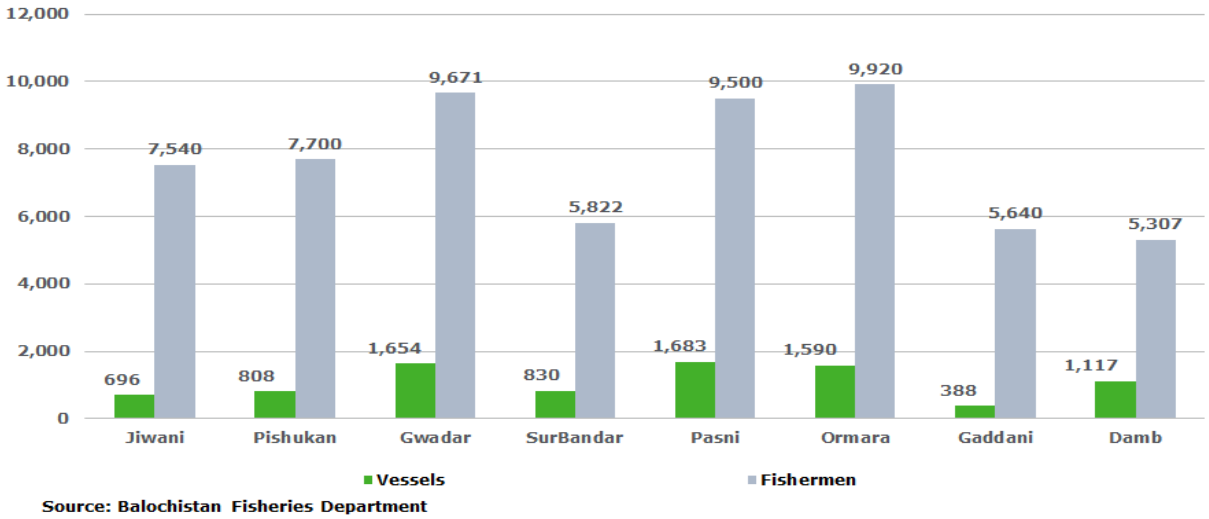
4.4.7 Along the coastline of Balochistan, a total of forty (40) small towns and villages have been inhabited by the local population mainly dependent on fishing where most of the fisherfolk population come from these towns and villages populated along the coastal line. Total fisherfolk population, recorded in FY 2018, summed up to 61,104, which also includes occasional fisherfolk with having a total 8,766 registered vessels. Most of these vessels are small wooden boats with only a few being well equipped for fishery purposes leaving the rest to be operated totally through manual means.[47]

Figure 16: Percentage share in total Fish catch



[47] Fisheries and Coastal Development Department

Figure 17: Registered Vessels and Fishermen Population



Source: Balochistan Fisheries Department

4.4.8 Total number of registered vessels are inadequate to accommodate the numbers of fisherfolk hence causing a deficit in vessel to fisherfolk ratio, which ultimately effects the rate of output for the overall sector. The marine capture fishery has experienced a decrease in overall production since the 1990s and a decrease in per-unit value. A recent stock assessment by the Government of Pakistan and the United Nations Food and Agriculture Organization found that Pakistan's marine fisheries are depleted and overfished and the continuation of current levels of fishing will seriously undermine production further[48]. The decrease in production has occurred even while total fishing effort (the harvest capacity of the fishing fleet and the time spent fishing) has increased. In addition, costs are high which is undermining the sector's profitability, while the shrinking resource base beneath the water undermines livelihoods in vulnerable, small-scale fishing communities[49].

4.4.9 Support functions related to fisheries such as freezing plants and ice factories do operate but sparingly as a few of the plants are either out of order or under construction, compelling the catch to be sent out of Balochistan for processing purposes. Out of 19 freezing plants, 4 are out of order and majority of them are concentrated at Pasni. Ice factories are 30 in total, mostly setup in Pasni out of which 10 plants are out of operations. Berthing facilities to unload and dock the vessel are also present at only 3 locations which include Gwadar, Pasni and Gaddani whereas the later 2 are non-functional[50].

Sustainable Development Goals

SDG 1 – No Poverty

4.4.10 The fisheries sector directly contributes towards improving livelihoods of fishing communities through generating income and employment opportunities. Fishery-related livelihoods are particularly important in rural and remote areas where alternative employment is lacking. Fisheries strengthen resilience by acting as a safety net. The

[48] Comprehensive Assessment of Pakistan's Marine Fisheries Resources to 2015." Fisheries Resources Appraisal in Pakistan Project (FRAPP)
[49] Revitalizing Pakistan's Fisheries | World Bank Group 2018
[50] Balochistan Coastal Development Authority

development of fisheries sector can greatly contribute in poverty eradication targets. Detailed indicators and targets for SDG 1 to be achieved by Balochistan are provided at **Table 1 of Appendix A**.

SDG 8 – Decent Work and Economic Growth

4.4.11 Fisheries act as a source of employment for the population living in the coastal areas. The development of infrastructure and provision of facilities to the local fisherfolk shall create job opportunities. This shall contribute in achieving targets for SDG 8 in relation to job creation and generating economic growth of the province. Detailed indicators and targets for SDG 8 to be achieved by Balochistan are provided at **Table 8 of Appendix A**.

SDG 14 – Life below Water

4.4.12 Conservation of the marine life through curbing illegal, unreported and unregulated fishing and better environmental practices needed to achieve the targets delineated by SDG 14. Detailed indicators and targets for SDG 14 to be achieved by Balochistan are provided at **Table 14 of Appendix A**.

Opportunities under CPEC

4.4.13 Advancements in the progression of CPEC projects have opened avenues of opportunities for this sector from job creations to potential economic boom. Construction of eight (8) fish landing jetties have been prioritised under CPEC projects with an estimated cost of $150 million.

4.4.14 Alongside the development of fish landing sites, onshore facilitations and chain management services will also be incorporated as a part of vision. It was estimated that the Jewani and Damb landing sites would be completed by 2020, Gaddani and Kund Malir by 2021, Surbandar and Pishukan by 2022 and lastly Pasni and Ormara by 2024.

4.4.15 The prioritised landing sites have been envisioned to be successfully developed and under operation latest by 2024. With the culmination of these projects, a dynamic transformation of the entire sector can be engineered as transitions leading to economic prosperity will generate revenues to be directed towards rehabilitation of fisheries sector.

4.4.16 It is likely to assume that the transfer of technologies will occur as the Chinese will bring in their innovative techniques and methodologies to be adopted by local fishermen to escalate the volume of their catch.

Priority Areas

4.4.17 It is essential to exploit the possession of natural potential for fisheries and coastal development. Throughout the enormous stretch of coastal area, Balochistan offers an opportunity to be capitalised for economic revitalisation via development of underutilised resources, capacitating and expanding the existing operations through financial aids or PPP.

4.4.18 Along the coastal strips of Surbandar, Ormara, Kund Malir and Gaddani, there is a high potential for constructing and developing zones strictly restricted to catering of fishing activities as well as development of a small locality for the fisherfolk to dwell.

4.4.19 Currently, fisherfolk rely on antiquated methods and techniques to perform their daily activities. Most of the vessels are small wooden boats, manually operated with inadequacy to capacitate the daily catch or carry enough load in one go. The outdated and unreliable vessels curb the ability to increase the volume of catch.

4.4.20 The Governance in this sector is weak to streamline the operations. Due to fragile law enforcements with ineffective legal interventions and allocation of low budgets, it is difficult for this sector to thrive. This indicates cracks in strategic planning and limitations to capacity induced by inefficient policies backed by weak governance framework. A national policy framework is compulsory to draw a strategic trajectory for this sector to streamline the operations.

4.4.21 Depletion in fish stock is another challenge, which highlights the need for adoption of more sustainable approaches in marine fisheries.

4.4.22 Lack of landing sites create hurdles for fishermen to appropriately dispense or unload their daily catch turning a proportion of their catch into waste leading towards decrease in the output of the overall sector. Shortage of appropriate storage facilities near the activity zones also exacerbate current conditions.

4.4.23 Mostly the vessels operate under no supervision or monitoring. This creates a passage for illegal activities and malpractices making the entire department's system to remain unregulated generating bottlenecks in daily operations as much of the operations and activities performed go unreported.

Targets

4.4.24 The GoB has set the following targets for fisheries under Pillar 4 to be achieved by 2026:

Table 4.23: Baseline and Targets – Pillar 4 (Fisheries and Coastal Development)

Description	Baseline	Targets
Increase in fish catch	153,155 m/tons	10-15% increase in fish catch
Sustainable Marine Fisheries	Depletion in Fish Stock	Sustainable Fish Stock

Target 1: Increase in fish catch

4.4.25 The total fish catch at Balochistan coast stands at 153,155 m/tons in FY 2018[51]. Development of Fisheries Economic Zones, using alternative methods of fish production, modern fishing gear including fiber glass boats and better fish processing and storage facilities shall improve the overall amount of catch and aid in achieving the target.

[51] Fisheries Department and Coastal Development Department, Government of Balochistan

Target 2: Promoting sustainable marine fisheries

4.4.26 The GoB recognises the issue of fish stock depletion as indicated in the recent stock assessment report issued by the FAO[52]. The GoB shall adopt environmentally sustainable policies and interventions for achieving long-term preservation and increase in available fish stock.

Strategy

4.4.27 Develop Fisheries Economic Zones (FEZ) at *Surbandar*, *Ormara, Kund Malir* and *Gaddani*. FEZ shall include end to end facilities from catching, processing, export, training and research on fisheries as well as low-cost housing schemes for fisherfolk and other workers.

4.4.28 Early completion of landing sites at *Jiwani*, *Damb*, *Pishukan* and *Pasni* to accommodate fisherfolk and provide them with required facilitations to enhance the rate of catch and to achieve economies of scale by bringing uniformity and interlinking the operations.

4.4.29 Improve and monitor compliance with the WTO's Sanitary and Phytosanitary Standards and other international standards and certifications e.g. Hazard Analysis and Critical Control Points to increase exports to EU and USA markets.

4.4.30 Adopt alternate methods of fish production i.e., aquaculture (shrimp hatchery, cage farming) for increasing fish production and introduction of innovative and effective fishing techniques which shall allow fisherfolk to bring enhancement to their skill set.

4.4.31 Merge various functions under a single entity currently being performed by Fisheries and Coastal Development Department, BCDA, PFHA and GDA shall create a point of one window operation to expedite entire process of fisheries department decreasing delays in operations and increasing efficiency of performance.

4.4.32 Introduce modern technologies including Vessel Monitoring System, Global Positioning System, Global Navigation Satellite System application, Automatic Identification System etc. for better monitoring of fishing boats and vessels to curb illegal, unreported and unregulated fishing to streamline operations and achieve efficiency in functions of fisheries department. This shall also allow transfer of technologies changing entire dynamics of this sector and creating opportunities for jobs and businesses.

4.4.33 Develop integrated Livestock and Fisheries Farms in collaboration with private sector to enhance the outreach of production through multiple channeling using marketing techniques. *(Note: This strategy is budgeted under livestock sector)*

[52] Comprehensive Assessment of Pakistan's Marine Fisheries Resources to 2015." Fisheries Resources Appraisal in Pakistan Project (FRAPP)

Budget 2021-2026

Table 4.24: Fisheries		Rs. in Millions				
Sr. No.	**Strategy**	**FY1, FY2**	**FY2, FY3**	**FY4, FY5**	**Total**	**Proposed FA Portion**
1	Development of Fisheries Economic Zone	2,766	1,483	1,483	**5,732**	-
2	Completion of Fish landing sites with onshore facilities	-	2,576	2,736	**5,312**	-
3	Development of SPS complaint protocols and inspection guidelines for regulating fisheries and capacity building	80	150	-	**230**	-
4	Establish International Standard Marine Fisheries Testing Labs at eight fish landing sites/harbors	-	-	2,000	**2,000**	-
5	Establish Border Control and Quarantine Facility at Gwadar	200	-	-	**200**	-
6	Aquaculture for fish production	100	150	350	**600**	-
7	Introduction of modern technological systems including vessel monitoring system, GPS, AIS	-	500	1,500	**2,000**	-
8	Throw forward of existing scheme (PSDP 2021-22)	6238	5458	3899	**15595**	-
	Total	**9,384**	**10,317**	**11,968**	**31,669**	**-**

4B: Culture and Tourism

Baseline

4.4.34 The Culture, Tourism and Archives department handles the subjects of culture, tourism and archives through dedicated Directorates. The department is involved with different activities to promote the rich culture and heritage of the province including arts, crafts, folklore and music. The Archaeology Directorate's mandate is protection and conservation of the built heritage in the province including historical monuments for preserving and promoting the heritage.

4.4.35 On the Tourism side, there are significant numbers of initiatives, which have been undertaken to create some basic infrastructure for promoting tourism in Balochistan including rest houses, and tourist spots etc. In post devolution scenario, the roles and responsibilities of the department have increased and it requires considerable administrative and financial support to be able to contribute towards public support for culture and tourism.

Targets

4.4.36 The GoB has set the following targets for Culture and Tourism under Pillar 4 to be achieved by FY 2026:

Table 4.25: Baseline and Targets – Pillar 4 (Culture and Tourism)

Description	Baseline	Targets
Budget Allocation for Culture and Tourism	*0.8 percent of total PSDP*	2% of total PSDP

Target 1: Increase in Tourism Allocation and Spending

4.4.37 The allocations under PSDP 2021-22 towards culture and tourism sector stood at Rs. 1542 million (0.8% of PSDP)[53]. There is a need for additional allocation and spending in this sector to promote tourism and improve image of Balochistan. The GoB has set the target for gradually increasing the allocation and spending on culture and tourism by at least 2% of the total PSDP on a yearly basis.

Strategy

4.4.38 Setting up a tourism development corporation for entering into PPP for establishing hotels (preferably 3 star) and other tourism facilities. The GoB may provide land while construction and management of facilities to be delegated to private parties creating a path of inflow for economic activities and attracting tourism through marketing techniques. The corporation's board shall include professionals related to the fields of archeology and tourism for the identification and rehabilitation of tourism sites/places. An impressive and sustainable visibility strategy shall also be developed under PPP mode to increasing the outreach of these sites at the international level via different channels (e.g. inviting and encouraging foreign teams to document local traditions/customs/arts/culture/sites and engaging different kinds of media etc.).

[53] PSDP 2021-2022

4.4.39 Develop tourist resort area at Kund Malir including touristic attractions such as water sports, hot air balloon safari over Hingol Park, ferry service between Karachi – Kund Malir – Gwadar to exploit the potential of natural beauty, which shall also aid in job creation and engage multiple business persons or investors to take part in construction activities. Develop other tourist spots like Kaio Island, Churna Island and Ras Malan (Golden Beach) etc.

4.4.40 Develop private tour operators echosystem for enhancing visibility and image of Balochistan through conducting exhibitions, seminars and familiarisation trips to various potential tourism sites. Such practice shall encourage the travel agents to bring their setup nearby providing tour facilitations to the locals or foreigners. In addition, the tourism department in collaboration with the Coastal Development Authority can explore the possibilities of engaging with the private tour companies for developing tour programmes for different sites on the coast including cruise tours for Gwadar and Somiani beaches.

4.4.41 Develop two/three new tourist attractions at Ziarat which may include mini-Global/Pakistan Park containing replicas of important tourist attractions such as 7 wonders of the world, hiking track and skiing resort to allow influx of tourism and create safety measures for them. Construction and maintenance services shall provide openings for job seekers.

4.4.42 Promote culture, arts, crafts and folk lore with renewed vigour. This is necessary for overcoming the general despondency in the province and highlighting the rich history and traditions of the province. For this, create a dedicated fund for supporting artists including musicians, actors and singers.

4.4.43 Develop sea aquarium at suitable coastal sites (may be on PPP mode).

4.4.44 Develop tourism promotional material (including videos, documentaries, 360 videos, short clips) for Internet and social media.

Budget 2021-2026

Table 4.26: Culture and Tourism — **Rs. in Million**

Sr. No.	Strategy	FY1, FY2	FY3, FY4	FY5, FY6	Total	Proposed FA Portion
1	Setting up a tourism development corporation	50	-	-	**50**	-
2	Facilitate PPP in construction of hotels	15	5	-	**20**	-
3	Construction of tourist park	70	800	700	**1,570**	-
4	Create a dedicated fund for promotion of Arts, Music and culture	50	180	770	**1,000**	-
5	Construction of Museums and Art Galleries	50	50	150	**250**	-
6	Development of coastal tourism sites	600	1,000	2,000	**3,600**	
7	Development of tourism material	20	30	40	**90**	
6	Throw forward of schemes (PSDP 2021-22)	675.2	591	422	**1688**	-
	Total	**1530.2**	**2,656**	**4,082**	**8,268**	**-**

Pillar 5: Protecting Agriculture and Livestock

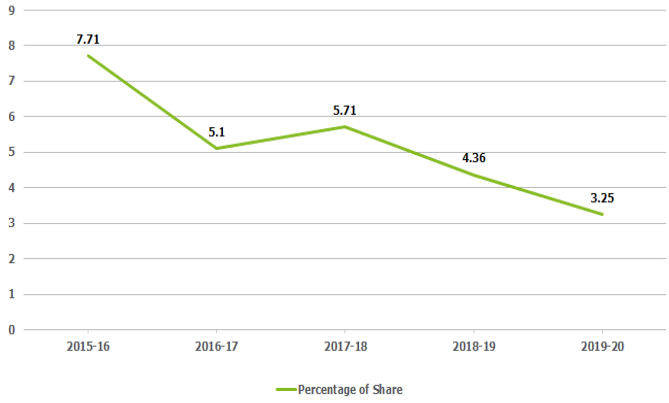
4.5 Pillar 5: Protecting Agriculture and Livestock

5A: Agriculture

Baseline

4.5.1 Pakistan, being an Agro based country, is reliant on the agricultural sector to fill up the major portion of national or provincial GDP. Pakistan, in general, covers around 79.61 million hectares of land with the potential for cultivation. Total Reported Area in FY 2017-18 covered 58.02 million hectares. However, total area that was cropped in FY 2017-18 was 23.17 million hectares.[54]

Figure 18: Provincial share of Balochistan's Agriculture in PSDP



4.5.2 Balochistan's economy is significantly dependent on agriculture having slow growth over the last two decades. The main reason for lackluster growth of Balochistan is due to high dependence on the slow growing agriculture sector relative to other provinces. The share of agriculture in Balochistan's GPP has been around 26% compared with 22% in Punjab, 14.9% in Sindh and 16.4% in KP in recent years.[55]

Balochistan lags behind as majority of its areas remain barren, which is not suitable for crops to sustain due to the harshness of weather coupled with its inherent terrain. As per statistical analysis over the past 5 years, the agricultural sector shows a gradual declining trend, in terms of budget allocation as a percentage of total provincial budget, (**Figure 18**). With respect to budget allocations, FY 2015-16 depicted the highest allocation of 7.71% compared to rest of years but a gradual downfall in allocations since then has brought it down to 3.25% of the total budget.[56] In a co-funding project namely "National Programme for Improvement of watercourses in Pakistan Phase-II", reflected in the Federal PSDP 2020-21, Agriculture Department would get Rs. 1.412 billion. Combining this amount with provincial PSDP allocation of funds, then the total allocation of funds for 2020-21 stands at 5.06%.

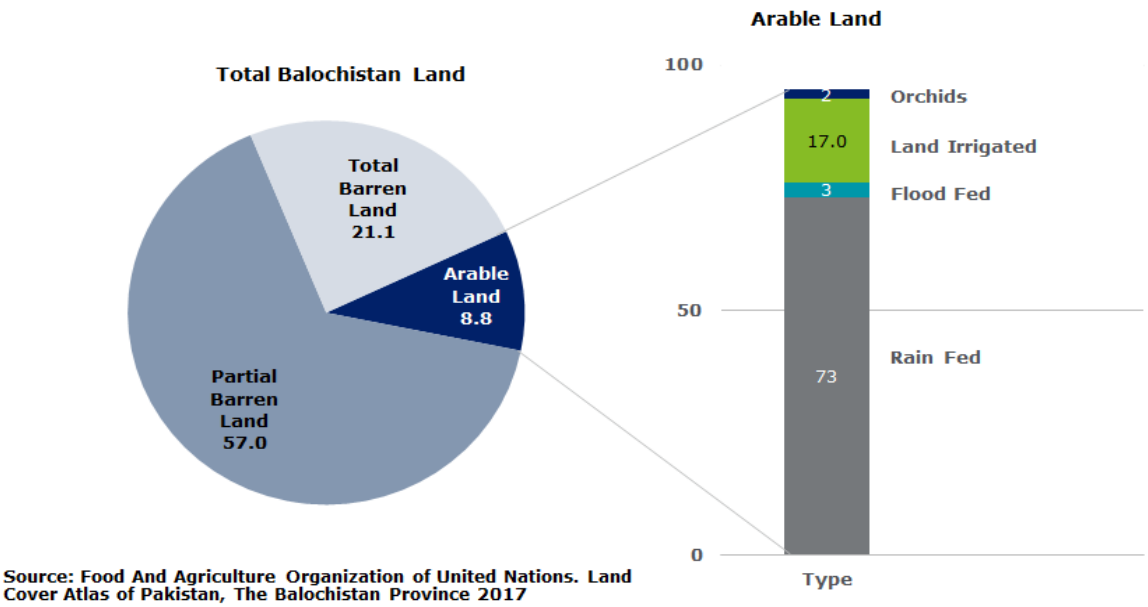
On the other hand, a mega project of Kachhi canal (Phase-I), covering Dera Bugti Nasirabad, Kachhi, is near completion with a cost of Rs. 80.4 billion while phase-1, Part-B is due to start. Together with allocation of funds to Kachhi Canal, agriculture has been receiving substantial allocation of funds.

4.5.3 Although the province consists of infertile land with sparse vegetation of 57.4% and complete barren land of 21.1%, Balochistan still supports terrains which can be utilised as arable land. Having its area bifurcated in terms of fertility out of entirety constitutes to a total of only 8.8% fit to be utilised as cultivable land (**Figure 19**). From this

[54] Land Cover Atlas of Pakistan, The Balochistan Province, Food and Agriculture Organization (FAO)
[55] Directorate of Crop Reporting Services, Agriculture Department Balochistan
[56] White Paper on Budget 2018-19, Finance Department, Government of Balochistan

aggregate percentage, the major slice of 6.4% is naturally rain fed area and the rest consists of crops irrigated through other means such as flood crops and orchids.

Figure 19: Balochistan Land Area (%)



Source: Food And Agriculture Organization of United Nations. Land Cover Atlas of Pakistan, The Balochistan Province 2017

4.5.4 Out of the total landmass of 347,190 km^2, the share of arable land sums up to roughly 30,552.72 km^2 from which 76% of cultivable land relies on naturally sourced water dependent via flood or rainfall. Crops fed through floods only constitute to 3% of total leaving majority of it (73%) to rely on rain, as floods are prone to destroy most of the crops. Irrigation techniques are mostly adapted in areas which do not receive enough rainfall covering 17% but does have the soil with great potential to grow crops on. However, the least amount of area covering only 2% is occupied by various kinds of orchids, which are also dependent upon water channeling, routing the floodwater and rainfall to these areas.[57]

4.5.5 While the province is recovering from the last drought followed by periods of rain and floods, the productivity of almost all the farming systems is still lower than the potential.

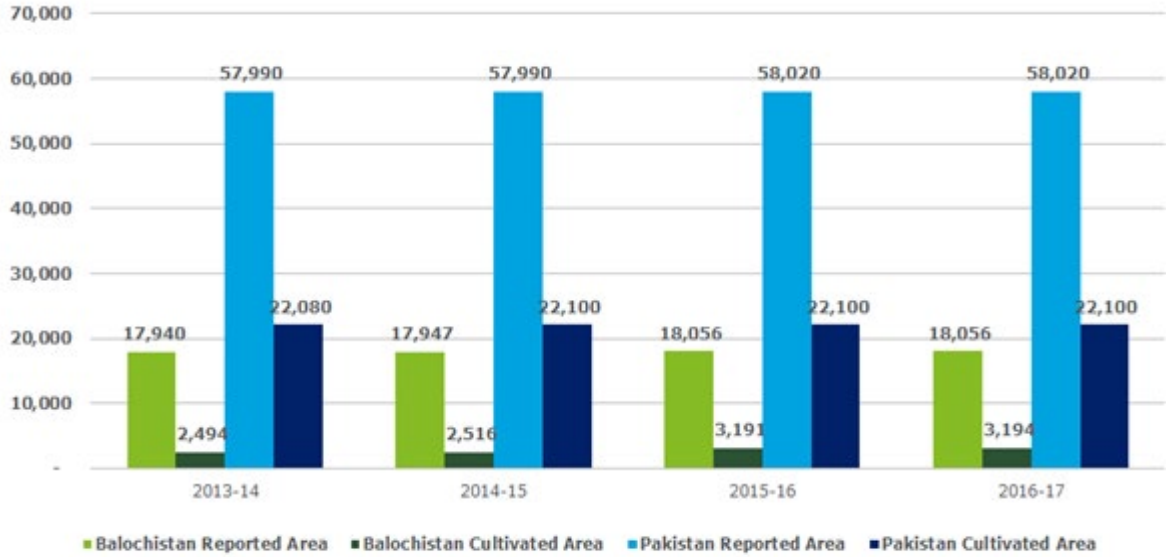
4.5.6 Major impacts of climate change on agriculture shall be in the form of:

a) shift in boundary of crops in hot regions due to rise in temperature;
b) rise in crop water requirement due to rise in temperature which shall further put pressure on scarce resources of groundwater;
c) reduced productivity in dry years because there are chances that climate change will make the drought events more severe and frequent; and
d) epidemic of animal diseases due to changes in climate especially in hot regions.

4.5.7 To the extent of totality, Balochistan, in Agriculture sector, shares a minimal contribution of 14.24% in terms of total cultivated area (3,194,000 Hectares) against the total cultivated area (22.10 million hectares) of Pakistan in FY 2016-17.[58]

[57] Food and Agriculture Organization, United Nation, Land Cover Atlas of Pakistan, The Balochistan Province
[58] Directorate of Crops Reporting Services, Balochistan

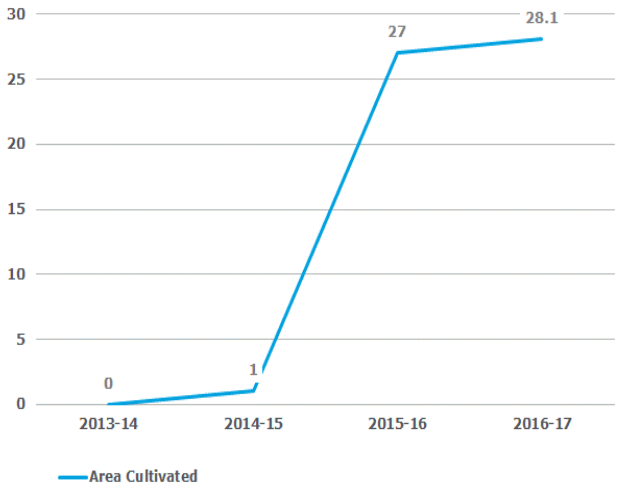
Figure 20: Share of Balochistan's Cultivated Area in Pakistan in million hectors



Source: Ministry of National Food Security & Research

4.5.8 Even if the trends depict an overall rise in the area cultivated at provincial level, however, when put under comparison on a national scale, the area cultivated in Balochistan represents a bare minimum contribution on a national spectrum. This can indicate that the floodwater and rain water is not being properly channeled for farming purposes as the reported area is not being potentially or fully utilised. Pakistan on an average scale has 38% of its land utilised for cultivation whereas Balochistan on an average only utilises 17% of its land for cultivation out of total reported area.

Figure 21: Balochistan's Past Years Cultivation Trend



Source: Ministry of National Food Security & Research

4.5.9 Keeping 2013-14 as base year, Balochistan portrays a yearly increase in cultivation, of 0.88% in FY 2014-15, 26% in 2015-16 from its prior year and 0.1% in FY 2016-17 from its preceding year (**Figure 21**). An overall increase of 28.1%, from FY 2013-14 to FY 2016-17, can be deduced from the data analysed.[59]

4.5.10 Foreign aid for the FY 2016-17 announced by ADB and commencement of new schemes signals the instant acceleration in growth in areas where crop cultivation was in dismal condition.

4.5.11 Currently, the farming activities in Balochistan mostly revolve around subsistence farming i.e., adequate crop yield for personal consumption with a very small percentage of commercial farming. The entire agriculture department currently employees around

[59] Ministry of National Food Security & Research

1,200 field assistants who provide agriculture related information to farmers but unfortunately the field staff themselves are not provided with proper training as there is no dedicated institution or school in Balochistan that train farmers.

4.5.12 Technological farming techniques are barely used which also restricts the flow and dissemination of information to enhance knowledge-based farming processes. Moreover, water conservation programmes and techniques are negligible or non-existent reducing the possibility of using drip irrigation methods, which is a very water efficient technique.

4.5.13 Provision of certified seeds is also excessively low which majorly affects the overall percentage of yield during a season. However, the certified seeds undergo multiple process and phases and require special care and monitoring which acts as a constraint to farmers.

4.5.14 One of the major constraints acting upon the entire farming class is the element of affordability as drip irrigation and other technological methodologies are costly to install and maintain. The R&D sector for agriculture shall also be prioritised since lack of research restricts the exploration and discoveries of various techniques which can be efficient for the farmers and the agricultural sector as a whole.

4.5.15 Constraints to cropping are:

a) lack of adequate irrigation infrastructure;
b) varying size of landholdings and scattered or remotely located farms;
c) reliance on family labour for farm operations;
d) low quality seeds;
e) lack of fertilizers and pesticides in remote areas;
f) inadequate equipment;
g) lack of access to marketing;
h) low public funding; and
i) weak institutions.

4.5.16 Low delta crops shall serve the purpose being fit to be planted in the regions of Balochistan yielding in the shortage of water supply.

4.5.17 There is a need to have a different strategy for agriculture sector of Balochistan considering the large area, difficult terrain and scattered and remotely located settlements so that the returns on investments are higher and services are provided effectively and efficiently to the farmers by the private sector.

4.5.18 Dedicated training institutes for catering agricultural sector shall be established to educate and train farmers to disseminate awareness.

4.5.19 To mitigate this scenario, banks shall aid in financing the farmers by providing them with credit facilities and a favorable return policy.

Sustainable Development Goals

SDG 1: No Poverty

4.5.20 Agriculture is directly linked to economic growth which benefits the poor. Sustainable agriculture practices and improved access to markets can improve the livelihoods of the people dependent on agricultural activities and contribute towards achieving the targets for SDG 1. Detailed indicators and targets for SDG 1 to be achieved by Balochistan are provided at **Table 1 of Appendix A**.

SDG 2: Zero Hunger

4.5.21 The SDG 2 aims at eradicating malnutrition and increasing agriculture productivity and incomes especially for small-scale food producers through improving access to land, productive resources and inputs, knowledge, financial services and market opportunities. The SDG 2 provides the target of doubling the income of small-scale food producers including women, indigenous peoples, family farmers, pastoralists and fishfolk. Detailed indicators and targets for SDG 2 to be achieved by Balochistan are provided at **Table 2 of Appendix A**.

SDG 4: Education

4.5.22 Agriculture extension services can provide the farmers with the required skills, tools input and knowledge to increase the crop yield. Detailed indicators and targets for the SDG 4 to be achieved by Balochistan are provided in **Table 4 of Appendix A**.

SDG 5: Gender Equality

4.5.23 Improving access to land, productive resources and inputs, knowledge, financial services and market opportunities particularly for women shall contribute towards increasing the agricultural productivity. Detailed indicators and targets for SDG 5 to be achieved by Balochistan are provided at **Table 5 of Appendix A**.

SDG 8: Decent Work and Economic Growth

4.5.24 Agriculture development shall generate employment and growth opportunities for farmers including women and youth. This shall contribute in increasing the GDP per capita and employment targets envisioned by the SDG 8. Detailed indicators and targets for SDG 8 to be achieved by Balochistan are provided at **Table 8 of Appendix A**.

Opportunities under CPEC

4.5.25 The following agriculture sector projects are planned to be conducted under CPEC:

Table 4.27: List of Agriculture sector projects under CPEC				
Sr. No.	**Sector**	**Projects**	**Cost USD**	**Timeline**
1	**Agriculture**	1. Lab for Forensic examination and testing of fertilizers, pesticides, food and drugs	10 million	(2019-2020)
		2. Machinery, equipment and technical training for establishment of the following plants:	15 million	2020
		• Date processing plants in Turbat and Panjgur	1 million	2020
		• Cold Storage plant in Ziarat for Apple and Cherries	1 million	2021
		• Ultra-high-pressure processing and de-hydration plant for onion in Kalat	0.5 million	2021
		• Fruit Processing plant in Quetta		
2	**Horticulture**	3. Establishment of Export-Oriented Floriculture at Gwadar and Quetta • Introduction of flower de-hydration technology • Certification of ornamental plan nurseries • Solar powered cold storage for cut flower	5 million	2020-2021

Priority Areas

4.5.26 Water conservation strategies shall be adopted due to shortage and continuous down fall in ground water resources. Drip Irrigation shall be used to overcome water shortage. Awareness about efficient use of water shall be used for water conservation.

4.5.27 Transition from high water density crops (like Apples, Grapes etc.) to low water density crops (such as Olive, Pistachio, Almonds etc.).

4.5.28 There is a shortage of certified seed providers in Balochistan, which greatly affects the yield percentage as mostly certified seeds are not used by farmers.

4.5.29 For the purpose of introducing new technologies such as harvesters and olive extraction machines, subsidies shall be provided by the Government on import of such machinery.

4.5.30 Research and Development is quite weak in Agriculture department. The R&D is required to be carried out for climate change impacts, drought resistant varieties of corps and marketing of products.

4.5.31 The GoB shall address the major constraints faced by agriculture to gradually improve the productivity as presently the overall yields of most of the crops are lower than the other provinces. Other than the endemic issue of water, there are issues of lack of certified seed and other inputs; the extension services are almost very weak and, in some areas, non-existent; the markets are small, few and weak and then there are issues of infrastructure including transportation and storages etc.

4.5.32 The GoB is cognisant that availability of water on sustainable basis will determine the future roadmap for agriculture. The wasteful water mining practices have led to triple jeopardy of depleting water table straining fiscal resources and wasteful use of electricity. It is widely recognised that the groundwater management problems can be overcome by controlling over exploitation of water, introducing legislation and strengthening institutions. The GoB has made efforts in the past to recharge the water tables through check dams, delayed action dams, ponds and dikes and rehabilitation of *karezes*; however, these now require strategic shift towards an integrated but devolved water management at the basin-level for a more equitable and sustainable water resource usage.

4.5.33 The GoB shall accord focused attention to harnessing of the underutilised floodwater resource, which is by far the largest water resource in the province. It shall introduce well-planned investments in water storages and other structures for bringing the 3.9 million hectares of cultivable waste under cultivation. This shall be done by encouraging the *Sailaba* farming, which can bring in additional 1 million hectares of land under cultivation and can generate livelihoods for about additional 200,000 households in the province.[60] Coupled with the issue of harnessing more resources is the challenge of improving the water productivity all across. In the upper lands, the improvements in fruit yields, varieties and post-harvest handling together with efficient water use are major issues. In the canal command areas, cultivation of water intensive crops like rice is proving to be detrimental to economic use of water and is creating serious environmental degradation. The rice crop here consumes 60 inches of water per crop harvest causing water logging and salinity.

4.5.34 Agriculture extension work in the province has remained challenging given the peculiar socio-economic and geographic conditions. The public sector extension staff, i.e. the agriculture field assistants are mostly untrained and do not possess the up-to-date technical knowledge of agriculture and further the system weaknesses have made the entire public extension system dysfunctional. The GoB acknowledges that it is now time to rethink extension and explore possibilities of collaboration with private sector for bringing in better reach out mechanisms through use of ICT. Though, this would initially pose a few challenges, such extension through mobiles, call centers etc., have succeeded in poor regions in Africa and are increasingly becoming popular in the underdeveloped world. The recent interventions in Punjab on this account are reflected below:

[60]Balochistan; Development; Issues & Prospects; Part II, (2012) World Bank

4.5.35 The use of ICT based extension services is doable even within under developed rural context of Balochistan. This shall cut across the innumerable barriers to providing information and knowledge to small farmers. The use of ICTs for agriculture extension is increasing in Asia and Africa, especially with the recent expansion of mobile phones. Mobile Phones and ICT devices are used to provide market information, advice on improved agriculture practices, farmer education, input availability and their use and so on. This, however will hinge on its design, connectivity with people, and some basic orientation of target beneficiaries for popularisation.

Box 2: Use of Technology for Agriculture Extension Services in Puniab

With a view to provide extension services to the small farmers, the Punjab Agriculture Department has engaged Centre for Agriculture and Biosciences International (CABI), an international organisation to make use of mobile technology and reach out to thousands of farmers through their cell phones. The CABI is reaching out to these farmers through voice calls and SMS and has translated the contents of SMS and voice messages in Urdu to overcome literacy barriers of recipients. A help line has been activated to provide real time advice to farmers for crops related issues, supported by a panel of field experts. This has created new possibilities for reaching out to small farmers in far flung areas and builds their capacity in crop management, pest management, productivity enhancement and other areas.

4.5.36 Similarly, there is very little presence of the private marketing companies both for supply of inputs as well as for marketing of products. The public sector agriculture markets are riddled with inefficiency and are dominated by the middlemen. There are positive movements across the region including many Indian states as well as within Pakistan in Sindh and Punjab to amend the erstwhile Market Act, 1939 by allowing greater participation of the private sector and encouraging reforms in the public sector sponsored markets. Encouraging vibrant agriculture markets can be instrumental in stabilising prices and providing greater returns to the growers. Non-availability of adequate agriculture markets, storages, processing, packaging and cold storages are serious constraints. At present, there is only one wholesale fruit and vegetable market in Quetta, which can barely cater to the farmers in Quetta and its suburbs. There is no market in Mekran region, with the result that the dates are taken to the markets in Sindh and are sold at a throw away prices. Nasirabad and Jafarabad is the granary of the province and there is only a small grain market at Dera Murad Jamali. Elsewhere, the farmers sell their produce to middlemen without full knowledge about prices.

4.5.37 The availability of quality seed, fertilizer and other inputs is another area of concern. Out of country's 367 registered seed companies, only three (3) are located in Balochistan. The private sector provided only 5.5% of seeds and public sector provided another 8.4%. Some major bottlenecks are non-availability of adequate storage capacity. In addition, the system for certifying nursery stocks for seedlings is also underdeveloped. On the side of fertilizer and pesticides, the logistic impediments have limited the presence of private companies and it is believed that many farmers do not make adequate applications of these inputs[61]. There are very few research stations in Balochistan and existing fleet of scientists is hardly capable to undertake research based on the farmers' field issues or evolve seed varieties, which can increase yields. There is only one Agriculture Research Institute located at Quetta with 12 directorates mostly based in the divisional headquarters with little output.

[61]Balochistan; Development; Issues & Prospects; Part II (2012) World Bank

Targets

Table 4.28: Baseline and Targets – Pillar 5 (Agriculture)		
Description	**Baseline**	**Targets**
Multidimensional Poverty	71.2%	35.6% (50% reduction)
Volume of Production	49,886 (hundred tones)	Increase in agricultural yield through: ▪ Improving access to land; ▪ Productive resources and inputs; ▪ Agricultural knowledge; ▪ Financial services; and ▪ Market opportunities. The quantitative targets shall be set under the operational plans of the agriculture department.
Job Creation (Labor force)	1 million	1.12 million

4.5.38 The GoB has set the following targets for agriculture under Pillar 5 to be achieved by FY 2026:

Target 1: Poverty Reduction through Agriculture

4.5.39 The GoB has set a target to reduce existing multi-dimensional poverty of 71.2%[62] by 50% in next six years (i.e. by FY 2026). This shall be an uphill task, for which the contribution from agriculture sector shall be required substantially as it is a major contributing sector towards the provincial economy.

Target 2: Increase in Volume of Production

4.5.40 The agricultural yield of Balochistan stands at 49,886 (hundred tones)[63]. The GoB intends to increase the agricultural yield of the province through:

- Improving access to land;
- Productive resources and inputs;
- Agricultural knowledge;
- Financial services; and
- Market opportunities.

4.5.41 The quantitative targets for volume of production are yet to be set.

Target 3: Income generation and job creation

4.5.42 The GoB has set the target for reducing unemployment rate of 4.09%[64] in the province by 30% by the end of FY 2026. The agriculture sector employs 40% of the total labour force (i.e. 1 million) in Balochistan[64]. The GoB has set the target for increasing the

[62] Multidimensional Poverty in Pakistan, 2015-16, Planning Commission 2016
[63] Land Utilization Statistics of Balochistan 2016-17, Directorate of Crop Reporting Services of Balochistan
[64] Pakistan Labor Force Survey 2017-18

labour force in agriculture for creating 20,000 new jobs each. Investing in agriculture promotion and extension services, provision of credit to farmers, provision of skills and tools and equal opportunities to women in agricultural activities shall contribute in achieving this target.

Strategy

4.5.43 Given the extensive structural impediments, the GoB recognises that agriculture strategy shall require a greater role of the public sector than is the case in other parts of the country. Water resource management and sustainable and equitable farming systems will remain central to the new thinking and these must now be handled at the river basin level under participatory approach. Effective water usage through *Sailaba* farming and use of high efficiency water systems; change over to high value products at river basin level would be central to sustainable water use. For effective extension services, availability of quality seeds and other inputs, competitive markets and the entire supply chain must be brought closer to the farmers through innovative strategies. The situation, therefore, requires newer thinking on the way forward.

4.5.44 Encouraging *Sailaba* farming under spate irrigation by development and management of water resources at basin level and integrating *Sailaba* with the storages/dams' command area.

4.5.45 Introduce high value products through use of high efficiency irrigation systems for raising productivity and water conservation.

4.5.46 Bring additional area under cultivation through *Sailaba* farming for enabling additional households to get livelihoods from agriculture. There is potential to cultivate 1 million hectares of additional land under farming and benefiting about 200,000 households. This would require a mapping of potential regions and target beneficiary populations for *Sailaba* farming and ensuring availability of inputs and services through private sector.

4.5.47 Integrate the command area of the existing small dams (Mirani and Sabakzai) as well as the dams under construction with the *Sailaba* farming under traditional spate irrigation. These command areas must be encouraged to use high efficiency irrigation systems and diversify towards high value products for maximising the returns by intensifying the yield and improving water productivity.

4.5.48 Rehabilitation and modernisation of Karezes command area shall facilitate water recharge and introduction of high efficiency irrigation systems and high value horticulture shall maximise productivity and returns. This can further be integrated with watershed management including trees, grasses and bushes to bring in greater community stakes.

4.5.49 Computerise and document the land titles in the command area of the existing and new storages to bring in better transparency in the land ownership component in the province.

4.5.50 Improving productivity and sustainability of canal command areas – Pat-feeder and Khirther canals and minor perennial irrigation schemes by adjusting crop patterns with water availability in both the major canals. The high-water consuming crops like rice require a diversification towards oil seeds, vegetables, fodder, pulses etc. for water

conservation and higher product values. Simultaneously, the waterlogged and saline land to be reclaimed in the command areas.

4.5.51 Fast-track development of command area of Kachhi canal.

4.5.52 Partner with private sector to evolve a mechanism for "ICT Based Extension Services". There are many companies which can evolve a design tailored for Balochistan's rural and semi urban settings. It may require certain investments in farmer education on the system and providing them mobile phones. Also, initially tehsil level tele-centres can be created by training the local staff for acting as the hub of information, knowledge and connectivity. Agriculture extension, market prices, input availability together with other sector information such as livestock, fisheries, immunisation etc. can all be provided.

4.5.53 Given the small presence of private sector seed, fertilizer and pesticides companies, the tehsil tele-centres centers can act as the information hubs and eventually become sale points for the agriculture and other inputs on cost sharing basis.

4.5.54 Phase out subsidies for electricity for tube wells and agriculture produce such as wheat and sugarcane. Liberalise agriculture commodity markets. Support adoption of water efficiency technologies and diversification to higher value crops.

4.5.55 Partner with private sector to establish modern agriculture markets at strategic locations. Initially, one Agro-Marketing Company can be established with linked smaller markets at district level and expanded at tehsil level. These can be gradually equipped with cold storages, processing and value addition facilities and having the information of marketing trend of all national markets and such information is disseminated up to grass root level under ICT extension model.

4.5.56 Ensure availability of agriculture credit through a special arrangement with the SBP for all components of agriculture including livestock, fisheries, markets, processing and packaging. This can initially be undertaken by evolving a credit guarantee scheme to create greater confidence of the financial sector.

4.5.57 Focus on women through dedicated interventions under ongoing and new community empowerment programmes. Evolve a programme for grant of subsidised inputs including certified seed and fertilizer for high value products to women farmers.

4.5.58 Formulate Agriculture Policy for Balochistan in line with the IWRM Policy 2006 to cover all major farming systems. Review of existing institutions to adjust these with changing dynamics of agriculture productivity. Initiate sub-sector specific institutional reviews to convert existing institutions into better performance organisations geared to work with private sector and the communities in a participatory mode. The dynamics of reaching out to people are changing and as such service organisations can no longer work under bureaucratic and detached mode.

4.5.59 Linkages and joint planning and programming with irrigation and power, forestry and livestock departments. There is a need to have integration of various subsectors of land use to maximise the returns – crops, forestry, fisheries, livestock, fruits and vegetables.

4.5.60 Making research more effective. The research output in Balochistan needs to be improved as currently there is little to show on any major component. The performance

remains low in relation to seed varieties, horticulture plants and their varieties, disease control, and yield improvements etc. There is urgent need to undertake organisational review and improve budgets, human resources, and make the research performance based.

Budget 2021-2026

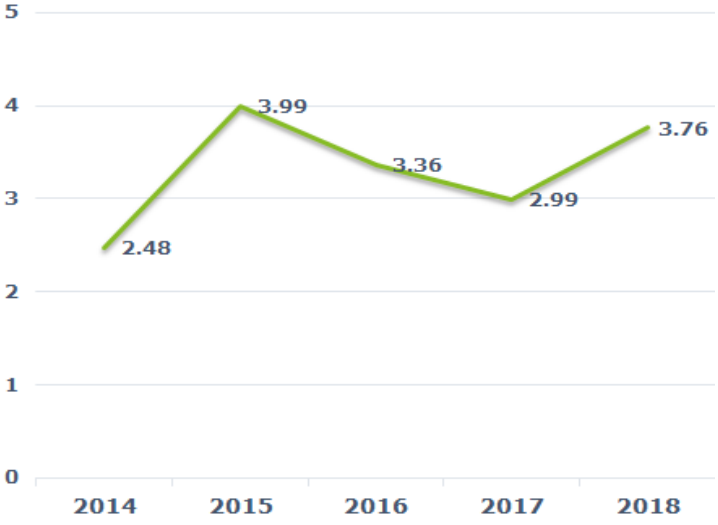
Table 4.29: Agriculture		Rs. in Million				
Sr. No	**Strategy**	**FY 1, FY 2**	**FY 3, FY 4**	**FY 5, FY 6**	**Total**	**Proposed FA Portion**
1	Promote Sialaba farming for existing as well new farms in all major Basins	1,500	2,000	3,500	**7,000**	-
2	On Farm Management (All Major River Basins)	1,000	1,800	2,200	**5,000**	2,500
3	Develop Command Area of existing and new Dams for HV products through HEIS	1,000	1,800	2,700	**5,500**	2,750
4	Introduction of HEIS and HV products Groundwater zones	1,000	1,000	2,000	**4,000**	2,000
5	Improving Water Productivity of Pat Feeder and Khirther Canals and Land Reclamation	1,000	1,000	2,500	**4,500**	2,250
6	Establish Agri Marketing Company and linked markets (PPP)	500	1,500	500	**2,500**	-
7	Strengthening Agriculture Department – Policy and Regulation	150	350	-	**500**	-
8	Establishment of Call Centre for ICT Based Extension services	1,000	1,000	500	**2,500**	-
9	Lab for Forensic examination and testing of fertilizers, pesticides, food and drugs	1,000	500	-	**1,500**	-
10	Date processing plants in Turbat and Panjgur (PPP)	1,000	1,000	500	**2,500**	-
11	Cold Storage plant in Ziarat for Apple and Cherries (PPP)	100	100	-	**200**	-
12	Ultra-high pressure processing and de-hydration plant for onion in Kalat (PPP)	100	100	-	**200**	-
13	Fruit Processing plant in Quetta (PPP)	-	50	150	**200**	-
14	Introduction of flower de-hydration technology at Gwadar and Quetta	200	150	250	**600**	-
15	Certification of ornamental plan nurseries at Gwadar and Quetta	100	200	-	**300**	-
16	Solar powered cold storage for cut flower at Gwadar and Quetta. (PPP)	100	200	-	**300**	-
17	Improvement and rehabilitation of Khushkaba farming using runoff from adjacent land	1,000	1,000	2,000	**4,000**	2,000
18	Development of command area of existing and new small dams	1,000	1,500	2,500	**5,000**	-
19	Development of command area of minor perennial irrigation schemes using surface and ground water	500	800	1,800	**3,100**	-
20	Improving productivity of commands of Pat Feeder and Khirther canals	1,000	1,200	2,800	**5,000**	-
21	Development of Coastal area agriculture farming systems	800	1,000	2,200	**4,000**	-
22	Developing command area of Kachhi canal	800	800	-	**1,600**	-
23	Throw forward of schemes (PSDP 2021-22)	11,778	10,305	7,361	**29,444**	-
	Total	**26,628**	**29,355**	**33,461**	**89,444**	**11,500**

5B: Livestock and Rangelands

Baseline

4.5.61 Livestock is a major subsector of Pakistan's agriculture sector as livestock's contribution accounts for approximately, 58.92% of agricultural value added and 11.1% in total GDP during 2017-18. Livestock has an important role in promoting socio-economic development in rural areas. Nearly 8 million families are involved in livestock raising and deriving more than 35% income from livestock production activities[65]. Share of livestock sector with respect to its parent sector (Agriculture) has always been a major contributor signifying it as the backbone to mobilise the agricultural activities.

Figure 22: Pakistan's 5 Year Growth Rate in Livestock Sector

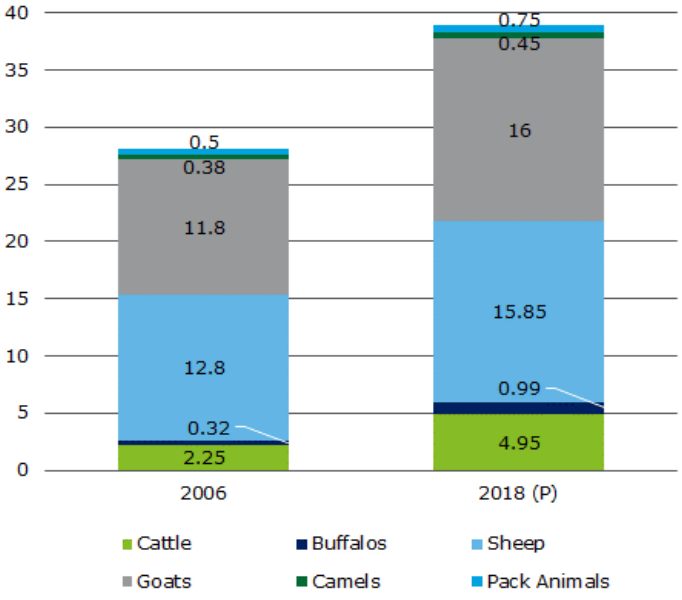


Source: Pakistan Bureau of Statistics

4.5.62 Balochistan, a landmass, covering 347,190 sq. km of area, geographically constitutes 44% of Pakistan's total territory with having majority of its terrain as rangelands leaving only 5% arable.

4.5.63 The last real-time livestock census was conducted in 2006. In subsequent years, projections, for livestock populations, are made by the Livestock Department based on the results of 2006 census.

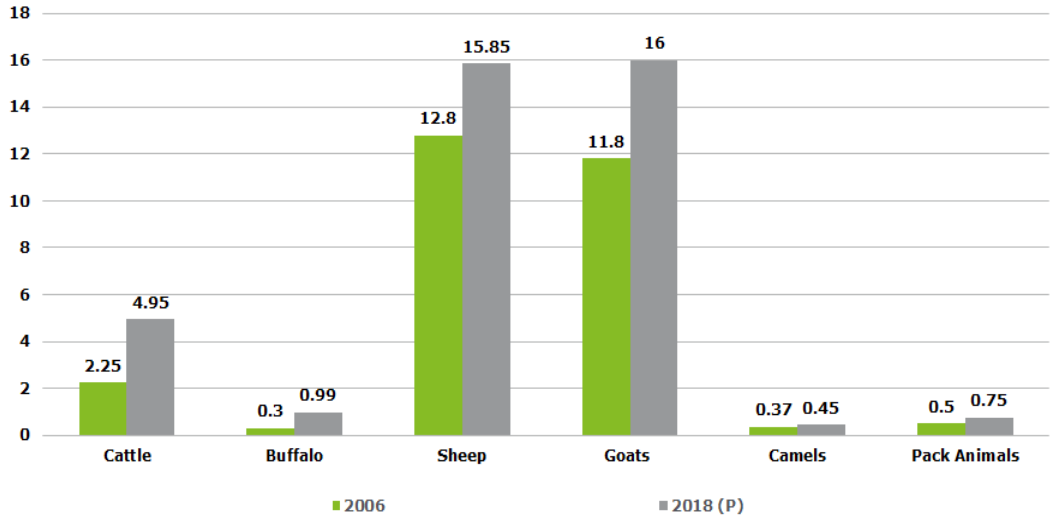
Figure 23: Balochistan Livestock Population (In Millions)



4.5.64 Based on the projections depicted in figure 23 and 24, the overall population in livestock of Balochistan has depicted a favourable increase of nearly 39% from FY 2006 to FY 2018.

[65]Pakistan Economic Survey 2017-18

Figure 24: Balochistan Livestock Population Growth Trend (In Millions)



Source: Livestock Department, Government of Balochistan

4.5.65 Livestock being the major contributor in Agriculture sector indicates an improvement in the overall conditions of the entire Agricultural sector of the Balochistan's economy. Elaborating the graphs above, it can be deduced that the cattle, buffalos, sheep, goats, camels and pack animals on individual extent have increased by 115%, 230%, 24%, 36%, 22% and 50% respectively.

4.5.66 Pakistan, being an Agro based country, generates the majority of its economic inflow through agricultural activities and export. The economy of Balochistan does play and has the potential to, further escalate the economic conditions with respect to the agricultural sector since the projected share of Balochistan in livestock sector was 20% in FY 2018.

4.5.67 Livestock also aids in industrial production and helps in increasing the well-being of the population as they are the source of multiple industrial products and the prime source of leather, meat and various food products. Balochistan, being a contributor of 10% for entire Pakistan's livestock products, indicates a potential for development in this sector.

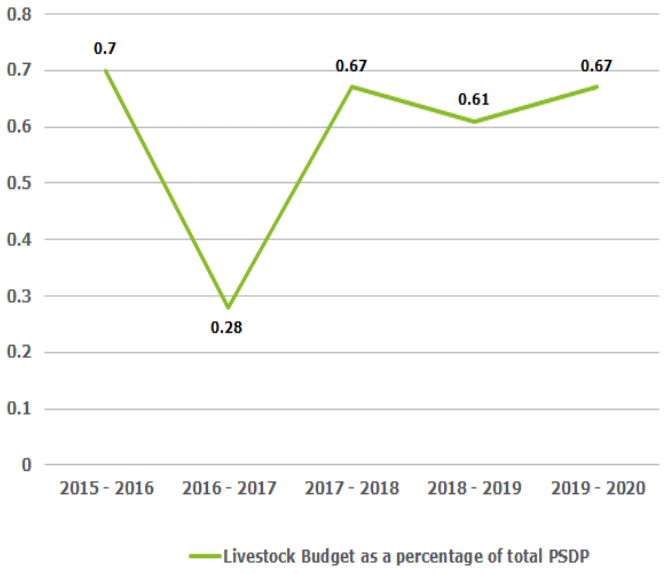
Table 4.30: Total Production of Livestock in Balochistan for FY 2015-16

Items	Units	Units of Production		Percentage Share
		Balochistan	Pakistan	
		2015-16	2015-16	
Milk	000 Tons	8,676	54,328	16%
Meat	000 Tons	132	4,443	3%
Edible Offal	000 Tons	25	394	6%
Hides and Skins	000 Nos.	6,119	70,164	9%
Wool	000 Tons	2.79	45	6%
Hair	000 Tons	2	27	7%
Guts and Casings	000 Nos.	5,802	71,728	8%
Bones	000 Tons	25	852	3%
Horns and Hooves	000 Tons	23	57	41%

Table 4.30: Total Production of Livestock in Balochistan for FY 2015-16				
Items	**Units**	**Units of Production**		**Percentage Share**
		Balochistan	**Pakistan**	
		2015-16	**2015-16**	
Fat	000 Tons	13	271	5%
Dung	000 Tons	48	1,207	4%
Urine	000 Tons	18	368	5%
Blood	000 Tons	40	66	61%
Heads and Totters	000 Tons	31	246	12%
Eggs	Million Nos.	579	16,188	4%
Total		**21,535**	**220,384**	**10%**
Source: Pakistan Economic Survey, 2017-18				

4.5.68 Balochistan, as per PSDP data, tends to allocate bleak amounts of budget for the last five (5) financial years in livestock sector. Graphical illustration explains the dismal share of budget and investments diverted to Livestock sector as the total budget allocations have not even constituted to 1% of total Balochistan's Development Budget.

Figure 25: Balochistan Livestock Budget Allocation



4.5.69 Balochistan is physically an extensive plateau of rough terrain divided into basins by mountain ranges of different heights and ruggedness. These various rangelands found in the province are capable of supporting a large number of livestock, creating the potential for an international market for wool and a thriving local market for dairy and meat[66].

4.5.70 Balochistan largely consists of bare rocks with sparse vegetation and areas totally barren for cultivation. Out of 34.7 million Hectares (Mha) of land, 93% of the area (32.3 Mha) in Balochistan is considered as Rangeland as grazing area for ruminants. From this gross percentage of rangelands, 65% (21 Mha) is considered the most suitable area for the ruminants. Areas falling under other lands include wetland, snow land, forests, orchids and natural vegetation in wet areas. However, the province does consist of areas that face favourable weather conditions suitable to grow crops on, but due to limited access and availability to water supply, the agricultural land only constitutes 2.4%.

[66]Balochistan White Paper Budget 2017-18

Sustainable Development Goals

SDG 1: No Poverty

4.5.71 The SDG 1 takes a multidimensional approach to ending poverty with targets of eradicating extreme poverty, building resilience among the poor, and creating sound policy frameworks. Growth and development of livestock sector of Balochistan can directly help in improving the livelihoods of the population dependent on it as it not only strengthens the assets that the rural households use to generate income but also helps in building resilience to external shocks.

SDG 2: Zero Hunger

4.5.72 The SDG 2 aims to end hunger through improved food security, nutrition and promoting sustainable agriculture. The key targets of SDG-2 include access to safe and nutritious food, improving productivity and income of small-scale producers and maintaining sustainable and resilient food production systems. The Balochistan livestock sector can significantly contribute in achieving these targets, as it is a direct source of meat, milk, eggs and dairy products to the community dependent on it. Further, it can also help generate income through creating job opportunities.

SDG 8: Decent Work and Economic Growth

4.5.73 The SDG 8 aims to promote sustained, inclusive and sustainable economic growth through productive employment and decent work for all. The livestock sector can boost economic growth in two main ways: by contributing directly to rural livelihoods and agricultural output, and through the sector's various productive linkages with other sectors/industries.

SDG 9: Industry, Innovation and Infrastructure

4.5.74 The SDG 9 focuses on infrastructure, industrialisation and innovation. The livestock sector offers various opportunities for establishing livestock farming and dairy products for local supply and exports. The improvement in livestock extension services shall also contribute greatly in better management and adoption of innovative methods for livestock sector.

Opportunities under CPEC

4.5.75 CPEC opens up avenues for the logistics to have favorable dynamics anywhere across the province. It is essential that the Government of Balochistan incorporates projects related to livestock on a priority basis.

4.5.76 Provision of equipment, research training and technical assistance for establishment of Livestock Research Institute with vaccine protection lab in Quetta is proposed under CPEC with a cost of $20 million planned to be implemented through FY 2020 to FY 2021.

Priority Areas

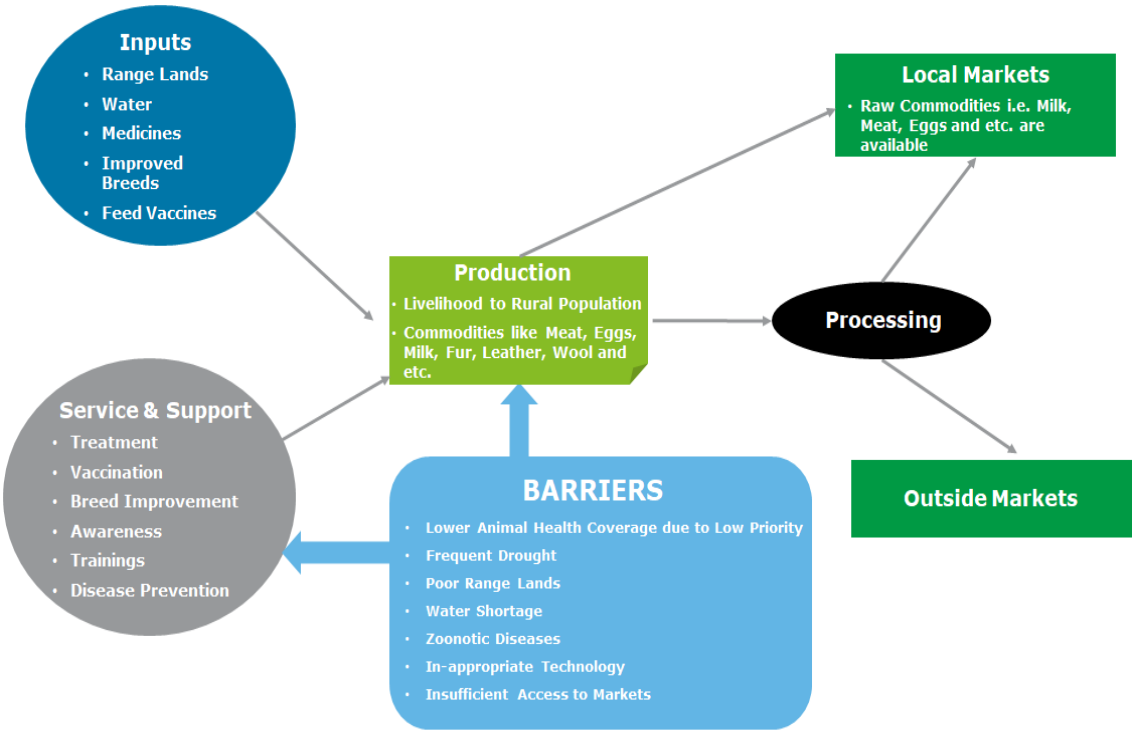
4.5.77 The GoB recognises that the livestock together with agriculture are the lifeline of a large majority of the population in the province and despite intermittent droughts, this sector has remained quite resilient. This sector has received little quality support from the public sector in the past except on the side of animal health; however, given the tremendous potential of this sector for growth and improving livelihoods, the Government plans to accord priority to it in the way forward.

4.5.78 One of the major constraints in the growth of livestock is the deficiency on account of nutrition. The sector's performance till now has been solely on account of nature as the natural rangelands have supported the feeding requirements of the livestock especially the ruminants till now. The rangelands, over the years, have depleted and the feed availability is now increasingly deficient in the nutrients required by the animals. The low nutritional value is believed to be responsible for high mortality rates and proneness for disease and low productivity.

4.5.79 Associated with this issue is the rangeland development, which is the major source of grazing and survival of the livestock in the province. Over 93% of the total area in the province (34.72 million hectors) is covered by rangelands and of the 21 million hectors is considered medium to good grazing land. These rangelands provide the bulk of feed requirements of the small ruminants. The overall productivity of these rangelands has been declining and the prolonged droughts have also increased the degradation. The biomass provided by the rangelands is now much less than the requirements of the grazing livestock and also there are increasing stock water constraints requiring attention. This requires a re-vegetation and restoration intervention with the assistance of technical experts including international donors having specialisation in natural resource management through a very active participation of the communities.

4.5.80 The extension services, which could provide technical advice on a range of livestock management from rearing, feeding, heath, crossbreeding etc. are more or less non-existent. There are veterinary units and staff across the province but there is very little information on their outreach and quality of services. Further, most of the livestock owners are either landless or have small herd and little access to any institutional credit including micro credit on account of multiple factors including lack of collateral, documentation hassle and most significantly weak presence of credit institutions in the province. The farmers generally depend on the local traders for credit, which despite being expensive is the only resource available to them.

Figure 26: Livestock Value Chain



4.5.81 The GoB plans to address the constraint of competitive livestock markets. Presently, the livestock markets are weak, few and have barely any facilities or services. Additionally, there is absence of modern meat markets and very little value addition is happening in this sector. Non-availability of strong markets impedes supply chain without which there are little chances of better productivity and incomes from the sector. To make a beginning, the GoB would evolve an organisational structure such as a section 42 company under the company's Act with the participation of private sector. This institution can then create a set of market structure with a main market at the centre and its subsidiary units in the major livestock zones. This company can begin with livestock transactions and gradually set up a meat processing and export unit at a suitable location such as Gwadar as well as Quetta to begin direct exports. Similarly, for extension services, another technically and commercially viable organisation would be created in collaboration with the private sector for proving quality services including livestock management, health, fodder, genetic strengthening, insemination etc. for improving the productivity and farmers' incomes. This would gradually be organised on commercial lines.

4.5.82 For the dairy, a dedicated intervention would be undertaken to create community-based milk collection centres linked to private sector processing. This can be women focused intervention given their preponderant involvement in animal rearing at homes. This component too shall require availability of proper advice and support relating to animal health and productivity enhancement and can be undertaken with support of non-governmental organisations.

Targets

4.5.83 The GoB has set the following targets for livestock under Pillar 5 to be achieved by FY 2026:

Table 4.31: Baseline and Targets – Pillar 5 (Agriculture)

Description	Baseline	Targets
Share of Livestock Products as a percentage of Pakistan Livestock products	10%	15%

Target 1: Increase in share of livestock products

Livestock sector of Balochistan holds 10%[67] share of total livestock products in Pakistan. The GoB has set the target to increase this share to 15% of the total livestock products of Pakistan thorough effective efforts to improve the livestock value chain. Further, investing in livestock promotion activities including meat fattening, breeding, marketing and extension services shall support the achievement of this target.

Strategy

4.5.84 While there is a need for numerous interventions in the sector which can range from institutional strengthening, research, improvements in extension services, programmes for breed improvements, production of fodders and forages, health management, rangeland development, to credit facilities, insurance and marketing etc., the Government shall prioritisse those interventions which have universal application and a significant impact. The GoB is confronted with two mega challenges: a) weak availability of inputs, services and logistics; and b) weak livestock markets and lack of value addition for high end users. In order to address this major supply chain deficiency, the GoB shall enter into a partnership with private sector to set up institutional mechanisms that can deliver. These mechanisms must be pillared on commercial viability and the GoB can subsidise costs to increase their viability.

4.5.85 Establish a Balochistan Livestock Services Company to provide livestock extension services relating to animal feed, farm management, animal health, breeding and other services. A large part of these services could be provided through an ICT based call centre service, which provides information to the farmers through mobile phones and gradually evolves a quasi-commercial model of generating messages on farmers database on range of information such as:

a. Livestock management;
b. Warning systems about contagious diseases;
c. Availability of quality medicine;
d. Insemination services; and
b. Feeding components etc.

Through this service company, critical linkages can be developed with other service providers and input producers such as the veterinary services in the private sector, feed mills, fodder producers, transportation and many other inputs required by the sector.

[67] Pakistan Economic Survey, 2017-18

4.5.86 Set up a Balochistan Livestock Marketing Company for establishing a central livestock market and meat processing unit at a central location in Balochistan. This is to be a lean organisation with pivot headquarters and processing initially at Quetta and Gwadar and with subunits at tehsil level. This shall primarily procure the animals through tehsil collection units for processing and value addition. This company can have two specialised units for milk and meat separately. It can be horizontally connected with other private sector companies involved in milk and meat processing. This company shall be producing Halal beef and mutton for export purposes. The market pull is expected to gradually correct the supply chain gaps:

a) Develop Livestock Smallholders Groups (like cooperatives for enabling resource and knowledge pooling)
b) Development of milk production, collection and marketing through a women focused programme.

4.5.87 Provide dedicated attention to meat fattening farms under public private partnership basis and promote the following:

a) Establishment of commercial fattening farms/feedlot units for sheep, goat and beef cattle with their own feed mills and slaughterhouse facilities.

b) Promotion of "Balochistan Nari Master" developed the first beef breed of Pakistan by the department through crossbreeding of Australian Drought Master and isndigenous "Bagnari". This to be propagated on scientific lines (embryo transfer technology) and connected to the meat company.

c) Develop Ostrich, Deer, Alpaca, Quail, Rabbit and Camel Farming in collaboration with farmers in the potential zones of the province for meat export through the Meat Company.

4.5.88 Undertake Rangeland Development in collaboration with the Forest Department and international partners for revegetation and restoration of the rangelands and stock water for sustainable nourishment of livestock. Introduce fresh drought resistant and fast-growing pasture/fodder species, trees. This shall eventually facilitate drought mitigation.

4.5.89 Extend Credit Guarantee Scheme for the livestock farmers through Microfinance and other banks. Askari Bank, Bank of Punjab and NBP are doing livestock insurance for their loans extended to farmers for purchase of cattle. Such initiatives shall be beneficial for lenders and borrowers and must be started in Balochistan.

4.5.90 Strengthen the Livestock Department to be able to evolve a policy framework to create regulatory mechanism. It needs to undertake institutional strengthening measures for upgrading its capacity to procure services, partnerships and impact assessments. Develop linkage with universities for research on livestock production particularly breeding, nutrition and management.

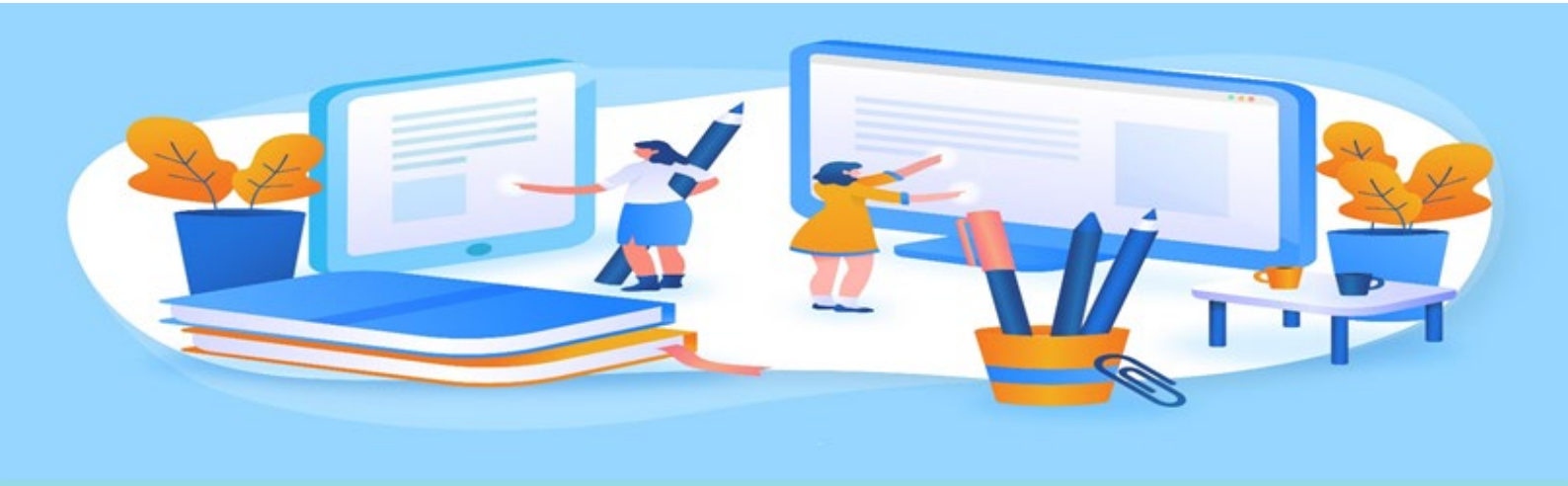
4.5.91 Establish livestock city, which is under planning with LIEDA in Uthal. Other than convergence of producers, processors and buyers, this enclave can become a central market for the livestock by products such as wool and skins, which can then help in creation of local cottage industry.

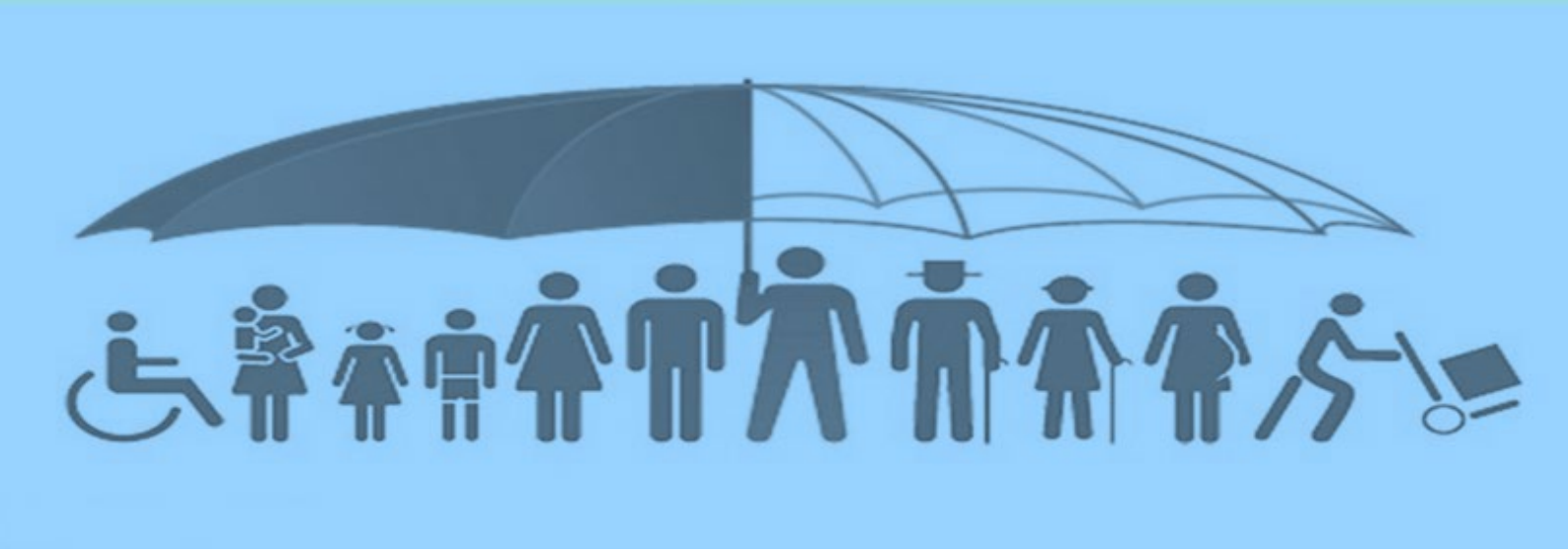
4.5.92 Develop integrated Livestock and Fisheries Farms in collaboration with private sector to enhance the outreach of production through multiple channeling using marketing techniques.

Budget 2021-2026

Table 4.32: Livestock		Rs. in million				
Sr. No	**Strategy**	**FY 1, FY 2**	**FY 3, FY 4**	**FY 5, FY 6**	**Total**	**Proposed FA Portion**
1	Maximization of Meat production on Public Private Partnership (PPP) Approach	450	1,000	1,550	**3,000**	1,500
2	Establishment of Livestock Services Company	200	1,000	1,300	**2,500**	-
3	Establishment of Livestock Marketing Company	200	1,000	1,300	**2,500**	1,250
4	Development of Milk Production, Collection and Marketing with Community Participation	130	300	570	**1,000**	-
5	Establishment of Services Based Livestock Market	500	500	-	**1,000**	-
6	Meat Fattening Farms under PPP	-	2,500	2,500	**5,000**	-
7	Develop Ostrich, Deer, Alpaca, Quail, Rabbit and Camel Farming	1,000	1,000	4,000	**6,000**	-
8	Creation of Livestock and Dairy Development Board	350	700	950	**2,000**	-
9	Drought Management and Mitigation Program	110	240	150	**500**	-
10	Development of Farm Fisheries Project	140	240	120	**500**	-
11	Veterinary Research Institute with Vaccine Production Facility	1,100	1,900	-	**3,000**	-
12	Establishment of Forensic laboratory at Quetta	700	800	-	**1,500**	-
13	Establishing of Animal Disease Surveillance Epidemiology, Veterinary Public Health and MIS Systems in the Province	700	800	-	**1,500**	-
14	Establishment of withholding center at Gwadar for export of livestock and its products	1,000	800	-	**1,800**	-
15	Establishment of livestock zones in CPEC economic development zones	2,500	-	2,500	**5,000**	-
16	Establish Livestock city at Uthal	-	-	1,500	**1,500**	-
17	Mobile veterinary clinics to cover the whole province for better service delivery	500	900	1,100	**2,500**	-
18	Throw forward of schemes (PSDP 2021-22)	1522	1331	951	**3804**	-
	Total	**11,102**	**15,011**	**18,491**	**44,604**	**2,750**

Pillar 6: Investing in Human Capital, Social Protection and Services





4.6 Pillar 6: Investing in Human Capital, Social Protection and Services

6A: Human Capital Development

Baseline

4.6.1 Human development is about *expanding the richness of human life, rather than simply the richness of the economy*[68]. In Balochistan, the status of Human Development is far weak than any other province of Pakistan. As per a recent report by the UNDP, Balochistan has a Human Development Index (HDI) of 0.473 and is ranked lowest among the four provinces. The HDI measures development by quantifying three dimensions of human life – education, health, and standard of living. This highlights that a lot of efforts are required to improve the human resource development in Balochistan.

4.6.2 The Higher Education Department of the province manages 35 degrees and 62 intermediate colleges having an approximate enrolment of 50,000 students. The overall budget on the college side is Rs. 2 billion for 2012-13. Despite this outlay and investments of sizeable amount in the capital expenditure, the state of college education remains weak in terms of quality. The enrolment level may be around 50,000 but the average attendance levels and overall quality of teaching remains low, this in turn has serious ramifications on the state of productivity in the province. Measures must be taken to increase the enrollment level in order to achieve the SDG 4 target number 4.3.

4.6.3 The bachelor's degree programmes in these colleges still follow the two-year curricular stream despite the development of four (4) year programmes by HEC. Secondly, most of the degree colleges extend the general arts subjects, which carry very little market value. It is the time to gradually consider restructuring these colleges towards fields, which shall carry greater chances of employment such as Business, Management, ICT, Engineering, Architecture, Communications and Media Sciences and so on.

4.6.4 The Technical Education and Training side presented additional challenges. Firstly, institutionally the subject is distributed amongst four (4) provincial departments including Education, Labour, Industries and Social Welfare Departments. After establishment of Balochistan Technical Education and Vocational Training Authority (BTEVTA), training component falls under the umbrella of BTEVTA.

4.6.5 There are presently seven (7) universities in the province with 5 of these located in Quetta and two universities namely the Lasbela University of Agriculture, Water and Marine Sciences is located at Uthal and the Balochistan University of Engineering and Technology is at Khuzdar. Six of these universities are in public sector and only one i.e., Iqra University is in private sector. There is a serious issue of access in terms of a vast geographic area having almost all institutions of higher education located in Quetta except for two; and secondly, the overall capacity shall also require to be expanded in the next seven (7) year strategy for creating greater opportunities of higher education in the province.

[68] UNDP 2016b

4.6.6 Higher education in the province also suffers from quality issues. At the university level, there has been some progress on HEC led programme developments including improved qualifications of the faculty and better quality research; however, the overall quality of teaching and student development requires additional efforts.

Sustainable Development Goals

SDG 4 – Quality Education

4.6.7 The SDG 4 delineates targets for equitable access to education and inculcating relevant skills in people for income generation. The development of human capital of the province through targeted and effective training and learning programmes and interventions shall contribute towards improving access to affordable technical, vocational and higher education. This shall also facilitate in developing quality resources to fulfill requirements of the industry in relation to required skills. Detailed indicators and targets for SDG 4 to be achieved by Balochistan are provided at **Table 4 of Appendix A**.

SDG 8 – Decent Work and Economic Growth

4.6.8 The SDG 8 promotes sustained economic growth through higher levels of productivity and technological innovation and encouraging entrepreneurship and job creation. The achievement of these targets shall not be possible without developing and enabling the existing workforce and youth through provision of knowledge and job ready skills. Detailed indicators and targets for SDG 8 to be achieved by Balochistan are provided at **Table 8 of Appendix A**.

SDG 17 – Partnerships for the Goals

4.6.9 The SDG 17 aims at global collaboration and partnerships for achievement of goals and targets. It supports knowledge sharing and cooperation for access to science, technology and innovation. The human capital development can be leveraged through establishing collaborations mechanisms for the advancement of trainings and capacity building of youth. Detailed indicators and targets for SDG 17 are provided at **Table 17 of Appendix A**.

Priority Areas

4.6.10 Access to college education is low and overall standards of college education requires improvement. These twin issues can be addressed by initially restructuring a few select degree colleges towards market-oriented disciplines for eliciting greater interest. Such restructuring has now become important with the progress of CPEC in the recent years, due to increase in competition, which has opened gateways to not only more opportunities but also increasing the standards higher in the national and global market. In order to cope up with all the environmental and strategic changes, the province, in addition to general arts related subjects, requires greater human resource in specialised fields with the knowledge and skills to life-based education. Inclusion of such skill-based education and knowledge is also part of SDG the 4 target number 4.4 and 4.7, focusing on the development of youth/adults in a way that they become professionally and sustainably skillful. Subjects which are directly or indirectly linked to the CPEC shall also be promoted in the colleges and universities to avail the best possible opportunities coming in Gwadar and other nearby regions.

4.6.11 Simultaneously, the colleges' governance structure needs to be overhauled for bringing in greater accountability in terms of student performances. This requires strengthening of the monitoring framework as well as Intermediate Board of Examination.

4.6.12 Technical education requires a major restructuring for revamping the existing technologies and standards of training in collaboration with private sector. In order to avail the maximum opportunities offered by the CPEC and new market requirements, the partnerships with the relevant field companies (under public partner partnership strategy) and private sector shall be focused to further capacitate the youth/adults of the province in the relevant fields with a value for meeting the CPEC objectives.

4.6.13 The access to universities needs to be improved by establishing new campuses in certain regions having no access to university education and simultaneously increasing linkages with federal and other private universities for sending greater number of students in other provinces and to the Federal Institutions through provincial scholarships. Infrastructure being developed under the CPEC will not only connect the people of Balochistan with other parts of Pakistan but also internationally through the projects such as, 'One belt one road', 'People to people exchange' and 'Transfer of knowledge'. All such projects shall open the doors for the people of Balochistan. In order to cater the SDG 4 target number 4.3, there is a need for improvement in terms of access to universities, affordability to enroll, increased scholarship opportunities and increased gross enrollment ratio for tertiary education and high-level education attainment.

4.6.14 The following areas will also be focused:

a. Ensuring the inclusiveness of all, irrespective of any discrimination (disability, vulnerability, indigenous etc.) in the vocational and technical training.
b. Addressing the financial constraints of the skilled youth of society by expanding the number of scholarships for students at different levels. This can be a step that shall not only cater the SDG 4, target 4.b but also can exploit the chance provided under CPEC to Balochistan in terms of domestic and international education opportunities.
c. Building capacity and skill development of youth/adults in the province via PPP strategy to prepare them with the increased flow of people to the region as a result of the projects under CPEC.

4.6.15 E-learning component will be incorporated in educational institutes at all levels.

Targets

4.6.16 The GoB has set the following targets for Human Capital Development under Pillar 6 to be achieved by FY 2026:

Table 4.33: Baseline and Targets – Pillar 6 (Human Capital Development)

Description	Baseline	Targets
Human Development Index (HDI)	0.473	0.700

Target 1: Promoting youth in education, employment and training for improving HDI

4.6.17 The Human Development Index of Balochistan currently stands at 0.473. This index is calculated through measuring development quantifying three dimensions of human life – education, health, and standard of living[69]. The index of Balochistan is the lowest among all provinces signifying the need for concerted efforts in the education and other sectors to improve the situation. The GoB has set the target to improve the HDI and achieve a score of 0.700 by FY 2026. Dissemination of awareness programmes and improving the quality of education at school and university levels shall encourage youth in training activities. Enhancing the outreach of BTEVTA programmes and providing free trainings and workshops to adults and youth shall aid in achieving the desired target.

Strategy

4.6.18 Improve the overall performance of the public sector colleges by installing a scientific monitoring framework which can provide online information about teacher and student attendances, progress on syllabus coverage, keep the record of the relevant data for SDGs annual mapping and assessment.

4.6.19 Introduce market oriented subjects and faculties especially the one having potential scope under CPEC projects (energy, infrastructure, technology, social sector development, PSDP) in the future such as: art and design, business administration, IT, media sciences, theatre, technological studies, civil/mechanical/industrial engineering, thermodynamics, atmospheric and oceanic sciences, and development studies etc.' in existing degree colleges by bringing in faculty on competitive basis.

4.6.20 Undertake performance based long-term management contracts with private sector for managing the new colleges under construction for establishing specialised institutes for Business Administration, Engineering, Architecture, Mining and Petroleum, Environmental Sciences etc., in different regions of the province.

4.6.21 Beef up the provincial non-salary budgets of the colleges especially categorising and planning the budget allocated to the SDGs and the CPEC after evaluating realistic requirements and these may be linked to student performances.

4.6.22 Conduct feasibility to establish boards of intermediate at divisional level with a view to increase the competition and improve management. Additionally, strengthening of the Intermediate Examination Board be ensured through better human resource and systems for making examination system more credible.

4.6.23 Develop partnerships with Oil and Gas and other companies for private sector management of a few selected technical/vocational institutions especially for fields relevant to the provincial resource base such as mining, petroleum, mechanical, and civil, etc. Open gates to fresh graduates and ongoing technical subject students to these major companies for short-term internship programmes for their maximum skill development. Restructure the existing technical intuitions through a technical assistance package for upgrading technologies and improving faculty capacities and organisational strengthening. Also, under this, rationalise the organisational structure

[69] Pakistan Human Development Index Report 2018-2019

by creating BTEVTA under technical assistance of the international donors to be able to bring in the required systems.

4.6.24 Introduce remote and difficult area allowance for incentivising the postings in these areas.

4.6.25 Conduct a need analysis in the entire province to figure out the real picture of potential students, their locations and available universities across Balochistan. After this analysis and properly strategising the situation, new universities/campuses will be opened, if so required, and the existing ones will be encouraged to open additional campuses in other regions to cover higher education gaps across the province.

4.6.26 With the Public Private Partnership mechanism, increased capacity building and opportunity raising activities for the youth shall be planned in the coming years.

4.6.27 With proper policy development and inclusion, measures shall be taken to link up main technical, science and technological colleges and universities with the CPEC project sites, SEZs and industrial estates to regulate field-visits and short-term internship opportunities for graduating and graduated students in Balochistan.

4.6.28 Associations such as ICAP, ICMA etc., can work jointly with other countries to ease the movement of certified professionals in and out of Pakistan, increase the job numbers and provide them a quality of life.

4.6.29 A youth social entrepreneurial community can also be established to support and get the best out of the ongoing development opportunities for youth.

4.6.30 Provincial government can develop and promote an open source in order to initiate e-learning at different levels. Online courses for teachers and students can be part of that open source which will help providing capacity building and learning opportunities to both. Few inspiration platforms for this can be massive open online courses (MOOCS) or coursera. E-learning material both students and teachers shall be developed and made available on and off-line.

4.6.31 The GoB shall set-up a Higher Education Commission for the province to oversee the standards of teaching in colleges and universities and recommend additional grants for these institutions. A regular system of grants needs to be initiated for the universities in Balochistan to meet a part of their fiscal deficits. These grants may be disbursed through Balochistan HEC based on agreed criteria as well as performance benchmarks.

4.6.32 The GoB shall strengthen and expand the scope and outreach of TEVTA to provide training on skills required by the CPEC and the industrial revolution 4.0 such as construction, engineering, mining, information technology, and hospitality through Public Private Partnership. The GoB shall adopt the multifaceted approaches including; incubation, business development through entrepreneurship, building alliance of home-based workers and business centers by engaging private sector/business brands focusing on youth and women. The TEVTA shall establish training hubs at divisional headquarters/economic zones identified under the CPEC on incremental basis with the formal collaboration of private sector business entities as well as training service providers and national and international technical training institutions to harness the potential of and increase employability of youth and women.

4.6.33 The Balochistan TEVTA shall collaborate with national and international technical training institutions especially those which have been recognised for advance training courses along with mainstreaming of youth in overseas labour force. The GoB shall sign-off MOUs with such potential institutions especially from China, Malaysia, and Japan etc. The BTEVTA shall be engaged for making the training institutes accredited.

4.6.34 The GoB plans to undertake a stipend-based skill development programme in collaboration with range of partners including NAVTEC, the three sister provincial governments and provincial TEVTAs, and private sector training institutions. A minimum of 30,000 youth in the province for this skill development programme shall be targeted in next three years.

4.6.35 Evolving and implementing internship/training programmes for 5,000 youth in collaboration with the Oil and Gas companies as well as other major companies in the province. The terms of partnership can be flexible to suit different partners; however, the GoB to finance the cost of stipend and living expenses of trainees. The partnering companies would be approached to bear the cost of internship/training.

4.6.36 The GoB shall evolve a well-designed programme for providing quality training for 1,250 nurses and midwives in collaboration with some major health providing institutions having state-of art capacity for such trainings.

4.6.37 The provincial HEC and Education Department shall pilot Smart University and Smart Classrooms concepts to bring new technologies to multi-level education (school, degree colleges and universities), into the classroom and carefully evaluate their uptake and learning impacts.

Budget 2021-2026

Table 4.34: Human Capital Development		(Rs. in Million)				
Sr. No.	**Strategy**	**FY 1, FY 2**	**FY 3, FY 4**	**FY 5, FY 6**	**Total**	**Proposed FA Portion**
1	Establish New Faculty (10 Degree Colleges)	500	1,000	1,400	**2,900**	-
2	Operate New Colleges under PPPs (MBA, BSC; Design, Mining, Petroleum)	60	80	160	**300**	-
3	Conducting need analysis and opening new universities accordingly, especially campuses of IT and Engineering University	320	76	124	**520**	-
4	Increase provincial non salary Budgets colleges	420	590	740	**1,750**	-
5	Managing Technical/Vocational Institutions under PPPs	750	1,170	1,500	**3,420**	-
6	Skill Development through TEVTAs	1,250	2,500	3,740	**7,490**	3,745
7	Linking up technical science and technology colleges with CPEC	9	9	9	**27**	-
8	Establishment and management of youth Entrepreneurial Committee	3	3	3	**9**	-
9	Development of Open-Source Learning Platform	15	13	13	**41**	-
10	Higher Education Commission	20	30	40	**90**	-
11	Introduction of market-oriented subjects and teachers in colleges and universities	293	293	293	**879**	-
12	Collaboration with National and International Technical Training Center and Skill Development through TEVTA	200	240	300	**740**	370
13	Implementing Internship/training programs with Oil and Gas Companies	320	420	840	**1,580**	-
14	Establishing PPP with Oil and Gas and other companies for operating technical and vocational training institutes	45	65	85	**195**	-
15	Life skills trainings at Schools, Colleges and Universities	45	70	90	**205**	-
16	Women Nurses and Midwives training	15	20	15	**50**	-
17	Smart Classrooms and Smart Universities	300	600	800	**1,700**	-
	Total	**6,804**	**10,010**	**13,740**	**30,553**	**4,115**

6B: Education

Baseline

4.6.38 The Government of Balochistan recognises the critical importance of education towards its vision for inclusive growth in the province. The education sector is presently beset with similar pattern of lagging behind as other sectors of the economy. It is confronted with the challenges of low literacy and enrolments, out of school children (OOSC), high level of dropouts from the schooling system particularly at primary level, high repetition rates, low completion rates, acute regional and gender inequalities, teachers' absenteeism, single teacher schools, closed/dysfunctional schools and shelter-less schools, all leading to unsatisfactory performances.

Sustainable Development Goals

4.6.39 In order to play a prominent role in the transformation and development of the world, the government of Pakistan took initiative, back in 2016, to adopt SDGs. The government of Balochistan and the UNDP have set up an SDG unit for Balochistan.

4.6.40 **Table 4 of Appendix A** provides an overview of the SDG 4, and its global targets are given, for a bigger picture. It is important to mention that the Government of Pakistan, in its SDGs National Framework, chose some of the priority national targets out of the ones mentioned under **Table 4 of Appendix A** provided at (i.e. Target number 4.1, 4.5, 4.6, 4.a, 4.c)[70].

Opportunities under CPEC

4.6.41 The China Pakistan Economic Corridor (CPEC) is one of the most important and impactful corridors of multiple engagements envisioned under China's mega Belt and Road initiative. The objective is to increase trade and service delivery through better connectivity and an enabling environment ensuring infrastructure and energy needs for the desired growth.

4.6.42 For Pakistan, the CPEC in its early harvest projects spent major part of the pledged resources to ensure energy sufficiency and better road connectivity. Whereas, the cooperation in the area social sector development shall primarily aim at improving the public service delivery in health, education, clean drinking water and skill development.

4.6.43 Accordingly, the Federal Public Sector Development Programme (PSDP) also includes projects for improving IT and telecom sector, establishment of technological and research centres, construction of Pak-China Technical and Vocational Institute at Gwadar, the CPEC Institutes for Planning, Development and Reform and exchange programmes between Pakistan and China[71]. These are a few of the mainstream projects proposed under the CPEC portfolio with an expected impact on key focus areas targeted in the social sector – health, education, vocational training, culture, tourism, youth and sports.

4.6.44 In order to exploit opportunities under the CPEC at the best possible level, there is a need to have a broader review of the existing regulatory and policy mechanism to find any gaps or the need for improvement in order to facilitate smooth roll out. Non-

[70]Sustainable Development Goals National Framework (March 2018). Ministry of Planning, Development & Reform Planning Commission. Government of Pakistan

[71]Federal PSDP, 2017-2018. CPEC and other related projects. Assessed from cpec.gov.pk/brain/public/uploads/psdp-projects/CPEC_Projects_2017-18.pdf

conventional models of engagement like public private partnerships and control and transparency features also need to be explored to make it a part of projects being agreed under the CPEC. For smooth and outcome-driven interventions, a buy-in and enabling environment is very vital in provinces as most of social sector mandate is with them.

Priority Areas

Updated extensive data for the development of SDG-4 provincial targets and indicators

4.6.45 In order to ensure the embedment of SDG-4 in any region, a clear picture of the regional SDGs targets and indicators is very important. In case of Balochistan, there is room to finalise and invest in more resources at the provincial level to set the priority targets and identify indicators for each.[72]

Understanding and Localization of agenda

4.6.46 The agenda of quality education for all has to be sensitised at the local level, so that the intervention can be initiated from the grass root level. The SDGs need to be understandable for the local people as well. The strategy to achieve the SDG 4 in the region is to mobilise local people of the region about the importance of education, provide them access so that they avail all the learning opportunities.

Issue of Access; School Participation

4.6.47 The level of school participation in Balochistan is significantly less than other three provinces. The school participation rates at all levels are low especially for girls. Only 26% women in Balochistan have ever attended school. The Gross Enrollment Ratio (GER) at primary level (4-9) including *katchi* class recorded in year 2019-2020 in Balochistan is 65%. The GER for government primary schools recorded as 59%. The GER remain stagnant for middle level as well at 47%, whereas it increased for matric level from 33% to 37%. The primary Net Enrolment Rate (NER) in the province is 56% compared to the national NER of 64% at this level. The participation at middle school level and secondary are even worse. NER at middle level for age groups 11–13 has been reduced to 26% and at secondary level it has been reduced to 14% for age groups 14 to 15. The NER for girls at middle and secondary level is only 20% and 9% respectively[73].

[72]Sustainable Development Goals National Framework (March 2018). Ministry of Planning, Development & Reform Planning Commission. Government of Pakistan

[73]Pakistan Social and Living Standards Measurement Survey 2019-20, Islamabad, Federal Bureau of Statistics

Table 4.35: Comparative Education Indicators Pakistan (%)						
		Gender	Punjab	Sindh	KPK	Balochistan
Pop. that ever attended school	Pop. that ever attended school	M	73	65	73	58
		F	58	44	36	26
Pop. that completed primary or above	Pop. that completed primary or above	M	60	57	59	21
		F	42	39	28	5
NER Primary (6-10)	NER Primary (6-10)	M	71	60	73	65
		F	69	49	59	45
NER Middle (11-13)	NER Middle (11-13)	M	40	35	48	31
		F	41	29	32	20
NER Secondary (14-15)	NER Secondary (14-15)	M	30	24	31	18
		F	31	20	18	9
Literacy Rate 15+	Literacy rate 15+	M	72	68	71	61
		F	57	47	35	29
Source: PSLM 2019-20						

4.6.48 In the last few years, the national adult literacy rate has increased to 57% and that of Balochistan to 44%[74]. While it does reflect some progress, this is much below than what is required to poise Balochistan for a steady growth path. At both age groups for middle level, there is a clear decline from the primary level NERs reflecting high dropout rates, which declined further at the secondary level[75].

Table 4.36: Net Enrolment Rates (2004-05 to 2014-15)									
	2004-05	**2005-06**	**2006-07**	**2007-08**	**2008-09**	**2010-11**	**2012-13**	**2014-15**	**2018-19**
NER Primary (5-9)	37	34	41	41	44	47	45	46	33
NER Primary (6-10)	44	39	50	51	54	56	55	56	40
NER Middle (10-12)	8	7	9	12	11	13	14	13	11
NER Middle (11-13)	17	14	19	22	22	25	28	26	20
NER Secondary(13-14)	5	5	5	5	5	6	6	7	6
NER Secondary(14-15)	9	10	10	12	11	14	14	15	12
Source: PSLM 2004-05 to 2018-19									

4.6.49 Balochistan Education Management Information System (BEMIS) 2016-17[76] underlines that the total enrolled children in Balochistan in the year 2010-11 excluding the katchi class were 652,165. In addition, the numbers of children in Madrassas' and in private sector have been estimated to be 100,818[74] and 256,989 approximately[77]. According to BEMIS 2016-2017 data, the number of private schools is 982 and enrolments are 256,989. All in all, the total enrolled children add up to approximately 1.32 million and roughly 1.3 million children being out of school (projected population of age cohorts of 5 to 9 and 10 to 14 years in 2013 is 2.6 million).

[74] Pakistan Education Statistics 2015-16
[75] Pakistan Social and Living Standards Measurement Survey 2018-19, Islamabad, Federal Bureau of Statistics
[76] Balochistan Education Statistics (2016-17)
[77] Policy Analysis of Education In Balochistan, UNESCO, 2011

4.6.50 The Balochistan Education Foundation (BEF) has lately evolved partnerships with both private sector owners of low fee schools as well as local communities under the Community Schools Programme (CSP). The BEF is presently supporting 648 community schools and 207 private sector schools. Community schools are set up where at least 20 students can be enrolled by the community, and there is no girls' school within a radius of 20 km. The BEF shall be made more robust. The programme is implemented through community organisations and the BEF monitors performance of schools on the basis of certain indicators. Under both the streams, the BEF has, till date, enrolled about 48,000 children.

School Infrastructure Gaps

4.6.51 An important constraint of access in Balochistan is non-availability of school infrastructure as well as distance of schools, which is a challenge. Of the 14,242 education institutions in the province, 11,598 are primary schools, 1,483 are middle and 1,020 are high schools. The remaining 141 are pre-primary, higher secondary, Inter colleges and Degree colleges.[78] Of all the primary schools, an overriding number has one to two room structures having one/two teachers. These are, thus, multi-grade teaching schools having scanty infrastructure and almost no budgets except the teacher salary. There is dire need of providing pre- and in-service training to the teachers in the province on multi-grade teaching approaches. Hence, other than non-availability of schools in about half the settlements, the schools available have bare minimum of resources. Approximately 77% schools have no drinking water, 55% no boundary wall, 69% have no electricity, and 73.3% are without a toilet facility[79]. The respective targets of infrastructure development of schools need to be improved in light of the provincial targets of the SDGs (proposed to be 100% access to electricity, drinking water and sanitation).

Learning Outcomes and Teachers

4.6.52 The GoB has lately added 5,000 teachers to the sector raising the strength to 52,049. While the BEMIS 2016-17 shows an average Student Teacher Ratio (STR) of 1:19; in reality, there is no credible system in place, which can confirm teacher presence in schools.

4.6.53 The GoB has lately evolved first Education Sector Plan (BESP 2013-18) emphasising on quality of education for sustainability and equity. The second BESP 2020-25, has its thrust on 'learning' as the key to change is very emphatic and detailed. The plan focuses on reading, numeracy and analytical ability as the targets for learning. Physical health, psychosocial development and general treatment of the child, both in communities and schools receive much greater attention in the BESP in addition to research and availability and analysis of data.

[78] *Pakistan Education Statistics 2015-16 (pg. 44)*
[79] *Pakistan Education Statistics 2015-16 (pgs. 134, 139, 144, 149)*

4.6.54 Technical and vocational education and training has been included as it is seen as an important conduit for employment of youth in a province with a massive youth bulge. This was not a part of the previous Sector Plan. Issues of governance, quality and expansion with relevance to the market are the key thrusts.

Education Spending

4.6.55 The Government recognizes that it needs to undertake innovative and bold decisions for taking a quantum leap forward in improving enrolments and quality of education. Currently, the GoB has been spending 19 to 20% of provincial expenditures on education for the year 2015-2016, which previously was only 16 to 17% for the year 2011-12. The allocation for education in Balochistan's budget increased to 18.86% in year 2014-15 from 17.59% in the previous year (2012-13). The scale went quite upwards in year 2015-16, reaching 19.93% but then dropped down to 18.99% in year 2016-17. For the financial year 2017-18, a total of 19.33% of Balochistan's provincial budget was allocated to education, showing the same kind of pattern which was followed in previous 10 years[80]. This needs to be scaled-up significantly for at least next 10 years to provide the required funding for the sector.

Targets

4.6.56 The GoB has set the following targets for education sector under Pillar 6 to be achieved by FY 2026:

Table 4.37: Baseline and Targets – Pillar 6 (Education)

Description	Baseline	Targets
Enrolment of Out of School Children	1.8 million	75% enrolment of out of school children
Access to Basic Infrastructure		
– Satisfactory Building	20%	80%
– Electricity	25%	85%
– Drinking Water	59%	90%
– Toilet Facility	35%	85%
Gender Parity Index	61%	85%

Target 1: Enrolment of Out of School Children

4.6.57 In 2018, the total number of out of school children in Balochistan stood at 1.8 million (0.63 million of ages 5-9 years and 1.26 million of ages 10-16 years)[80]. The GoB has set the target to enroll 75% of the out of school children by FY 2026.

4.6.58 Introduction of community schools, distance learning, early childhood education, appointment of teachers on merit, capacity building of teachers, providing basic education facilities, collaboration and partnerships with private schools and targeted

[80]Alif Ailaan (2018). 2013-2018 *Five Years of Education Reforms in Balochistan.*

interventions for improving and implementing the minimum education quality standards in schools, shall facilitate the achievement of this target.

Target 2: Access to basic infrastructure facilities for schools

4.6.59 The basic infrastructure facilities available at schools of Balochistan are not adequate as only 20% of the schools have a satisfactory building, 25% of schools have electricity, 59% schools have access to drinking water, 35% of schools have toilet facilities, and 46% of schools have a boundary wall[80]. The GoB intends to increase the access to basic infrastructure facilities to schools by FY 2026 including satisfactory building to 80% of the schools, provision of electricity to 85% of the schools, provision of drinking water to 90% of the schools and sanitation to 85% of the schools. School upgradation based on a survey of existing infrastructure facilities and need analysis shall enable chalking out an effective strategy for improving access to basic facilities, especially focusing on providing building to shelter-less schools.

Target 3: Equal Opportunities for education and vocational training

4.6.60 The average Gender Parity Score in Balochistan schools currently stands at 61%[80]. The GoB has set the target for Gender Parity Index (GPI) to be 85% by FY 2026.

Strategy

4.6.61 With a view to overcome infrastructure gaps for enhancing the access to education, GoB plans to enroll a minimum of 500,000 children in next five years through multiple interventions and players; however, the target of enrollment of out-of-school children shall be finalised soon, The GoB's strategy lays down the priorities as under:

a. Strengthening Non-formal Education / ALP System

Having significant number of 5-16 years age children out of school poses a challenge to educate them. Current pace of expanding formal schooling system suggests that if non-formal education is taken help from, the children will remain deprived of education. The Government plans to develop an accreditation system which will help in quality assurance and enhancement of NFE programmes by building capacity for managing NFE programmes by the non-government / private sector.

In order to cater specifically the issue to access to schools, other than focusing on non-formal community schools' system, digital/distant learning shall be incorporated in the system, with the help of which, a very useful and innovative method of learning can be introduced for the students, who are unable to go to school because of unavailability of schools, nearby.

b. Utilizing Existing Capacity and Making Schools 'Safe' and 'Child Friendly'

The GoB shall gradually provide five (5) rooms to all the primary schools in phases by prioritising the schools with higher and potential enrolment: 82% of all primary schools are multi-grade with 52% being single teacher institutions. These steps are envisaged to be critical for moving towards universal enrolments for compliance with the Article 25-A.

In addition, the GoB would undertake concrete steps to improve the overall school environment both through improvements in school designs and better upkeep maintenance and gradually providing missing facilities. In addition to existing Local Education Council (LEC) and District Education Group (DEG) at district levels, School level committees shall also be engaged in achieving the target, which shall be done via Public Private Partnerships.

c. School Up-grades

Given the steep structural pyramid where the 14,242 schools, of which over 81% schools are primary, the Government shall undertake a well-planned up-grade of schools based on surveys and examination of the demographic data.

The Government of Balochistan has further approved up-grade of a few selected high schools to higher secondary level in view of severe shortage of opportunities for college education in large parts of the province.

d. Early Childhood Education (ECE)

The GOB targets expansion as well as a shift in the purpose of early childhood education. It will have to not only shift from the traditional 'kachi' but also be based on research of child needs that may vary across districts and communities. The ECE shall be reviewed keeping in view ground realities and requirements. Quality of early childhood care and education programmes shall be improved so as to encourage learning and help in reducing learning difficulties accumulated by children from poor background. Communities shall be engaged to increase intake at the right age in early childhood programmes/grade 1.

e. Inclusive Education

The GoB plans to gradually create opportunities of schooling for children with special requirements and/or having any disability. This is planned to be undertaken by initially creating awareness and developing greater understanding of the requirements. Special introductory courses in pre- and in-service degree/certificate programmes will be added to ensure quality inclusive education.

f. Public Private Partnership

Public Private Partnership will be encouraged to increase the number of schools. This can be incorporated by adopting the model where private sector can construct school buildings and the Government of Balochistan can take the responsibility of paying rent of the buildings.

g. Education Quality and Child Learning Outcomes

The GoB plans to hire local teachers, preferably female teachers, for the proposed 'Community Schools' under its strategy to expand the availability of primary school facilities to all the eligible children in the province. In addition to local hiring strategy, provision of residential/hostel facility for teachers will also be planned to ensure their availability in schools and districts. For this particular initiative as well as for other categories and levels of teachers, the GoB plans to

henceforth recruit teachers through a third-party test for installing system of merit in the province.

The GoB has initiated an implementation framework involving an implementation process, which includes an organised dissemination of the provincial curriculum, initiating the process of textbooks' development in accordance with the prescribed policy, and then finally undertaking in-service as well as pre-service teachers training on the new textbooks.

The GoB plans to improve the capacity of the BTBB, especially, in the context of its revised role of a regulator and it also plans to involve the private sector publishers in the capacity development programmes for gradually increasing their capability to participate in this process through multiple innovative ways. Under the strategy, the GoB plans to undertake professional development of the in-service teachers on the new curriculum and textbooks as well as its introduction in the pre-service trainings.

The GoB plans to expand teachers training programmes. For the pre-service teacher training, the strategy's focus is to:

- Gradually expand the pre-step ADE and adapt the HEC developed curriculum for the 4-year B.Ed. programme in phases
- Encourage the existing teachers to undertake these programmes

The GoB recognises the need to increase the accountability of school performances measured in terms of child performances.

The GoB plans to make the Internal and External Assessment systems more effective and in coming years consider evolving more credible system of Student Assessment as a permanent and institutionalised feature to help parents and community to hold the teachers, school management and the government accountable on its performance.

For strengthening school level management, the GoB intends to explore possibilities of creating an Education Executive Cadre with two sub cadres: a) District Planning and Management and b) Headmaster Cadre. These shall be created by fresh hiring through BPSC.

The GoB plans to increase the non-salary budgets of schools in phases beginning with bigger schools and after instituting adequate systems for managing and monitoring the school expenditures at school level. The increased cash inflows shall be backed up by capacity building, administrative and regulatory reforms aimed at making school level management accountable to communities and simultaneously out-sourcing monitoring of expenditures. The non-salary budgets would finance costs of learning materials, repair maintenance and cost of transportation for children coming beyond a given distance.

The GoB plans to undertake the regulation of the private sector schools as well as the Madrassas in the province towards the overall objective of holistic education management in the province. The Government would subsequently engage with the Madrassas for considering adoption of the National Curriculum in their studies.

The GoB plans to strengthen the M&E framework significantly for ascertaining the school performances on the basis of regular internal assessment and evaluation. Other than strengthening of School Assessment system, the capacity development of BEMIS, the GoB is considering to introduce ICT based monitoring system for a very close and institutionalised oversight mechanism.

The GoB recognises that it needs to partner with the private sector to reach out to large number of out of school children on urgency basis to support enrolment of a minimum of 200,000 additional children.

The GoB would simultaneously explore possibilities of performance-based partnership contracts with some reputable and bigger private sector educational institutions for establishing new schools and/or long term performance-based management contracts of some existing government schools under low cost private sector model to enroll additional children on per child cost basis.

4.6.62 The GoB plans to introduce IT teaching in all high and middle schools in the province. With a view to install an accountable and quality training mechanism, the GoB plans to outsource this to private IT Companies on the basis of competitive bidding on per child basis. This intervention shall provide the province a more IT literate population, which shall hopefully provide a greater impetus to development in coming days.

4.6.63 The GoB would introduce remote/ difficult area allowance to incentivise availability of teachers and other staff in all parts of the province.

Budget 2021-2026

Table 4.38: Education		Rs. in Million				
Sr. No	**Strategy**	**FY 1, FY 2**	**FY 3, FY 4**	**FY 5, FY 6**	**Total**	**Proposed FA Portion**
1	Geo Tagging of Schools	15	15	15	**46**	-
2	Enrolment Drive through multifaceted Approaches	126	126	126	**377**	-
3	Access and Equity (via community schools and digital learning centers establishment)	10,362	16,663	16,851	**43,876**	21,938
4	Early Child Education	1,740	2,310	1,800	**5,850**	4,680
5	Inclusive Education	77	70	50	**197**	158
6	Quality Education	1,850	1,200	700	**3,750**	3,000
7	Textbooks development and Publication	640	750	1,200	**2,590**	2,072
8	Teacher Development	110	120	200	**430**	344
9	Governance and Management	80	40	60	**180**	144
10	Creation of Head Teacher Cadre and Recruiting Head Teachers after thorough and updated need analysis as per OOSC, existing and new schools	1,500	1,690	2,600	**5,790**	4,632
11	Enhance School Non-Salary Budgets	1,240	1,360	2,200	**4,800**	3,840
12	Student Assessment System	455	510	800	**1,765**	1,412
13	Partner with Private Sector EMPs (50,000 children)	2,060	2,700	3,600	**8,360**	6,688
14	Add 200,000 children through BEF	3,250	3,700	5,300	**12,250**	9,800
15	Literacy and NFE	325	620	760	**1,705**	1,364
16	Outsourcing IT in High and Middle Schools (150,000 children)	340	380	600	**1,320**	-
17	Remote/Difficult Area allowance	580	680	1,100	**2,360**	-
18	Monitoring and Evaluation	120	135	210	**465**	372
19	Data recording, management and resource hunting	32	31	31	**94**	
20	SDG Education Forum (Cooperation mechanism between SDG provincial units, CPEC units and public sector)	4	4	4	**12**	-
21	Strengthening of SMCs for close monitoring of schools and teachers	522	522	522	**1,567**	-
22	Throw forward of schemes (PSDP 2021-22)	13,840	12,110	8,650	**34,599**	-
	Total	**39,268**	**45,736**	**47,379**	**132,383**	**60,444**

6C: Health

Baseline

4.6.64 Balochistan's health sector indicators are very poor and the progress attained in last decade is not promising. This is despite greater awareness and support from multiple agencies including international donor agencies in the health sector especially in the public health component where, apparently, very little has changed for last many years. The very obvious factors are low economic activity and poverty and governance issues in health sector.

Sustainable Development Goals

4.6.65 **Table 2 and Table 3 of Appendix A**, provide an overview of the SDG 2 (End hunger, achieve food security and improved nutrition and promote sustainable agriculture) and SDG 3 (Ensure healthy lives and promote well-being for all at all ages) which cover health sector.

Opportunities under CPEC

4.6.66 Under CPEC, Pak China Friendship Hospital is proposed to be constructed at Gwadar. This is an upgrade of 50-bed hospital constructed under GDA Business Plan. The hospital is planned on 68 acres of land. One out of six medical blocks (each 50 bedded) and almost 20% of the residential blocks are completed. Under the proposed project remaining medical blocks, nursing and paramedical institutes, medical college, central laboratory, and other allied facilities are to be constructed with supply of medical equipment and machinery.

Priority Areas

There is a need to manage the data collecting, recording, and assessment mechanism, which is needed to ensure the embedment of health-related SDGs in the province. More work is needed at the provincial level in Balochistan to finalise the priority targets and set indicators for each SDG.[81]

4.6.67 Though, there have been certain coordination and steering committees established at federal and provincial levels, the challenge of smooth intervention for SDG 2 and SDG 3 in Balochistan is still there. Poor coordination between ministries and departments can be considered as one of the major reasons behind this.

4.6.68 Additionally, the collaboration measures at the provincial level to cope up with the possible impacts of the CPEC in the region and to upgrade the lifestyle of the people (both urban and rural areas) are to be taken with the following possibilities:

a. Seeking partnerships to address the issues related to IMR, MMR, full-immunisation, emergency services, health facilities, malnutrition, undernourishment, child-delivery services, health hazards because of poor hygiene and wash facilities etc.

[81]Sustainable Development Goals National Framework (March 2018). Ministry of Planning, Development & Reform Planning Commission. Government of Pakistan

b. Collaborating with government and private sector to establish back-linkages in remote areas to increase access to main roads to address emergency related situations timely.
c. Improving quality of hospital and emergency staff by ensuring need based medical trainings (locally, domestically and internationally in some cases) in collaboration with private and governmental organisations.

4.6.69 The biggest challenge faced by Balochistan in the heath sector is that of primary and preventive health care especially in the context of mother and child. The terrain and distances in Balochistan come out as a major limiting factor where the reach out of basic health services remain restricted to certain pockets within each district. Coverage of maternal, child health services including antenatal, neonatal, contraception, and vaccination is considerably weak across the province. Only 36% of deliveries take place in health facilities, which is at least 18% lower than other provinces. In rural areas, over 71% deliveries take place at home and of these a significant proportion is assisted by untrained attendants.

Table 4.39: Child Delivery and Type of Assistance

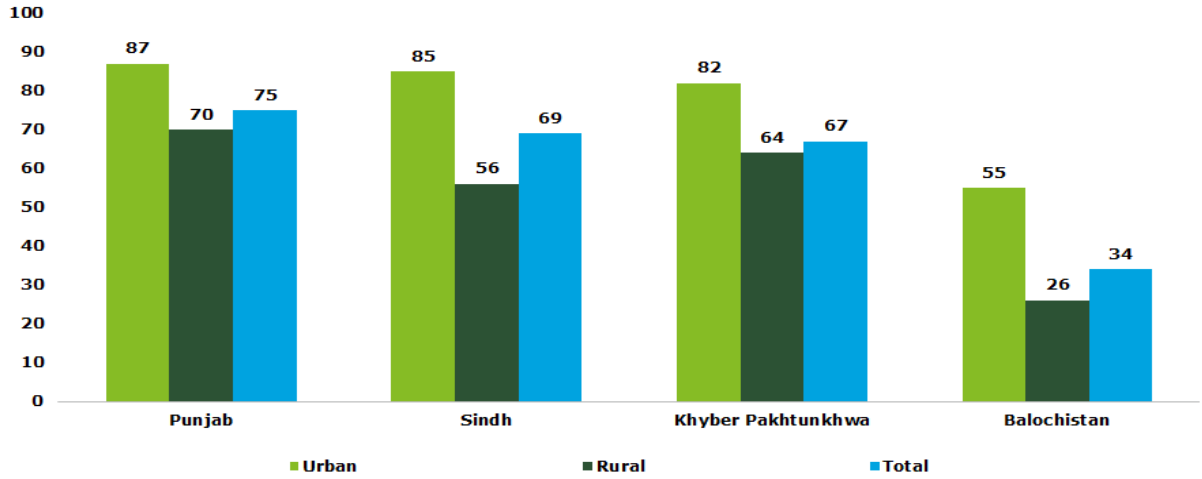
Place of Delivery	Punjab			Sindh			KPK			Balochistan		
	U	R	T	U	R	T	U	R	T	U	R	T
Home	15	32	26	13	43	30	17	37	34	31	53	47
Public Health facility	38	30	33	29	28	28	44	34	36	41	26	30
Private Health Facility	47	38	41	57	29	42	39	28	30	27	20	22
Other	1	0		0	0	0		1	1	0	1	1
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
Person that Assisted												
Doctor	67	48	55	74	50	61	64	43	46	53	28	34
TBA	2	4	4	2	3	2	2	3	3	1	10	8
Family member/other	5	8	7	7	10	8	6	23	21	15	22	21
Other	0	0	0	0	0	0	0	1	0	1	2	2
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**107**	**100**	**100**	**100**

Source: PSLM 2019-20 (U: Urban; R: Rural; T: Total)

4.6.70 The other components of MNCH including prenatal and antenatal care are also quite dismal. Urban areas in Balochistan show only 47% of prenatal consultation of any type; and in rural areas the coverage dips further to 41%. Similarly, the antenatal care is equally bad with over 34% of pregnant women in the province who have received Tetanus Toxoid (TTx) injection, which results in higher levels of child mortality (**Figure 27**)[82].

[82]Pakistan Social and Living Standards Measurement Survey 2014-15, Islamabad, Federal Bureau of Statistics

Figure 27: Percentage of Pregnant Women that have Received TTx Injection



Source: PSLM 2014-15

4.6.71 The Infant Mortality Ratio (IMR) and U5MR are also considerably higher than other provinces. The Balochistan MICS 2010 has assessed these to be 72 and 89 per 1000 live births against the MDG targets of 40 and 52 per 1,000 live births. Under child immunisation, the provinces' comparative data in PSLM 2014-15 shows an overall coverage of 51% for Balochistan compared to 90% in Punjab, 73% in Sindh and 78% in KPK.

4.6.72 Polio remains an area of concern. According to a report[83], despite of 59% reduction in wild polioviruses detected in year 2016 as compared to year 2015, the road to make Pakistan completely polio-free is still a long way away.

4.6.73 In Balochistan, TB and hepatitis are major contributors to communicable disease burden. Caseload of TB in Balochistan as in the national level is mainly amongst the poor. Case detection rates vary across districts and these are extremely low in Dera Bugti, Kalat, Kech, Musakhel and Sibi. The treatment success rates also vary across districts. Hepatitis B and C levels are also major concerns; however, unsafe practices of injection usage and needle disposal are widely prevalent and vaccination levels are low at less than 7%. HIV control needs a special focus in urban Balochistan.

4.6.74 After Sindh, Balochistan was found to be the most affected by food insecurity. It was assessed that about 40.7% people were food insecure; and of those who were found to be food insecure, about 7.5% were mild food insecure, 6.9% were moderate food insecure and 35.3% were severe food insecure[84]. Given the severity of the problem, there is an urgent need to evolve nutrition interventions in coordination with other departments, especially the agriculture department as part of a larger inter-sectoral strategy.

4.6.75 Balochistan, like other provinces, lacks a pharmacy strategy and this sub-sector has traditionally been overlooked in planning for health systems. There has been proliferation of shadow pharmacies, inappropriate prescriptions of medical practitioners and low use of recommended generics. Health financing measures are also needed to reduce high OOP expenditure on drugs. Above all, there is absence of a

[83]Report of the Independent Monitoring Board of the Global Polio Eradication Initiative (August 2016).
[84] National Nutrition Survey 2018

central body to act as the hub of pharmacy functions for taking this forward. An effective and strong pharmacy strategy needs to be developed in the province so that the target 3.8 of the SDG 3 can be achieved smoothly.

4.6.76 The Government recognizes that the issues of governance of health require attention. There is over centralisation of authority, weak oversight of services and absence of a clear monitoring and evaluation framework. Further, there is a need to strengthen the tenures of top management as frequent transfers of both senior and mid-level management impact governance adversely.

4.6.77 Given comparatively low presence of private sector in Balochistan with the exception of Quetta, the bulk of population relies on public health facilities. The provincial health spending has remained static at around 6% of total provincial expenditure for last many years. The total health expenditure increased at an average annual growth rate of 29%, from 2006-07 to 2011-12.

Targets

4.6.78 The GoB has set the following targets for health sector under Pillar 6 to be achieved by FY 2026:

Table 4.40: Baseline and Targets – Pillar 6 (Health)

Description	Baseline	Targets
Under 5 mortality rates per 1,000 live births	78	57
Skilled Health Personnel attending births	38.2%	70%
Satisfaction of women with modern family planning	33.8%	50%

Target 1: Reduction in Under 5 mortality rates

4.6.79 The GoB has set the target to reduce under 5 mortality rates from existing 78[85] to 57 per 1,000 live births by FY 2026.

Target 2: Increasing skilled health personnel for attending births

4.6.80 The GoB is committed to increase the health service delivery and hence, set the target for increasing the proportion childbirths attended by skilled health personnel from existing 38.2%[85] to 70% by FY 2026.

Target 3: Increasing proportion of women satisfied with modern family planning

4.6.81 Another area for improving service delivery is increasing the use of modern family planning methods. The GoB intends to increase the proportion of women having their family planning needs satisfied with modern family planning methods from existing 33.8%[85] to 50%.

Strategy

[85] Pakistan Demographic and Health Survey 2017-18

4.6.82 The GoB acknowledges that, without strengthening the outreach as well as quality of PHC services including the immunisation and MNCH, it cannot move out of the low health indicators. This is a core priority and the simplest way to reach the objectives through building on existing success stories. By now, PPHI in Balochistan has exhibited a reasonably robust presence and has undertaken the first steps by rehabilitating the BHUs and providing better health services through availability of medical staff and medicines.

a. The GoB plans to integrate the Civil Dispensaries (555 in number), EPI and LHVs with the PPHI by transferring the administration and budgets of these entities to PPHI. PPHI to be tasked to upgrade the CDs to BHU levels, by providing them required grants for additional infrastructure and human resource. Additionally, PPHI to manage immunisation through scientific database.

b. PPHI to upgrade a minimum of one third of the BHUs to BHUs-plus model for delivery of services on 24/7 basis in all the districts. There are 22 ongoing schemes relating to primary health (New BHUs, CDs, RHUs, and rehabilitation of different HFs etc.). These require Rs. 193 million for completion; these together with new schemes shall be given full capital and operational funds for early operationalisation.

c. Strengthen PPHI's legal and institutional framework by converting it into a section 42 company and providing it with an endowment for making it an autonomous organisation to work as a strong partner organisation in health service delivery with built in accountability mechanisms. PPHI already enjoys autonomy at certain level, however, it shall also be provided with the rights of managing internal human resources (which includes the recruitment and termination of people).

d. Establishing links between TB, Malaria and Hepatitis for integrated and evidence-based control at community levels. This requires strengthening of TB Programme and Malaria Programme to be made results based. Further, the Chief Minister's Initiative for Hepatitis Free Balochistan requires review for expanding it with a focus on preventive vaccination beginning from school children, newborn, expectant mothers and population within highly infected regions.

4.6.83 Health Department to reorient its role from HR management to health policy, financing, oversight and regulation body. For this, HR management shall be decentralised to Health Facility level especially for tertiary care hospitals and by gradually rationalising the availability of human resource. There is chronic shortage of specialist doctors, nurses and paramedics in the DHQs and RHCs across the province other than Quetta. The GoB to create Facility Specific Non-Transferable Vacancies for Specialists for these Hospitals and shall enforce a professional deployment policy.

4.6.84 Construction of Food Quality Check laboratories at the district and provincial level to ensure the quality of food and minimise the health hazards, strengthen the Health Management Information System (HMIS) by improving the human resources, other resources and creating linkages with the District Management Information System (DMIS), revise and update percentage targets in Balochistan of full immunisation of children aged 12-23 months, prenatal and antenatal care, greater care for first 1000 days of child, and child-delivery with professional assistance in order to achieve the SDG 3 targets. After the revision of targets, important measures shall be taken at all levels to

implement the strategy at its fullest. There is a need to identify the possible health hazards in Gwadar and nearby regions where the CPEC infrastructure work is in progress and take requisite safety measures to ensure a healthy environment in the province as required in SDG 3. The other measures include: evolving a Minimum Health Service Delivery Package (MHSDP) and Standards in Public Sector Facilities and move towards Result Based Implementation, and creating trained Administrative Cadre to improve efficiency of Health Administration at all levels. The current trend of posting doctors as Medical Superintendents and against other administrative positions is to be phased out by bringing in Health Management Cadre. The GoB plans to undertake a few, "Hospital Autonomy Pilots for major Tertiary/ Specialist Hospitals" by creating autonomous boards in partnership with philanthropists, not for profit organisation and even with for profit private sector. This is with an objective to upscale and improve the services of tertiary care hospitals.

4.6.85 Under ongoing portfolio, 10 new hospitals (50 bedded in Kech, Killa Abdullah, Kuchlak (Quetta), Ghousabad (Quetta), Kalat, Punjgur, Pasni, Nushki, Kachi) are being constructed. In addition to this, it includes 100 bedded hospitals in Quetta, a cancer hospital in Quetta, 100 bedded Mental Hospital in Quetta and Women's hospital in Zhob. All these shall require a huge amount on operational side and undertaking recruitments through existing policies shall once again lead to centralised management and possibilities of deployment in bigger urban centers mostly Quetta.

4.6.86 Explore possibilities of PPPs in different components of health sector especially in areas such as medical education, specialised curative care, diagnostic services, and community mobilisation campaigns to:

a. Underline the importance of health and its relationship with food;

b. Challenges to achieve the targets under SDG 2 and SDG 3;

c. Initiate hygiene awareness programmes;

d. Maintain and develop blood banks;

e. Undertake a high-quality training program for developing nurses and paramedic staff by bringing in a performance-based management contract for one of the nursing training facilities on the basis of per trainee costs;

f. Private and non-governmental organisations shall be allocated with the responsibility of initiating home doctors and nurse training programmes;

g. Evolve a Nutrition Programme through dedicated packages and inter-sectoral linkages especially in collaboration with agriculture department;

h. Attend to gaps in the availability of emergency services;

i. Pharmacy strategies and availability of strengthened drugs and diagnostic services through support from all levels (government, private, non-governmental organisations, relevant stakeholders etc.); and

j. Establish an effective health management system by initiating 24/7 ambulance services in majority of the accessible regions and a health connectivity mechanism

to connect local and remote areas to mainstream hospitals for the smooth flow of information in case of emergencies.

k. Introduce services for people with disabilities and old age people. Services for care of people with disabilities and old age will be a priority. Using the revolving fund strategy, essential assistive devices will be given to the needy people by subsidising the cost of the devices via micro installment option. For the ones, not being able to afford the expenses even on subsidised installment plan, 50% of the expenses will be taken care by the GoB. As a first step, an updated and authentic database management of the target group shall be developed. Secondly, the strategy will be synchronised with Ehsas programme model, and the interventions and planning will be done in close consultation with their representatives.

l. Focus will be given on strengthening mental health of the people in the region. The process will include, provincial level baseline study, targeting service delivery to cater mental health related issues, managing database of the survey study, integrating mental health and counselling in primary health care units, setting up a referral system to connect the interested ones with the professional psychologists, counsellors, therapists, available at tehsil headquarter level. Having specialists available in hospitals, dealing with especially postpartum depression and its related counseling and referral links.

Budget 2021-2026

Table 4.41: Health — **Rs. in Million**

Sr. No	Strategy	FY 1, FY 2	FY 3, FY 4	FY 5, FY 6	Total	Proposed FA Portion
1	Integrate CDs and EPI with PPHI, convert CDs into BHUs	3,300	4,000	4,000	**11,300**	5,650
2	Upgrade 300 BHUs into BHU Plus	1,500	1,190	1,900	**4,590**	2,295
3	PPHI Endowment	730	840	1,260	**2,830**	-
4	Hospital Autonomy Pilots	575	630	630	**1,835**	-
5	Operationalize 5 New Hospitals through partnerships	520	630	940	**2,090**	-
6	Strengthen HMIS; Develop MHSDPs	215	265	440	**920**	736
7	Updating of Target for full Immunization	47	-	-	**47**	-
8	Health Hazard Analysis in regions near CPEC Infrastructure	85	-	-	**85**	-
9	Additional Doctors, Staff, Non salary Budgets	380	790	1,300	**2,470**	-
10	Integrated Nutrition Program	380	500	1,200	**2,080**	1,040
11	Emergency Services Facility	180	100	125	**405**	203
12	Establish Health Management System	606	588	588	**1,782**	-
13	Strengthen Diagnostic Laboratories	250	430	720	**1,400**	700
14	Create Blood Banks under PPP	225	100	150	**475**	238

Table 4.41: Health		Rs. in Million				
Sr. No	**Strategy**	**FY 1, FY 2**	**FY 3, FY 4**	**FY 5, FY 6**	**Total**	**Proposed FA Portion**
15	Medical College under PPP	1,240	680	500	**2,420**	-
16	Management Contract for Nursing and Paramedic Training Institute	380	400	560	**1,340**	938
17	Convert Health Foundation into Health Regulatory Authority	150	175	300	**625**	438
18	Remote /Difficult Area Allowance	1,040	1,100	1,200	**3,340**	-
19	Lump Sum for Population Welfare	520	1,560	3,120	**5,200**	-
20	Pharmacy Strategy for better medical management	6,100	6,100	6,100	**18,300**	14,640
21	Training of Medical Staff and Nurses	30	30	30	**91**	-
22	Services for People with Disabilities and Old Age People	33.33	33.33	33.33	**100**	-
23	Strengthening Mental Health	16.67	16.67	16.67	**50**	-
24	Throw forward of Schemes (PSDP 2021-2022)	11,237	9,832	7,023	**28,090**	-
	Total	**29,740**	**29,990**	**32,136**	**91,865**	**26,878**

6D: Social Safety Net and Pro-Poor Initiatives

Baseline

4.6.87 Poverty is defined as "a state or condition in which a person or community lacks the financial resources and essentials to enjoy a minimum standard of life and well-being that's considered acceptable in society". Poverty is pronounced deprivation in well-being and comprises many dimensions. It includes low incomes and the inability to acquire the basic goods and services necessary for survival with dignity. In developing countries, consumption is used as proxy to compute income-based poverty line. According to this method, 24.3% population was below the official poverty line in 2015-16.

Table 4.42: Poverty Incidence

Year	National	Urban	Rural
2005-06	50.4	36.6	57.4
2007-08	44.1	32.7	49.7
2010-11	36.8	26.2	42.1
2011-12	36.3	22.8	43.1
2013-14	29.5	18.2	35.6
2015-16	24.3	12.5	30.7

Source: Planning Commission; Committee estimations

4.6.88 Social protection is defined as the set of policies and programmes designed to reduce poverty and vulnerability by promoting efficient labour markets, diminishing people exposure to risks, and enhancing their capacity to protect themselves against hazards and interruption/loss of income.

4.6.89 The country's social protection system comprises three types of schemes:

a. Social security/social insurance (e.g. EOBI, WWF — the pension and worker's welfare fund respectively)
b. Social assistance for the poor (e.g. Zakat, Benazir Income Support Programme)
c. Labour market programmes (public works programmes).

4.6.90 There was no emphasis on social protection in the first decade of Pakistan's existence. Social Assistance was introduced in the early 1990s – the Pakistan Bait ul Maal (PBM). This was a cash transfer like Zakat but did not have the exclusionary element that Zakat did. PBM was also financed through the taxation system and was thus the first genuinely redistributive social protection program in the country.

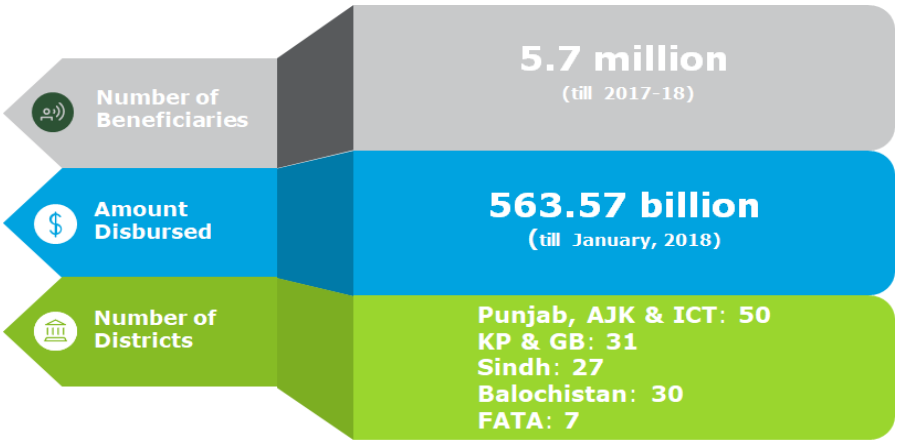
4.6.91 In 2008, the Benazir Income Support Programme (henceforth BISP) was launched to support the poor in the wake of high food price crisis. This Unconditional Cash Transfer Increased the Social Protection allocations in Pakistan three-fold in one go.

Key Programs and its Outreach in Pakistan

BISP Outreach for Unconditional Cash Transfer (UCT)

4.6.92 The programme provides eligible families with unconditional cash transfers (UCT), originally set at a monthly value of Rs. 1,000, raised to Rs. 1,200 in July 2013, Rs. 1,500 in July 2014 and Rs. 1,566 in July 2015. The transfer is delivered quarterly, with the vast majority of beneficiaries receiving cash through the BISP Debit Card. The cash transfer is targeted at the poorest 25% of the population with a specific eligibility threshold set on the BISP poverty score to assign households as eligible for the BISP cash transfer (See **Figure 28**).

Figure 28: Key Facts about BISP Unconditional Cash Transfer Programme



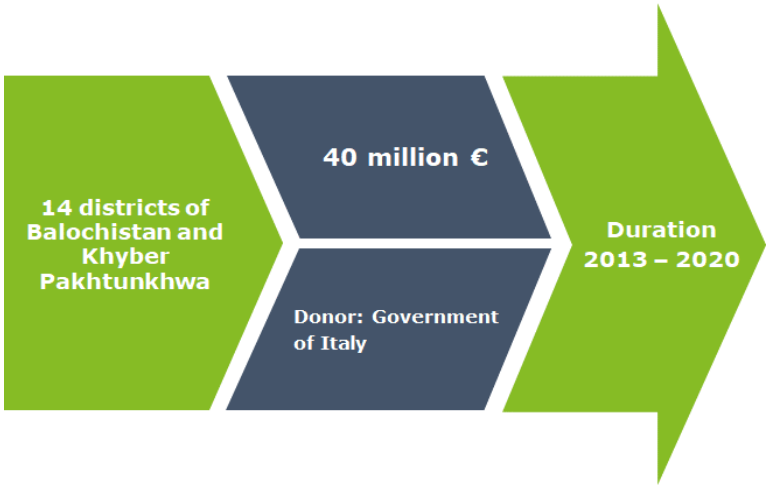
BISP Outreach for Conditional Cash Transfer, (Waseela-e-Taleem)

4.6.93 WeT Programme was launched in five pilot districts as part of initial test phase, in collaboration with education departments of provinces/regions in November 2012. It was extended to 27 new districts in January 2015 and, later on, to 18 districts in February 2018 in all provinces/regions of Pakistan. WeT programme is currently implemented in 50 districts across the country.

Programme for Poverty Reduction (PPR)

4.6.94 The Programme for Poverty Reduction (PPR) is focused on districts in Balochistan, Khyber Pakhtunkhwa and FATA and is being implemented in the field by 17 Partner Organisations. It aims to reduce poverty amongst the population of the selected areas through the creation of sustainable conditions of social and economic development (**Figure 29**).

Figure 29: Key Facts about Programme for Poverty Reduction



Prime Minister's Interest Free Loan Scheme

4.6.95 The Rs. 3.5 billion Prime Minister's Interest Free Loan (PMIFL) Scheme targets districts with low socio-economic indicators, high food insecurity and social sector investment by PPAF. There are 44 districts receiving coverage under this programme through the work of 26 partner organisations.

4.6.96 The table below shows the distribution of loans by sector and gender.

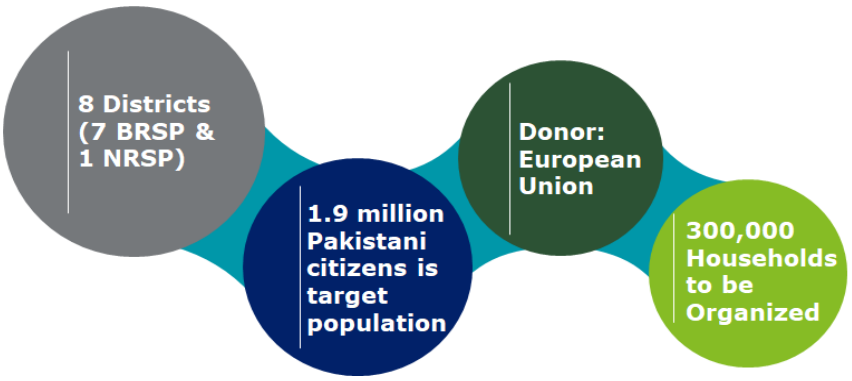
Table 4.43: Provincial and Gender Breakup of PMIFL Loan Portfolio

Provinces	Men	Women	Total
Sindh	25,969	60,568	86,537
Punjab	61,472	164,123	225,595
KP	43,153	31,712	74,865
Balochistan	8,889	7,849	16,738
GB	5,414	3,569	8,983
AJK	4,152	4,881	9,033
Total	**149,049**	**272,702**	**421,751**

Balochistan Rural Development and Community Empowerment Programme (BRACE)

The grant component of the five-year Balochistan Rural Development and Community Empowerment Programme (BRACE) is being implemented by three implementing partners namely RSPN, NRSP and BRSP in 249 Union Councils of aforementioned eight districts of Balochistan. The programme focuses on empowering citizens and communities and providing them with the means to implement community-driven socio-economic development interventions. It will also amplify their voice and capability to influence public policy decision-making through active engagement with local authorities for quality, inclusive and equitable service delivery, and civic oversight.

Figure 30: Key Facts about BRACE



Child Support Programme (CSP)

4.6.97 In 2005, the Government of Pakistan assuring its commitment to achieve goal of Universalisation of Primary Education under Millennium Development Goals approved first Conditional Cash Transfer (CCT) programme of the country i.e., Child Support Programme (CSP). The PBM stands predominant, first ever welfare organisation to instigate the CSP complementing with National Social Protection Strategy. The intervention, designed with technical collaboration of the World Bank, aimed to provide a continuum of community-based services for children and families.[86]

4.6.98 The PBM mobilises funds from the Government of Pakistan (GoP) and distributes them as a cash subsidy to eligible beneficiaries for sending their children aged between 5-16 year to school to get primary education. Additionally, cash incentive is being paid to the eligible beneficiaries @ Rs. 300/- per month to the families with one child and Rs. 600/- per month to the families with two or more than two children. The programme comprises of four interlinked processes i.e. Targeting (BISP Score Card), enrolment, compliance and payments.

Table 4.44: Outreach of Child Support Programme

Province	District
Punjab	Bhakkar, Rawalpindi, Multan, Bahawalpur, Rajanpur, Layyah, Lodhran and Muzaffargarh
ICT	Muzaffarabad, Ghanche and Hattian Bala
Sindh	Shaheed Benazirabad (SBA), Tharparkar, Ghotki, Khairpur
KPK	Kohistan, Abbottabad, Swat and Malakand
Balochistan	Quetta, Kharran and Lasbela

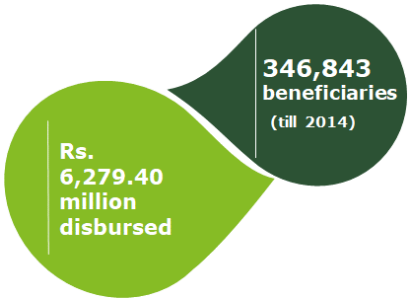
Employees Old Age Benefits Institution (EOBI)

4.6.99 Under EOB Scheme, Insured Persons are entitled to avail benefit like Old-Age Pension (on the event of retirement), Invalidity Pension (In case of permanent disability), Old-Age Grant (an Insured Person attained superannuation age, but does not possess the minimum threshold for pension) Survivor's Pension (in case an Insured Person is expired). The EOBI does not receive any financial assistance from the Government of

[86] www.pbm.gov.pk/csp.html

Pakistan in carrying out its operations. A contribution equal to 5.0% of minimum wages has to be paid by the employers of all the industrial and commercial organisations where the EOB act is applicable. Contribution equal to 1.0% of minimum wages by the employees of said organisations. Pensions are paid on monthly basis. The minimum pension is Rs. 3,600/- per month which may raise up to Rs. 6,400/- depending upon the period of insurance and wages of the insured person. Old-age grant is paid in lump sum equal to one month's average wages of the insured person for every completed year of insurable employment.

Figure 31: EOBI – Number of Beneficiaries and Amount Disbursed



Workers Welfare Fund (WWF)

4.6.100 Workers Welfare Fund was established under Workers Welfare Fund Ordinance, 1971 for providing low-cost housing and other amenities to the industrial labour. Initial contribution of Rs.100 million was made by the Government of Pakistan and further resources were to be raised by the private sector. The main objectives of WWF are:

a. Financing of projects connected with the establishment of housing estates or construction of houses for the industrial workers.

b. Other measures for the welfare of workers such as:
   - Education-free of cost up to secondary level
   - Scholarships-post secondary level
   - Marriage grants
   - Death grants etc.

Sustainable Development Goals

4.6.101 Goal 1 is to "No poverty in all its forms everywhere" by 2030. While extreme poverty has eased considerably since 1990, pockets of the worst forms of poverty persist. Ending poverty requires universal social protection systems aimed at safeguarding all individuals throughout the life cycle. It also requires targeted measures to reduce vulnerability to disasters and to address specific underserved geographic areas within each country. For that reason, Pakistan has adopted following targets and their indicators to be implemented in the country with the target of 2030. Please refer to **Table 1 of Appendix A** for detailed targets set for Goal 1 for Balochistan.

4.6.102 In order to achieve the targets envisioned for Balochistan under Goal 1, the following policy support shall be required:

a. Higher sustained and inclusive growth;
b. Provision of social protection to below poverty line population;

c. Balanced regional development; and
d. Increase access to credit for livelihood sources.

Opportunities under CPEC

4.6.103 There are no specific initiatives under CPEC for social protection; however, various projects to be implemented under CPEC relating to power generation, connectivity, and industrialisation shall contribute directly and indirectly towards the economic development of the Balochistan. The purchasing power of the common people should also be effected through this huge initiative.

Priority Areas

4.6.104 As mentioned above, that about 70% population of Balochistan is below poverty line and household vulnerability is comparatively higher amongst four provinces of Pakistan. Along with the existing opportunity of CPEC and direct foreign investments considered as huge potential for growth and development to address the SDGs and their relevant targets. In the light of the above scenario, the priority areas have been listed which can help in bridging the gaps between the existing and CPEC opportunities by prioritising the following areas:

4.6.105 Establish Council of Social Safety Protection and Poverty Alleviation (CSSPPA) for central planning and facilitation

4.6.106 There is a dire need to integrate and synergise the social protection and poverty alleviation efforts as well as to create meaningful linkage with the relevant Federal programmes. The major challenges are targeting, outreaching, monitoring and consolidation of such initiatives. Thus, the GoB shall constitute a Council of Social Safety Protection and Poverty Alleviation by providing legal cover and develop comprehensive policy framework duly approved by the provincial cabinet. This council shall perform the function of apex body for all the GoB initiatives related to social protection and poverty alleviation. It shall be constituted by representing Social Welfare, Zakat and Usher, Women Development, TEVTA, Agriculture and Livestock, Industries, Social Protection and Poverty Alleviation Fund, MFIs, BRSP and Finance and Planning and Development Department.

4.6.107 The GoB is already implementing a poverty reduction programme through livelihood improvement in the province. This is co-financed by the UNDP, the GoB, the WFP, and Bait-ul-Mal. In addition, the GoB has also provided financial support to BRSP. Such initiatives are with a purpose to integrate development programme aiming to reach out to poverty pronged districts for increasing agriculture, livestock productivity, improve access to social services, develop vocational skills, conserve natural resources and strengthen communities with focus on women.

4.6.108 Similarly, the Livelihood Support Projects aiming to improve livelihood of small fisherfolk, farmer communities' household's needs to be developed in prioritised districts where potential of livelihood improvement is significant. The community mobilisation programmes generally take significant time to take off; therefore, RSPs especially BRSP and other CSOs /networks having strong presence and connectivity with grassroots can be engaged to foster the community mobilisation baseed work to ensure effective implementation of other development initiatives at grass roots level.

4.6.109 The scale of Zakat disbursements is very small in the province about Rs. 200 million[87]. Also, its disbursements, alike other federal and provincial entities, are staggered into multiple components including ghuzara allowance, education stipends, Madaris, health care, marriage allowance and rehabilitation grant. Other than being small amounts, the identification of *mustahqeen* is also not based on any survey, etc.

4.6.110 Establish Social Protection and Poverty Alleviation Fund (SP&PAF)

4.6.111 The GoB shall establish Social Protection and Poverty Alleviation Fund to address needs of the poorest of the poor, vulnerable, persons with disabilities, internally displaced persons through applying multi-dimensional approaches including:

- Conditional Cash Transfers
- Unconditional Cash Transfers
- Creation of Assets through graduation programme

4.6.112 The fund shall be governed by constituting section 42 company under SECP or follow the model of BISP for its governance. For the inception phase, the GoP shall provide an endowment fund which can gradually build by engaging donor agencies like the World Bank, the Asian Development Bank, FCDO (formerly UKAid/DFID), UNDP, and other bilateral donors for the first 10 years of the life cycle of fund and gradually the GoB shall increase its annual allocation.

a. Conditional Cash Transfer Programme

The fund shall be designed on the principle of co-responsibility and launch specific programmes for poor and vulnerable groups by addressing the resource gaps and accessibility issues related to health and nutrition, education, skill development, for the re-enforcement of home-based workers, etc.

b. Unconditional Cash Transfers

On the basis of experience and learnings of BISP programmes, the fund shall complement the same programme by increasing the outreach on incremental basis. The current national survey of BISP in which 100% districts of Balochistan shall be covered considered for future programming.

c. Creation of Assets through Graduation Programme

The fund shall develop a comprehensive diversify graduation programme for those beneficiaries who have been benefited by conditional and unconditional cash transfer programme by using the experience of BISP, RSPs, BRACE, Grameen (Bangladesh), IFAD and PPAF. The prime objective of the graduation programme shall be to bring out community from vicious circle of poverty by providing them a set of services, skills and working capital in shape of credit (both interest free, with comparatively low interest rate, capital assets e.g., sheep, goats, poultry, small machinery etc.).

[87] Zakat and Usher Department, GoB

4.6.113 The GoB plans to establish Microfinance Bank for partially overcoming the constraints of availability of microfinance in the province. The GoB would explore possibilities of partnership with private sector by making an equity injection in the investment; however, in case of not being able to find appropriate partnership it would move ahead and create the Bank after a proper feasibility. It shall be established on proper commercial lines by bringing in qualified personnel and internal control systems. The GoB would also create an endowment for providing subsidised credit for well-targeted poor beneficiaries.

Targets

4.6.114 The GoB has set the following targets for Social Safety Net and Pro-poor Initiatives under Pillar 6 to be achieved by 2026:

Table 4.45: Baseline and Targets – Pillar 6 (Social Safety Net)

Description	Baseline	Targets
Multidimensional Poverty	71.2%	35.6%
Spending on Social Protection Programs	1.64%	5%

Target 1: Reduction in multi-dimensional poverty

4.6.115 The GoB has set the target for reducing the existing multidimensional poverty of 71.2%[88] by 50% in next six years (i.e. by FY 2026). Increase in provision of basic facilities to the current 70% poor population and funding to poverty alleviation programmes, provision of basic facilities to the poor, vulnerable and persons with disabilities shall facilitate in achieving this target.

Target 2: Increasing coverage of social protection programmes

4.6.116 The GoB intends to increase the coverage of social protection programmes focusing on ensuring the availability and access of basic services to the people of Balochistan and in particular vulnerable communities. The targets for FY 2026 shall be increasing the coverage of social protection programmes by 40% of the existing coverage and increasing the spending on social protection programmes from 1.64%[89] to 5% by FY 2026. Establishment of a social protection fund for the introduction of poverty alleviation, food security, and microfinance programmes and expanded area development programmes shall facilitate in achieving this target.

Strategy

4.6.117 The GoB shall constitute a Council of Social Safety Protection and Poverty Alleviation by providing legal cover and develop comprehensive policy framework duly approved by the cabinet. This council shall perform the function of apex body for all the GoB initiatives related to social protection and poverty alleviation. It shall be constituted by representing Social Welfare, Zakat and Usher, Women Development, Balochistan TEVTA, Agriculture and Livestock, Industries, Social Protection and Poverty Alleviation Fund, MFIs, BRSP and Finance and Planning and Development department.

[88] Multidimensional Poverty in Pakistan, 2015-16, Planning Commission 2016
[89] PSDP 2019-20

4.6.118 The GoB shall establish Social Protection and Poverty Alleviation Fund to address needs of the poorest of the poor, vulnerable, persons with disabilities, internally displaced persons through applying multi-dimensional approaches including:

a. Conditional Cash Transfers;
b. Unconditional Cash Transfers;
c. Creation of Assets through graduation programmes; and
d. Channelising Corporate Social Responsibility (CSR) initiatives to reduce poverty in consultation with corporate and private sector.

4.6.119 As the GoB is already working on the transformation and policy reform in its food department. In addition, the department shall also plan responsive food security programmes integrating with relevant line departments like agriculture, livestock, horticulture, and forestry. Such programming shall contribute in addressing the issues of nutrition and access to food amongst disaster pronged areas during droughts.

4.6.120 Bringing together a consortium of MFIs for evolving a "Women Focused Micro-Finance for Crafts and other Livelihoods" programme for 50,000 women. For this, either the SBP would be approached to evolve a special credit insurance scheme, which can be partly co-financed by the GoB.

4.6.121 Establish Microfinance Bank in partnership with private sector and design it appropriately on commercial lines with adequate systems and with dedicated funds for subsidising credit for the poor on the basis of notified transparent criteria.

4.6.122 Expanded Area Development Programme through RSPs and other partners to target 200,000 households with focus on women.

Budget 2021-2026

Table 4.46: Social Safety Net and Pro Initiatives — **Rs. In Million**

Sr. No.	Strategy	FY1, FY2	FY3, FY4	FY5, FY6	Total	Proposed FA Portion
1	Establish Council of Social Safety and Poverty Alleviation	50	-	-	**50**	-
2	Establishment of Social Protection and Poverty Alleviation Fund	1,200	3,500	8,000	**12,700**	7,620
3	Women Focused Micro Financing with support of SBP	225	120	75	**420**	-
4	Establish a Microfinance Bank (under PPP)	1,000	-	-	**1,000**	-
5	Expanded Area Development Program	375	2,000	2,500	**4,875**	-
6	Throw forward of schemes (PSDP 2021-22)	456	455	454	**1,365**	-
	Total	**3,306**	**6,075**	**11,029**	**20,410**	**7,620**

CHAPTER 5:

STRATEGIES FOR OTHER KEY SECTORS OF THE ECONOMY

5. Strategies for Other Key Sectors of the Economy

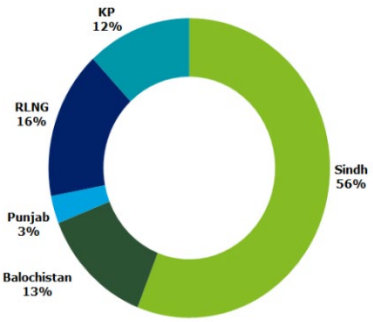
5.1 Energy and Power

Baseline

5.1.1 Commercial energy usage in Balochistan is lower than the national average. In 2010–11, it has accounted for 2.2% of the nationwide use of energy. Balochistan's share in Pakistan's consumption of petroleum products was about 2.8%, for natural gas it was 1.5% and for electricity 5.25%. Electricity consumption is slightly higher than the national average primarily on account of the subsidy on electric tube wells. The 75% of Balochistan's electricity consumption is because of use of agricultural tube wells whilst 90% of gas consumption is towards power generation.

5.1.2 Energy use in Balochistan is declining as a percentage of Pakistan's total energy use in gas, petroleum, and electricity, in fact given the correlation between energy use and economic growth, the decline in energy use is a marker of the slowdown in economic growth in the province.

Figure 32: Provincial Share (including RLGN) of Gas Supply to Gas Companies (%)



Source: State of the Regulated Petroleum Industry 2016-2017, OGRA

5.1.3 Balochistan's share in the gas supply to the country has declined to just 13% in 2017 (**Figure 32**) from about 25% for the early part of the decade. Gas consumption is 2% of the total national gas consumption.

5.1.4 LPG consumption is also just 2% of total national LPG consumption.

5.1.5 Balochistan's share in petroleum products consumption is also declining, from 11% in 2010-11 to just 6.4% in 2017-18[90].

5.1.6 The provincial share in electricity consumption has also declined slightly from just over 5% in 2013 to 4.7% in 2017. Of this, 3-4% is from agriculture (**Table 6 of Appendix B**). Out of just 600,000 total consumers, agriculture consumer's account for just 5.38% of all consumers of electricity in Balochistan; however, they consume more than 75% of all electricity in the province (**Table 7 of Appendix B**). Domestic and commercial consumers in Balochistan account for less than 2% each of total electricity consumption by these groups nationally and industry consumes less than 1% of total electricity used by all industry in Pakistan, a dismal reflection on the state of commerce, industry and incomes in the province.

[90] State of Regulated Petroleum 2016-17, OGRA

5.1.7 The disproportionate amount of consumption by the agriculture sector is because of subsidies given to farmers in the form of fixed discounted rates for tube-well operations. The trend creates distortions in the form of losses and burden to both federal and provincial governments as well as losses to QESCO, not to mention groundwater over abstraction leading to water scarcity. This is going on since the last decade.

5.1.8 The QESCO's annual losses, largely due to the agriculture subsidy, were Rs. 34bn in 2016, Rs. 19bn in 2017 and Rs. 27bn in 2018. The cumulative losses till 2018 were Rs. 166.5bn. These have swelled to 218bn in 2019[91] (See **Table 8 of Appendix B**).

5.1.9 Power demand of Balochistan (2018), was over 1,700MW, compared with a very low supply of 600MW, resulting in massive electricity shortages. Thus, persistent and regular load shedding of 12-18 hours in major towns, excluding capital Quetta, is a matter of routine.

5.1.10 Though, the total installed power generation capacity in Balochistan is of the size of 2,422MW (all gas based thermal power), the bulk power supply is in fact dispersed to trunk transmission network for utilisation by other provinces. Balochistan's existing transmission and distribution network is inadequate and incapable to take load more than 600MW that it currently receives.

5.1.11 Understandably, the private sector is reluctant to invest in Balochistan for a variety of factors. These include remoteness of the area, lack of communications and other infrastructure in most of the area, and low return on investment.

5.1.12 Solar power, wind energy, geothermal and micro-hydro systems are among the various resources in Balochistan for alternate and renewable energy. Harnessing of these resources however is insignificant. Balochistan has a long coastline with sizeable wind energy potential. Average wind speed of 5-7 meters per second, suitable for wind power generation, exists in most of the areas, such as Naushki, Naukundi, Ormara, Turbat, Pasni, Lasbela and Khuzdar. According to the estimate based on available meteorological data, the province has the potential to generate about 400MW electricity.

5.1.13 The provincial government plans to develop solar and wind-power projects in parallel with the private sector investment. An amount of Rs. 2.7 billion has been allocated by the provincial government for the power sector under its Public Sector Development Programme (PSDP) 2018-19 for implementing the new schemes of electrification and power generation and distribution. Most of these schemes are rural electrification and solar power related.

5.1.14 Canada has signed an agreement with the provincial government to establish in the IPP mode, solar power plants of 1,000MW cumulative capacity in different locations which have been identified. Also, Kuwait's holding company Enertech also planned to develop 50 solar plants each of 10MW capacity that would be off-grid installations.

5.1.15 Given the expense and difficulty associated with transmission and distribution networks, coal fired power plants for distributed electricity through mini and micro

[91] QESCO Annual Reports

grids and at mine mouths is recommended. Given that renewables especially solar and wind are now cost competitive with most conventional forms of electricity generation (measured by Levelized Cost of Electricity (LCOE)), and the significant human health and environmental costs associated with coal powered generation, it is recommended that distributed mini and micro grids supplied by renewables take precedence over coal powered generation.

5.1.16 The assertion that financial costs for renewables are competitive with coal is borne out by a study of tariff petitions[92] filed with the NEPRA over the last few years. The GoB can take advantage of significant private sector investment in renewables as well as tap in to global climate change related funds available for exactly such situations.

5.1.17 Balochistan had a Power Generation Policy, 2007 but it was never really implemented and stands irrelevant after the 18th Amendment in 2010. Currently, there is no policy which governs the energy and power sector in Balochistan.

Sustainable Development Goals

SDG 7: Affordable and Clean Energy

5.1.18 The SDG-7 means to emphasis over a transition from fossil energy generation, which is the most expensive and ozone harmful technique to a renewable source. A transition to green energy shall ensure a flat streamlined access and out-reach of electricity across the province. Balochistan itself is feasible for solar energy farms and windmills for power generation to fulfill the energy shortfall across the province. Detailed indicators and targets for SDG 7 to be achieved by Balochistan are provided at **Table 7 of Appendix A**.

Opportunities under CPEC

5.1.19 Other than the two coal-based power plants, there are no other direct energy projects as part of CPEC for Balochistan (See **Table 9 of Appendix B**). The opportunity presented by transport and SEZ development under CPEC and their subsequent energy needs both in terms of fuel for transport and heating/cooling as well as electricity shall be substantial and must be capitalised upon.

Priority Areas

5.1.20 Developing Balochistan Energy Policy, establishing Regulatory framework and creation of Balochistan Energy Agency (Authority) (BEA) shall improve the ability to formulate, plan and execute a comprehensive and integrated energy strategy.

5.1.21 The underserved Balochistan's rural population needs to be supplied with adequate, affordable, clean energy for human development and poverty reduction. With much of the rural areas reliant on biomass for their heating and cooking needs, rural gas supply would have significant impact on health and poverty outcomes.

[92] For example, the CIHC Pak Power Company Limited filed a tariff petition in January 2018 for 8.5 c/kWh for its 300MW coal fired power plant in Gawadar. On the other hand, Siachen Energy Pvt Ltd filed a tariff petition in 2018 for 6.2c/kwh for its 100MW solar power plant in Thatta, Sindh. Enertech Quetta Solar Pvt Ltd filed a petition also in 2018, for just 4.8 c/kwh for its 50MW plant in Bostan, District Pishin. Wind power tells a similar story with numerous 10-50MW wind farm projects filing petitions with NEPRA since 2017, for leveled tariffs of 5-7 c/kwh (see https://www.nepra.org.pk/petitions.htm).

5.1.22 Because of topographical challenges in addition to a small consumer base with low purchasing power, extending the existing national grid to rural areas is neither financially nor technically feasible. Distributed mini and micro grids with their own power generation may be more viable option.

5.1.23 With significant solar, wind, geothermal potential and cost competitiveness with conventional power generation with prices set to decrease in the future with technological advancements, renewables present unique opportunity for Balochistan to not only secure its own energy future but also to lead the way and showcase the least developed province of Pakistan as the country's renewables leader.

5.1.24 To ensure energy security, the province must have the capability to analyse, model, map, forecast energy demand and supply and its impacts on the economy and environment of Balochistan and be able to integrate energy planning with the water, agriculture, environment, and economy nexus. It needs to establish and secure future supply chains and make infrastructure investments as well as create the enabling environment for investors through policy, legal and institutional reform. Cross border energy supplies such as natural gas, oil and electricity from Iran and Central Asian Republics present a good opportunity provided there is policy, legal and institutional space for it. RLNG terminals and other petroleum processing facilities along the coast and inland along the CPEC western route forming a virtual pipeline from Gwadar to Xinjiang, China is also a good opportunity.

Box 4: Decentralised energy supply and alternative financing solutions

The energy affordability challenge also created an opportunity for companies such as M-KOPA - which has raised over $161 million according to Crunch base - to provide cheap small-scale off-grid solutions through a pay-as-you-go (PAYG) business model in order to broaden the consumer base and reach the people at the bottom of the pyramid. M-KOPA offers solar home systems for an initial deposit, followed by 365 micro-payments, after which the customer obtains the ownership over the system. Similarly, Azuri Technologies sells small scale solar home systems that provide lighting for eight hours, and a mobile phone charging port. Azuri customers pay a one-time installation fee for the system and then use mobile money services to top-up their unit for about 1.5 years before they own the unit or upgrade it to a larger system.

Similar to M-KOPA and Azuri, in East Africa, other companies like Lumos Global, Bboxx, and Meshpower, and Solar Off-Grid have made tremendous contributions to closing the energy access gap in various parts of Sub-Saharan Africa. In West Africa, PEG Africa, also targets the lower ends of the pyramid by offering PAYG financing and allowing consumers to access energy services without overwhelming upfront costs.

Some other key actors in the mini-grid space include, PowerGen a private utility in the continent, with over 50 micro-grids installed in Zambia and seven East African countries, and whose vision is grounded in the intention to 'lead the charge in implementing the future energy system of Africa, because the continent, with its weak incumbent infrastructure, shouldn't try to emulate energy systems in developed countries, but should focus on building the energy system of the future with on-grid storage, distributed generation, and smart metering."

The proliferation of mini grids on the continent has also seen the establishment of the Africa Mini Grid Developers Association (AMDA), a trade association aimed at ending energy poverty in Africa. AMDA currently counts 11 members in Kenya and Tanzania including startups like Rafiki Power, Jumeme, and PowerHive and established utilities like Engie. AMDA is funded by the Shell Foundation, the World Bank and the UK Department for International Development. Although in its early stages, this trade association is an auspicious indicator of increased and more inclusive energy access in Africa.

The availability of decentralized solutions paved the way to the spread of companies developing mobile solar-powered machines and tools able to provide for the absence of the national grid. Among these, many target rural areas and informal sector workers. Solar Freeze is a Kenyan startup that provides solar-powered cold storages for farmers to contrast post-harvest losses. AgSol, founded in Papua New Guinea and expanded to reach the African shores, develops solar agro-processing machines such as grain mills. Similarly, companies such as Sun Culture and Future Pump use solar panels to power irrigation systems.

Strategy

5.1.25 The GoB plans to enact a Balochistan Energy Policy for the province covering not just power generation, but also over all energy security including oil, gas, coal and renewables for the transport, commercial, industrial and domestic sectors in addition to power. Exploration and production activities shall be regulated at provincial level.

5.1.26 The GoB shall develop a Balochistan Energy Development Board for the regulation and management of energy sector.

5.1.27 The GoB shall pursue rural electrification for human development and poverty reduction. Review innovative business models and technologies such as pay-as-you-go and micro solar and wind for off-grid far-flung areas where extended transmission network is not financially and technically feasible.

5.1.28 The GoB shall carry out feasibility and options analysis for rural gas supply. Explore distributed gas supply options, or a provincial gas grid, including an RLNG facility(s) along coast, possibly Gwadar. A virtual pipeline option in the form of waystations and tankers from Gwadar to Xinjiang, China may also be explored given the infrastructure investments in transport expected under CPEC. Infrastructure investments shall be needed to connect to increase supply coverage.

5.1.29 Issue of receivables from agriculture and tariff subsidy to the QESCO shall be resolved. This shall be done with the QESCO, Finance Department, Energy Department and Agriculture Department coordinating at the provincial level with the federal government.

5.1.30 The GoB recognizes that the QESCO cannot alone meet the demand of electricity for Balochistan. Therefore, the GoB shall explore the feasibility for establishment of two new distribution companies for north and south Balochistan to cater energy demand.

5.1.31 The GoB shall aggressively pursue renewables, not just for power generation, but also for cooking and heating through policy, legal, institutional reform and infrastructure investments.

5.1.32 The GoB plans to build technical capacity and analytical capability to analyse, model, map, forecast energy demand and supply and its impacts on the economy and environment of Balochistan. Energy planning shall be integrated with water, agriculture, environment and economy nexus.

5.1.33 The GoB shall raise per capita energy availability by establishing and securing future supply chains and making infrastructure investments as well as creating the enabling environment for investors through policy, legal and institutional reform. The GoB shall create policy, legal and institutional space for cross border energy supplies such as natural gas, oil and electricity from Iran and Central Asian Republics.

5.1.34 The GoB shall engage with the Federal Government to explore the feasibility for establishment of plants in Balochistan for Synthetic Natural Gas (SNG), an LPG Air Mix.

Budget 2021-2026

Table 5.1: Energy and Power		Rs. in Million				
Sr. No.	**Strategy**	**FY 1, FY 2**	**FY 3, FY 4**	**FY 5, FY 6**	**Total**	**Proposed FA Portion**
1	Energy Policy and BEA	200	200	200	**600**	-
2	Rural Electrification	2,000	2,000	2,000	**6,000**	3,000
3	Distributed Grid	600	600	600	**1,800**	-
4	Renewables	2,000	2,000	2,000	**6,000**	3,000
5	Energy Security	200	200	200	**600**	-
6	Rural Gas Supply	2,000	2,000	2,000	**6,000**	3,000
7	Feasibility to setup 2 new distribution companies	50	100	-	**150**	-
8	Throw forward of schemes (PSDP 2021-22)	1,236	1,082	773	**3,091**	
	Total	**8,286**	**8,182**	**7,773**	**24,241**	**9,000**

5.2 Water

Baseline

5.2.1 Balochistan is a water scarce province with arid to hyper arid climate and low precipitation levels. Agriculture and livestock are the lifelines of large majority of the people as such water shortages in the province determine the productivity and incomes in the province. Despite developments in the water sector, population growth, urbanisation, mining sector and industrialisation, are posing greater demands on water resources of the province. The expanding imbalance between supply and demand, has led to shortages and unhealthy competition amongst end-users, besides causing severe environmental degradation in the form of:

a) persistent increase in water logging and salinity in the Indus Basin Irrigation System (IBIS) area of Pat Feeder and Kirthar canals;
b) inefficient and ineffective irrigation management in minor irrigation schemes leading to loss of precious water;
c) lowering of water table and mining of groundwater in the three over-drawn basins (Pishin-Lora, Nari and Zhob);
d) neglect of *Sailaba* and rain fed *Khushkaba* farming systems with reduced recharge to the groundwater; and
e) intrusion of saline water into fresh groundwater reservoirs in the coastal areas and at certain inland locations.

5.2.2 Floodwater is the largest resource of water in the province almost two-third of total available water but a large part of this is underutilised; and in contrast, the ground water constitutes about 4% and it is over-utilised due to irregular incentive policy regime[93]. Another critical issue requiring attention is the productivity of the IBIS canal command water together with that of harnessing and storing floodwater for overcoming water shortages in the province.

5.2.3 Water availability and quality have both continued to deteriorate in both rural and urban areas. Groundwater availability continues to worsen, however, with a "race to the bottom" and "tragedy of the commons"[94] scenarios playing out in many parts of Balochistan. For example, the alluvial aquifer in Kuchlak was exhausted after three decades of intensive use from more than three hundred agricultural wells. In addition, the province continues to be ravaged by climate change induced droughts as well as floods costing both lives and materials.

5.2.4 Variability in water availability is far higher than the national average and per capita water storage is only 20% of the (grossly inadequate) national average[95]. Floodwater generated by intense but highly episodic rainfall is the largest usable water resource in Balochistan. Extended droughts and destructive flash floods are relatively common and are expected to worsen with future climate change. Rainwater is harnessed for irregular spate (or flood) irrigation. Spate irrigation in the province is generally poorly managed and reliant on inadequate infrastructure making it both relatively inefficient and unproductive.

[93] Balochistan Need Assessment Report, 2013 (Part II – Water and Agriculture)
[94] The **tragedy of the commons** refers to a common pool resource (shared resource system) such as the Kuchlagh aquifer that is eventually destroyed because individual users act independently according to their own self-interest, contrary to the common good of all users by depleting or spoiling that resource through their collective action.
[95] World Bank - Pakistan: Getting More from Water, 2019

5.2.5 Governance challenges and a lack of investment have led the province to remain highly dependent on agriculture (26% of provincial GDP) despite the availability of considerable mineral and energy resources. Recent economic growth has been largely driven by expansion of tube-well irrigation for high-value agriculture, especially horticulture with key agricultural products including wheat, apples, grapes, vegetables, barley, milk and meat.

5.2.6 The people most vulnerable to water scarcity, in Balochistan, are the rural poor especially women and children. In the current context, improving rural livelihoods and stimulating economic growth require vastly improved management of the scarce water resources of the province.

5.2.7 Balochistan province has a rugged, arid landscape characterised by several rivers, flowing to the Arabian Sea, Afghanistan, and the Islamic Republic of Iran. Balochistan is the only province not fully within the Indus Basin. The Zhob and Kundar (tributaries of the Gomal) and the Nari are within the Indus Basin, which covers 65% of Pakistan and represents over 95% of its water resources. Of the 18 river basins of Balochistan, seven are part of the Indus basin; the Nari River terminates in Hamal Lake in Sindh — its waters never reaching the Indus and the other six rivers contribute small volumes to the Indus.

5.2.8 There are seven rivers in the Makran Coast basin of Balochistan (18% of the area of Pakistan) and four rivers in the Kharan Desert (17% of Pakistan). These latter rivers are low-volume, intermittent rivers but of considerable value to the sparse populations that live in these basins. Balochistan is characterised by low rainfall and frequent dry spells and persistent droughts. Although the summary resource assessment (**Table 6.2**) suggests groundwater is of minor importance, this portrayal reflects only the direct rainfall recharge to groundwater.

Table 5.2: Average Annual Available Water Resources of Pakistan

Billion cubic meters

	Surface water	Groundwater	Total
Indus Basin	205.7	12.7	218.4
Makran Coast	6.2	0.7	6.9
Kharan Desert	2.9	0.6	3.5
Total	**214.8**	**14.0**	**228.8**

Source: World Bank - Getting More from Water, 2019

Table 5.3: Average Annual Provincial Water Resource Availability in Pakistan

Billion Cubic Meters

	Accord apportioned surface water	Internally generated runoff	Renewable fresh groundwater	Total renewable resource
Khyber Pakhtunkhwa	10.83	11	2	24
Punjab	69.00	19	9	97
Sindh	60.14	3	2	65
Balochistan	4.77	8	1	14
Pakistan	144.75	41	14	229

Source: World Bank - Getting More from Water, 2019

5.2.9 Because of topography and limited infrastructure, Balochistan is unable to use its full allocation; its annual shortfall has varied between 25% and 53%.

Table 5.4: Provincial Withdrawals, Level of Use and per Capita Availability

Billion Cubic Meters (total withdrawals); Cubic Meters (per capita values)

	Total water withdrawals	Relative level of resource use	Water availability per capita	Water withdrawal per capita
Khyber Pakhtunkhwa	7	0.29	781	230
Punjab	118	1.21	882	1,069
Sindh	55	0.85	1,360	1,158
Balochistan	4	0.29	1,120	325
Pakistan	184	0.80	1,102	885

Source: World Bank - Getting More from Water, 2019

5.2.10 Balochistan's population has increased from 4.3m in 1981 to 12.3m in 2017. Balochistan's water availability per capita (See **Table 6.4**) is only less than Sindh's, yet it is the least water secure province of Pakistan. Agriculture is by far the largest user of water in Balochistan at more than 95%. Canal irrigation in Balochistan is limited and supports just 0.3 million hectares (around one-fifth of the irrigable area). Water from the Indus is supplied by the recently completed Kacchi Canal from the Taunsa Barrage, by the Pat Feeder and Desert canals from the Guddu Barrage and by the Khirthar Canal from the Sukkur Barrage. Small-scale irrigation from groundwater and the perennial rivers (of the Makran coastal and Indus drainage systems) support close to another 0.3 million hectares. Groundwater is accessed through traditional karezes, shallow dug wells, and deep tube wells. An additional 0.3 million hectares, approximately, are serviced by flood, or spate, irrigation (*sailaba*), which uses very simple diversion structures to harvest short, flashy floods into bunded basins to pond and infiltrate. Water harvesting (*khushkaba*) is a smaller version of flood irrigation that relies on capturing local un-channeled surface runoff in bunded basins; it serves around two-fifths of the irrigable area. Nearly half of Pakistan's flood spurs are in Balochistan where their flow-diverting function is an Integral part of many spate irrigation systems.

5.2.11 The provincial government manages canal irrigation and, to a lesser extent, small-scale irrigation schemes. Farmer communities manage water harvesting and flood irrigation, although the government supports infrastructure construction. Around half the farmland in Balochistan is salinity affected.

5.2.12 Cost recovery in Balochistan is higher because the limited extent of irrigation in these provinces means operating costs are lower. Pakistan's financial performance for irrigation is among the lowest in the word (Bell et al. 2014). Cost recovery is partly determined by collection efficiency. Collection efficiency is very low in Balochistan.

Groundwater

5.2.13 The increase in population and demand for economic development has resulted in indiscriminate abstraction of groundwater, which is only 9% of total water resource available in Balochistan. Now, deep groundwater is being used through drilling of tube wells up to a depth of 300m and water table is lowering at a rate of 2-6m per annum. The lowering of water table and groundwater depletion is basin specific and even within basin, some of sub-basins outside national electric grid have potential for further development of groundwater. Situation is rather critical in basins within national electric grid, where water table is lowering at a rapid rate and depletion is posing serious concerns. Quetta's water supply relies on regulated tube wells; the groundwater source is heavily depleted and severe water shortages are common (Ahmed 2013).

Table 5.5: Estimated Average Annual Groundwater Balances by Province in Pakistan

Billion Cubic Meters

	Punjab	Sindh	Khyber Pakhtunkhwa	Balochistan	Total
Recharge					
Rainfall recharge	8.1	2.4	1.3	1.5	13.3
Recharge from irrigation system	27.0	18.9	2.3	0.8	49.0
Return flow from groundwater abstraction	8.5	1.0	0.2	0.1	9.7
Recharge from the river system	1.4	0.4	0.1	0.2	2.2
Total	**45.0**	**22.7**	**3.9**	**2.6**	**74.2**
Discharge					
Groundwater abstraction	42.5	4.3	2.2	0.6	49.6
Non-beneficial evapotranspiration losses	2.5	17.0	0.3	1.4	21.2
Base flow from rivers and subsurface	-	1.4	1.8	0.6	3.8
Total	**45.0**	**22.7**	**4.3**	**2.6**	**74.6**
Net balance	**-**	**-**	**-0.4**	**-**	**-0.4**

Source: World Bank - Getting More from Water, 2019

5.2.14 Groundwater use exceeds recharge by an estimated 22% (Halcrow Group 2007) with overexploitation occurring in 10 of 19 sub-basins. In the Pishin Lora Basin, where abstraction is four times the recharge rate, pumping has entirely depleted the shallow alluvial aquifer, and new deep wells with powerful electric pumps have been installed to access the underlying fractured rock aquifer (van Steenbergen et al. 2015). Groundwater availability continues to worsen, with "race to the bottom" and "tragedy of the commons"[96] scenarios playing out in many parts of Balochistan. The alluvial aquifer in Kuchlagh was exhausted after three decades of intensive use from more than three hundred agricultural wells.

5.2.15 The cumulative decline of water-table ranges from 2 to 3 meters/y. The most significant decrease of 60m in the last 12 years has been recorded in parts of Quetta Valley. The estimated total groundwater recharge in an average year of all river basins is 2,200

[96] See footnote 1. This also helps make the case for water pricing, since individual withdrawals not only have direct financial costs of extraction but also external costs ("externalities") that individual extractions impose on fellow current and future users of the water resource by making less water available to them.

MCM, the withdrawal is 2,657 MCM. The groundwater overdraft in eleven river basins is 886 MCM, whereas 429 MCM is available for sustainable development only in seven river basins. (Aftab et al, 2018).

5.2.16 The measures include a ban on agriculture tube wells in urban areas, construction of storage, supply and delay action dams (DADs). As a consequence, 326 DADs with a storage capacity of 332 MCM were constructed in different river basins. (Aftab et al, 2018).

5.2.17 Rainfall/floodwater recharge presents the largest source of recharge to groundwater in Balochistan (See **Table 6.5**), compared to other provinces where recharge from irrigation system is largest source. This presents an opportunity for Balochistan to put in place technologies to increase rainfall recharge especially in the case of flood causing rains as witnessed in 2019, as well as increase coverage (length) of its irrigation system.

5.2.18 Introduce water conservation measures through awareness, education and action by introducing and incentivising use of low flow technologies in addition to rainwater harvesting. In fact, Balochistan can lead the way for the rest of Pakistan in this initiative. New industrial, commercial and residential developments can have low flow requirements, extraction and treatment and disposal requirements as part of their design.

Water-Energy-Food Nexus

5.2.19 In Balochistan's case the water-energy-agriculture nexus plays out in a different way than the rest of Pakistan where the focus is more on hydroelectric dams for water-energy and Indus basin surface water with groundwater for food production. Since Balochistan has little to no hydroelectric potential, here the nexus system tilts towards the electricity and fuel used by tube wells at subsidised rates[97] resulting in massive losses to the QESCO (see section on Energy and Power) and significant production costs to farmers using diesel operated tube wells. The subsidised rates also contribute to over abstraction and inefficient use of ground water.

5.2.20 In order to address issue of heavy subsidy, it required to convert the subsidised tube wells to solar power, though it will not solve the problem of over-abstraction. This shall be done however with the farmers' incomes and ability to maintain their production systems remaining un-affected; thus, the agriculture component of the nexus must also be accounted for. This would require close coordination between the Irrigation department, energy department, the QESCO and the agriculture department.

Wetlands

5.2.21 The Miani Hor coastal lagoon in Balochistan is a productive estuarine fishery which provides important nursery habitat for the juvenile of several marine fish species. Its productivity is dependent on the freshwater flows of the Porali River.[98]

5.2.22 Other wetlands include Astola Island, and Jiwani Coast, as well as the Hamun e Mashkel, Hamun e Lora, Zangi Nawar Lake, Hanna Lake etc. These are extremely important for local and migratory fauna especially birds, flood regulation and ground

[97] SDG 13: A Legislative and Policy Gap Analysis for Balochistan, Lead Pakistan
[98] World Bank, Getting More from Water, 2019

water recharge, and other ecosystem services as well as the humans and livestock that depend on these wetlands for survival.

Climate Change

5.2.23 In the Makran and Kharan basins, the hydrological impacts of climate change will be very different to the Indus Basin. Balochistan has experienced a general warming trend since 1980, with an increase in extreme rainfall events especially in the coastal area (Abbas et al. 2018). It is likely to experience more variable rainfall and a reduction of snowfall at high altitudes (LEAD 2017). Balochistan is highly vulnerable to climate change impacts and the province's capacity to adapt to climate change is very low. To buffer increasing variability, the province will need to manage groundwater more strategically, scaling up managed aquifer recharge to capture high-intensity rainfall events. Balochistan shall also incorporate measures to enhance climate resilience into its legal and policy instruments.

Droughts

5.2.24 The Chagai-Kharan region in Balochistan is amongst the most drought-prone areas of Pakistan (Khan and Khan 2015). Balochistan is by far the most drought-prone province because of its arid to hyper-arid climate (van Gils and Baig 1992). Balochistan's agricultural sector has experienced major drought losses especially from 1998 to 2002 when agricultural productivity halved (Ahmad et al. 2004). Nationally, this drought was the most extreme since independence. It affected more than 3.5 million people, caused hundreds of deaths and increased migration from rural Balochistan (GoP 2004). Three years of drought from 2012 to 2015 had further serious impacts across the arid zone (WFP 2015).

5.2.25 The institutional arrangements for drought planning are hampered by a lack of capacity and its functions do not include basin-scale water sharing arrangements during periods of extreme scarcity. The extent to which NDMA effectively advises decision-makers on droughts is unclear. Given the far-reaching impacts of droughts on Pakistan's economy and society, more attention shall be paid to drought planning, including development and implementation of a drought forecasting system.

Seawater Intrusion

5.2.26 In the coastal belt of Makran in Balochistan, the Gwadar District is affected in parts by seawater intrusion, which is degrading groundwater quality and exacerbating the already extreme water scarcity of one of the poorest and most underdeveloped regions of Pakistan.[99]

[99] World Bank, Getting More from Water, 2019

WASH

5.2.27 Sanitation infrastructure is inadequate and poorly maintained. Virtually, no investment has been made in the management of fecal sludge or wastewater. Drainage infrastructure is practically nonexistent in rural Balochistan, with more than 82% of households not connected to any drainage system, generating stagnant pools of sewage near dwelling areas in villages.

5.2.28 In Quetta, about 100 kilometers of sewers cover a small fraction of the city and there is a single dysfunctional wastewater treatment facility. Most of Quetta's wastewater and urban runoff is discharged into open drains, which are often clogged by solid waste and prone to overflow. There is evidence of agriculture use of untreated wastewater in urban orchards, posing significant health hazards (Khalil and Kakar 2011).

5.2.29 Connected households with more than six hours of water a day is just 2-5% in Balochistan. In rural Balochistan, 21% of households relied on piped water in 2014–15 as compared to 23% in 2004–05.[100]

5.2.30 Most rural dwellers rely on pumps (motorised and hand), which together accounted for 30% of drinking water in Balochistan. Balochistan rely more on motorised pumps (22% of all water sources) and less on hand pumps (8%). The rest relied mostly on surface water, unprotected (open) wells and tankers. These sources account for a whopping 49% in Balochistan.[100]

5.2.31 The quality of urban water supplies is very low with 80% being unsafe for consumption in Balochistan. Over the last decade, the already poor quality in Balochistan has worsened. The most common problem is fecal contamination from cross connections between water mains and sewers (Haydar et al. 2009). Arsenic and iron levels exceed safety limits in 6% to 10% of piped urban supplies nationally.

5.2.32 Balochistan spends the bulk of its WASH finances on employee-related expenses with the rest going to O&M. Low reliability reflects poor customer orientation by water service providers. Intermittent services discourage users from paying water tariffs, affecting the financial sustainability of service providers, which further undermines service quality. The complete absence of public services for rural wastewater management poses a significant health hazard. Despite improvements in rural sanitation, the lack of public water supplies essentially negates the human health benefits.

5.2.33 Provincial planning is hampered by inadequate data, lack of institutional cohesion and the absence of an independent regulator. The virtual absence of regulation, the inability to raise tariffs to recover costs and poor cost recoveries force municipal entities to rely heavily on large annual subsidies which are increasingly difficult to sustain.

5.2.34 Water supply and sanitation is characterised by institutional overlaps and unclear legal mandates. There is a lack of role delineation between the LG&RD, PHE, Irrigation and other departments, including WASA, in provision of water supply and sanitation services. Policy implementation varies according to departmental priorities, capacity, and operational norms creating further confusion and conflict.[101]

[100] World Bank: WASH Poverty Diagnostic | When Water Becomes A Hazard, 2018
[101] World Bank: WASH Poverty Diagnostic | When Water Becomes A Hazard, 2018

Policy, Legal, and Institutional

5.2.35 The Balochistan legal framework for water management needs updating as it does not require either the water resource inventory or the water user registry to be publicly accessible, although it does require monitoring results to be published. Balochistan specifies the required components of water resources management plans.[102]

5.2.36 There is no established mechanism for strategic basin-scale planning which comprehensively considers sustainable management of existing infrastructure assets, surface water and groundwater interactions, interprovincial water sharing, inter-sectoral water management, environmental sustainability or basin-scale management of sediment and salinity and other water quality issues. Flood planning and interprovincial sharing have been addressed with some success, and management of some major system assets — especially the headwater dams is the responsibility of WAPDA with development financing support.

5.2.37 Both, the 2018 National Water Policy (NWP) and the Balochistan Integrated Water Resources Management (IWRM) policy, espouse a desire to operationalise a more comprehensive and integrated approach to water resources management, but this has yet to be seriously tackled. This requires institutional reforms and a more comprehensive legal framework.

Sustainable Development Goals

SDG 6: Clean Water and Sanitation

5.2.38 The SDG 6 emphasises to ensure availability and sustainable management of water and sanitation for all the people living in a region. Balochistan is already in a water crisis over the availability of clean drinking water and its access. The SDG 6 promotes to achieve access and availability of clean water and sanitation as these two are the basic requirement to a sustainable life. Detailed indicators and targets for the SDG 6 to be achieved by Balochistan are provided at **Table 6 of Appendix A**.

5.2.39 Detailed indicators and targets for SDG 12 to be achieved by Balochistan are provided at **Table 12 of Appendix A**.

SDG 13: Climate Action

5.2.40 The SDG-13 signifies the negative impacts the government faces due to dumping of waste in the area with clean water which induces toxins and health hazards. Climate ensures sustenance to mankind and animals without which breathing air would not remain possible. Detailed indicators and targets for the SDG 13 to be achieved by Balochistan are provided at **Table 13 of Appendix A**.

Opportunities under CPEC

5.2.41 Water availability for Gwadar is being given due attention. Five MGD RO plants under CPEC, fresh water from Swar Kaur and Shadi Kaur dams under the Federal PSDP are main initiatives. The implications for energy, infrastructure projects and establishment

[102] World Bank, Getting More from Water, 2019

of SEZs under CPEC will require a significant increase in the use of water over current usage, as well as put additional strain on quality of available water resource through pollution without proper environmental safeguards in place and this must be accounted for in developing the strategy for the water and sanitation sectors. In addition, it is likely that CPEC opportunities will bring about migration to areas offering higher wages related to the CPEC projects from both within and outside the province; this will put pressure on local food production systems.

5.2.42 Wastewater/effluent treatment plants shall be made a part of the developments associated with the CPEC. In particular, the special economic zones, industrial development, and Gwadar and subsequent development of the Balochistan coast shall take into account effluent discharge and treatment and prevent the environmental degradation evidenced in Karachi and much of coastal Sindh.

Priority Areas

Water Resource Management

5.2.43 Strengthen water data, information, mapping, modeling and forecasting through BEPA and Irrigation Department and Federal Agencies such as WAPDA, MoWR, and FFC. The overall completion cost for this recommendation is estimated to be $1-10 million per year.

5.2.44 Establish a multi-stakeholder process of basin-scale water resource planning. The estimated budgetary allocation for this activity amounts to less than $1million per year. Establish provincial water planning and inter-sectoral water allocation mechanism. The estimated cost for operationalising this mechanism is nearly $1–10 million per year. Accelerate increase in agricultural water productivity. Adopt conjunctive planning and management of surface and ground water as a part of water conservation strategy. Projected cost allocation for this activity amounts to $1 million per year. Construct limited new storage (when hydroelectric power justifies the expense) and review reservoir operations. Completion cost of this procedure constitutes to $ 1 -10 million annually.

Service Delivery

5.2.45 Modernise Irrigation and Drainage and improve Operations to enhance the overall efficiency of adapted procedures. The estimated cost allocated to achieve this process amounts to $ 10–100 million per year.

5.2.46 Reform urban water governance and close infrastructure gap to enhance transparency between workers and governance. Enlisted below are the steps to achieve the stated priority with an estimated completion cost of $ 10–100 million per annum.

5.2.47 Improve rural sanitation. Completion cost for this objective would amount $ 1 – 10 million on a yearly basis.

Risk Mitigation

5.2.48 Improve understanding and management of climate risks to the Lower Indus and Indus Delta. Streamlining the management with effectiveness would approximately cost $ 1 million on an annual basis. Strengthen planning and management of water – energy

interactions. The estimated budgetary allocation to achieve this objective is around $ 1 million per annum. Improving, Understanding and managing basin-scale sediment dynamics would need an estimated allocation of $ 1 million per annum.

Strategy

The strategy for this sector has been devised through emphasising over the prioritised areas providing interventions at legal, policy, institutional and infrastructural levels.

Legal Reforms

5.2.49 **Water Resource Governance**

a. Strengthen water data / statistics, geo-mapping, modeling and forecasting with a medium range target of clarifying legal mandates for water information collation and sharing among departments from district / provincial level. These measures shall include strengthening legal frameworks for land-use planning which considers flood-risks.

b. Establish a multi-stakeholder process of basin scale water resource planning progressing towards establishing/strengthening the legal framework for strategic basin water resource planning. Establish Provincial Water Planning and Inter-sectoral Water Allocation Mechanisms as a short-term intervention and establish clear legal property rights for water, separate from land, and legal requirements to maintain public register of water licenses for a long-term sustainable strategy.

c. Accelerate increases in agricultural productivity to fill up the short-term gap and scope legal provisions to support pricing and trading of water rights for a long-term approach.

d. Adopt conjunctive planning and management of surface and groundwater for a short-term approach and establish a regulatory framework for groundwater access, management and regulation as a medium-term plan.

5.2.50 **Water Supply Service Delivery**

a. Modernize irrigation and drainage and improve operations at short-term length while revising Balochistan's irrigation and Drainage Authority Act, 1997 to clarify roles and responsibilities of Irrigation Department for irrigation management.

b. Initially reform urban water governance, close infrastructure gap, and establish legal mandate for regulatory oversight of urban water supply service provider performance by strengthening the regulatory framework for pollution discharges at medium term approach.

c. Improve rural sanitation as a short-term plan and establish clear legal mandate for provision of rural sanitation services at mid length timeframe.

5.2.51 **Risk Mitigation**

a. Improve understanding and management of climate risks.

b. Strengthen planning and management of water-energy-agriculture interactions at initial stages and establish provincial regulatory framework for groundwater access and management at intermediate level of strategy.

c. Improve understanding and management of basin scale water and sediment dynamics.

Policy Reforms

5.2.52 **Water Resource Governance**

a. Establish an implementation framework for IWRM policy with clear roles and responsibilities for water data and information. Develop standards and guidelines for flood risk mapping and a policy framework for floodplain zoning.

b. Regularly update IWRM policy to establish sectoral priorities and to define allocation processes.

c. Develop conjunctive water management plans at district level to focus on building drought resilience.

d. Question and review widely held view of inadequate storage and efficacy of small and medium dams given inflow variability from climate change, increased droughts, floods, and sedimentation etc. Focus on groundwater recharge, rainwater/floodwater harvesting, underground storage.

5.2.53 **Water Supply Service Delivery**

a. Review and revise *Warabandi* with new water sharing rules based on economic efficiency and farmer equity. Reform *Abiana* to reflect realistic O&M costs.

b. Rationalise overlaps in policy frameworks and align with Local Government Act (2010). Develop and disseminate standards for water supply service delivery and link service tariff increases to service quality.

c. Establish provincial standards and targets for rural sanitation services.

5.2.54 **Risk Mitigation**

a. As a medium-term strategy, develop long-term plans for sustainable management of Makran and Kharan basins.

b. Analyse synergies and antagonisms between electricity supply and usage policy for agriculture tube wells to inform policy changes.

c. Develop management plans to guide long-term basin scale floodwaters and sediments.

Institutional Reforms

5.2.55 **Water Resource Governance**

a. Strengthen the technical capacity in Irrigation department, BEPA, PMD for water data management, modeling, and forecasting including the use of earth observations. Strengthen capacity for monitoring and reporting water distribution and use. Build capacity for floodplain zoning.

b. Establish Balochistan Water Council, comprising various departments including BEPA, the departments of PHE, P&D, Forest and Wildlife and Fisheries, besides WUAs, NGOs, and private sector to provide strategic framing for cross jurisdictional basin planning. Establish consultative process for effective and broad stakeholder input.

c. As a medium-term plan, incrementally transform Irrigation department into Balochistan Water Resources Management Agency (BWRMA) called for in the IWRM policy of 2006, with broad responsibilities including environmental management with BEPA. Inaugurate robust participatory process to guide water allocation planning.

d. Strengthen capacity for economic modeling within provincial government. Improve OFWM through farmer training and awareness. Increase investment in agriculture research.

e. Strengthen capacity of Irrigation Dept./BWRMA for groundwater management and conjunctive planning. Strengthen WUA for local-scale monitoring and management of water resources in line with agreed management plans.

f. Strengthen capacity of Irrigation Dept./BWRMA for reviewing storage infrastructure procedures and investments.

5.2.56 **Water Supply Service Delivery**

a. Modernise irrigation system, lining of canals in waterlogged and saline areas and improve drainage infrastructure as a medium -erm strategy.

b. Strengthen and empower urban water supply service providers and establish independent regulators to oversee service provider performance and to help reduce political interference. On a medium-term basis, it is essential to create an enabling environment for increasing private sector participation in the urban water supply sector.

c. As a part of medium-term strategy, strengthen the capacity and increase financing of departments responsible for rural sanitation. Establish appropriate district level institutional arrangements to engage with communities in infrastructure improvement and develop appropriate mechanisms to ensure sustainable revenue base for O&M costs. Monitor and report progress towards rural sanitation targets.

5.2.57 **Risk Mitigation**

a. For a medium-term approach, strengthen technical capacity of water and environmental agencies for climate change impact assessments and mitigation planning. Resource relevant agencies for effective implementation of management plans.

b. Increase coordination between Agriculture, Energy, and Irrigation Departments as well as the QESCO to strengthen the capacity for joint water-energy-agriculture analysis which considers economic and environmental outcomes.

Infrastructure Investment

5.2.58 **Water Resource Governance**

a. Expand provincial Hydro-met network, including groundwater monitoring and establish interoperable water information systems.

b. At medium term approach secure financing for necessary infrastructure as determined by IWRM approach to infrastructure needs.

5.2.59 **Water Supply Service Delivery**

a. For intermediate timeframe strategy, increase the capacity and performance of wastewater treatment and improve O&M of existing distribution infrastructure. Install urban water metres to increase their coverage and reliability.

b. Invest in public infrastructure for rural sanitation services, including wastewater collection and basic treatment and disposal at village level.

5.2.60 **Risk Mitigation**

a. At medium term strategic level, increase solar and wind power investments where feasible.

b. Ensure new infrastructure designs and rehabilitation projects, considering sediment and flood risks to structural safety and operational performance.

Budget 2021-2026

Table 5.6: Water		Rs. in Million				
Sr. No.	**Strategy**	**FY 1, FY 2**	**FY 3, FY 4**	**FY 5, FY 6**	**Total**	**Proposed FA Portion**
1	Water Data	300	300	300	**900**	-
2	Multi-stakeholder Process	100	100	100	**300**	-
3	Provincial and Inter-sectoral Planning	200	200	200	**600**	-
4	Agricultural Productivity	600	600	600	**1,800**	900
5	Conjunctive Use	100	100	100	**300**	-
6	Storage and Infrastructure	2,000	2,000	2,000	**6,000**	3,000
7	Modernize Irrigation and Drainage	3,000	3,000	3,000	**9,000**	4,500
8	Urban Water Supply and Sanitation	3,000	3,000	3,000	**9,000**	4,500
9	Rural Sanitation	1,000	1,000	1,000	**3,000**	1,500
10	Climate Risks	400	400	400	**1,200**	600
11	Water-Energy-Agriculture Nexus	200	200	200	**600**	-
12	Basin flood and sediment dynamics	200	200	200	**600**	-
13	Throw forward of schemes PSDP 2021-22	15,716	13,751	9,822	**39,289**	-
	Total	**26,816**	**24,851**	**20,922**	**72,589**	**15,000**

5.3 Gender

Baseline

5.3.1 "No nation can rise to the height of glory unless your women work side by side with you; a crime that our women are shut up within four walls of their houses as prisoners." (Quaid-e- Azam Muhammad Ali Jinnah, 1942).

5.3.2 Gender discrimination, as the name suggests, is the unfair treatment of women, denial of opportunities and violation of their rights. It means that distinction, exclusion or restriction made on the basis of sex is called gender discrimination. Despite the numerous gender discrimination laws and court rulings, women are subjected to unequal treatment in all spheres of life all over the world. Even in an advanced country which claims to be champions of women's right, gender discrimination is present in one form or another, especially in the field of economics. Women are not compensated fairly for their efforts and contributions at workplace.

Various Angles of Disparity

5.3.3 Gender equality promotes economic growth. It can be assessed in terms of education, health care, economic, political, legal and social rights provided to the members of both genders. In Balochistan province, gender discrimination is more rampant in both rural as well as urban areas. The cause of gender discrimination in Balochistan are low education rate, poor socio-economic conditions, societal trends, religious trends, culture and participation in decision-making. Girls are not allowed to pursue education, denied good healthcare and their social relationships and social behavior is also controlled by men[103]. Illiteracy, rigid customs, tradition and influence of religious personalities are the main causes of gender discrimination in Quetta.

5.3.4 Women constitute approximately half of the population of Balochistan and by denying them education the possibility of progress is reduced by half. As half of the population is not allowed to make use of its talents, Balochistan has not been able to progress as compared to other provinces of Pakistan.

5.3.5 Women's participation in democratic practices such as exercise of their right to vote freely and without fear to their safety is still not guaranteed. According to the electoral rolls of Election Commission of Pakistan of September 2017, out of the 97.02 million citizens registered as voters, 54.60 million are men (56.27%) and 42.42 million (43.73%) are women. The gender gap in voter registration has now gone up to 12.17 million from 10.97 million in March 2013[104].

5.3.6 There were approximately 20 polling stations in Balochistan where not a single woman voted. In 2013, general elections 42% of the women in Balochistan were registered as voters while over a half of the women who could vote were not even registered.

Sustainable Development Goals

[103] Arts and Social Science General - Causes and Consequences of Gender Discrimination against Women in Quetta City
[104] https://www.melangemagazine.biz/gender-disparity-in-pakistan-a-case-study-of-balochistan/

SDG 5: Gender Equality

5.3.7 The Goal 5 is about enhancing women empowerment by tackling gender discrimination issues. The analysis is twofold. It looks at the laws and policies which are applicable in Balochistan for enforcing the SDG 5 targets. The nine targets of goal 5 cover a wide range of issues including discrimination, violence, early and forced marriages, unpaid domestic work, participation in political, economic and public life, access to sexual and reproductive health and rights (SRHR), and access to economic resources and enabling technology.

5.3.8 In order to end all forms of discrimination against women and to adopt and strengthen policies and laws for gender empowerment under broad SDG Targets 5.1 and 5.c, the most imperative, fundamental step is the change in political attitude and the political will towards issues of women's rights, equality, and empowerment[105]. (See **Table 5 of Appendix A**).

Opportunities under CPEC

5.3.9 Over the past few years, the China Pakistan Economic Corridor (CPEC) has ignited a debate among various sections of the Pakistani and international community. However, a missing agenda from these debates has been any concerted effort to discuss the possible benefits which the women of Pakistan will reap from this economic partnership promising over 8000 jobs. Women have been left out of mainstream discussions of economic policy and investment for a long time, and gender mainstreaming has been a slow process in the policymaking landscape.

5.3.10 The majority of economic opportunities for women in CPEC will be situated in the Special Economic Zones (SEZs), as opposed to the large infrastructural projects where the preferred workforce will most likely be men. Within these SEZs, high skill manufacturing as well as services related employment opportunities could prove beneficial for women.

5.3.11 Given the status quo, it seems the economic opportunities created through the CPEC might overlook the female workforce, and gender might continue to be an obstacle in the livelihood opportunities for thousands of women in the country. As research continues to demonstrate, there is not just a moral or ethical case to be made for women's economic participation but a compelling business case as well.

Priority Areas

5.3.12 The priority areas identified are in line with the nine targets of the goal 5 covering a wide range of issues related to policy and legislation, discrimination, violence, early and forced marriages, unpaid domestic work, participation in political, economic and public life, access to sexual and reproductive health and rights (SRHR), and access to economic resources and enabling technology.

5.3.13 In Balochistan, the overall indicators of social development in context of gender equity and equality, access to services, gender gap in labour market and women participation in development process are comparatively too low with respect to other provinces of

[105] Marva Khan, KII, Dec 12th, 2016, Lahore

Pakistan. Thus, special emphasis is required by the GoB to mainstream female gender across the overall growth and development processes to achieve the SDG 5 and its respective nine targets as committed by the Government of Pakistan. The salient Priority Areas of the BCDGS on gender are:

a. **Gender mainstreaming** across all major growth and development sectors of the GoB requires robust support and facilitation along with tracking and monitoring of SDGs implimentation;

b. **Coordination and capacity building** for the officials of all GOB departments to adhere to the gender policy as well as to ensure that gender mainstreaming guidelines are effectively implemented in respective departments.

c. **Creating culturally responsive food security packages** by food department of the GoB in consultation with health, agriculture and livestock departments for malnourished and under-privileged vulnerable groups of women and girls in poverty pronged districts of Balochistan.

d. **The GoB shall establish a robust response system for GBV survivors** by adopting an integrated approach and engaging service providers (legal aid, physio socio treatment, health services, and shelter etc.) through the Women Empowerment Department in collaboration with Civil Society Organization(s). There is a need to extend emergency services including shelter homes and women hostels to protect GBV survivors.

e. **Introduction of microfinance loans** through credit guarantee schemes for under privileged families in collaboration with the SBP and donor agencies.

f. **Under the proposed Stipend Based Skill Development** programme within the Pro-poor programme component, 30% trainee candidates are proposed to be women. Within this programme, women focused training for nurses/midwives have been proposed.

g. Another intervention**, "Women Focused Micro-Finance for** Crafts and Other Livelihood" would concentrate on 'Crafts' and other small enterprises through market linkages and RSPs for targeting about 50,000 women.

h. The GoB plans to take forward a **Gender Free School** education. Additionally, under two interventions relating to partnering with private sector for providing education to 300,000 children, it has been emphasised that the out of schoolgirls shall be given priority.

i. Under the **Strengthening of Literacy Programme**, proposed to be undertaken through NCHD, the participation of girls in the literacy programme will be prioritised.

j. Under health, the strategy focuses on primary health of mother and child at the centre stage. The number of BHUs is being increased and 30% upgraded to BHU Plus level for providing MNCH services.

k. One-third of BHUs have been proposed for upgradation to BHU Plus model for delivery of services on 24/7 basis in all the districts. In addition, one secondary level

health facility is to be converted into secondary level hospital and having maternal care and other services.

l. A Nutrition Programme is to be undertaken through dedicated packages and inter-sectorial linkages which shall be mother and child focused programmes.

m. Under Agriculture, there is a proposal for dedicated interventions for women focused community mobilisation and grant of subsidised inputs including certified seeds and fertilizers for high value products to women farmers.

n. In the livestock component, the milk processing shall focus on women employment.

o. For the Housing Programme, women focused community participation has been stressed for involvement in planning and construction of housing enclaves.

Strategy

5.3.14 The GoB shall establish Gender Responsive Unit (GRU) to monitor and track the efforts of gender mainstreaming against SDGs. In this context, the department of Women Empowerment shall be the focal point and its designated officer shall manage the GRU at the CM Secretariat. The comprehensive database and management system shall be developed to track all dimensions of gender mainstreaming including allocations of budgeting, direct beneficiaries of each programme/project representation in different development programmes, progress against each indicator of the SDGs related to gender mainstreaming.

5.3.15 The GoB shall support establishment of gender focal persons in every GoB department, and develop a guidance note on capacity development in gender mainstreaming. These officials shall be responsible to the provincial gender focal person. It is important to note that gender focal persons are not new civil service positions but rather those officials whose job descriptions include gender related domains shall be notified for each department. The provincial gender focal person shall be placed at GRU in the CM Secretariat.

5.3.16 The GoB shall transform food department's mandate with a focus on more responsive food security initiatives predominantly for malnourished women and girls by integrating agriculture and livestock sector. The specific food packages shall be developed and marketed with the support of public private partnership to address the food needs in drought and poverty pronged districts. Initially, 100,000 women shall be catered and gradually number shall be incrementally increased.

5.3.17 The GoB shall establish the 24/7 helpline along with support services under one roof at the directorate of the Women Empowerment at Quetta and shall be replicated at divisional headquarters level to address the needs of the GBV survivors and integrate overall response by provisioning support of response services under one roof and integrate with private local service providers. A special fund to be created for providing emergency services for women including hostels and protections homes at Women Empowerment Department. Initially, the fund is established with a value of Rs. 30 million and shall be incrementally increased with the support of donors and private partners.

5.3.18 The Gender Responsive Unit (GRU) with direct support of the Women Empowerment Department and designated gender focal person of each district shall ensure that cross-sectoral interventions focus on the participation of women/female gender in their programme interventions. In this context, the female gender-based allocations in their respective ADP needs to be ensured during the budget preparations.

Budget 2021-2026

Table 5.7: Gender		Rs. in Million				
Sr. No.	**Strategy**	**FY 1, FY 2**	**FY 3, FY 4**	**FY 5, FY 6**	**Total**	**Proposed FA Portion**
1	Establishing a Gender Responsive Unit	10	-	-	**10**	-
2	Food Packages for malnourished women and girls	2,650	6,100	10,100	**18,850**	13,195
3	Establishing a 24/7 helpline and a support service block under one window	30	30	30	**90**	-
4	Formulation of a dedicated and exclusive fund for providing emergency services to women	70	120	185	**375**	300
5	Throw Forward of Schemes (PSDP 2021-22)	580	508	363	**1,451**	-
6	**Total**	**3,340**	**6,758**	**10,678**	**20,776**	**13,495**

5.4 Environment

Baseline

5.4.1 Balochistan is characterised by lonely, desolate, varied landscapes, from pristine coasts and beaches in the south to sun-kissed deserts in the centre and majestic mountains and forests in the north. The land and natural and built environment support in the province are vital for ecosystem and livelihood services, and presents massive tourism opportunities.

5.4.2 Environmental governance in Balochistan requires a lot of improvement; almost twenty years have passed since the Balochistan Conservation Strategy (BCS, 2000) was written, a comprehensive guiding document for conservation of Balochistan's environment, with a ten-year implementation framework. Given worsening air, water, and soil quality as well as over abstraction of groundwater, dwindling habitat and depleting rangelands due to climate change and population increase, and illegal poaching and hunting, including of the Houbara Bustard, Balochistan has clearly not been able to give the required attention and resources to implementing the guidelines in the BCS[106]. The CPEC projects and subsequent economic growth are going to put more pressure on Balochistan's environment and a detailed modeling, analysis and plans to deal with these pressures are going to be important tasks.

5.4.3 It is helpful in the governance and management of the provincial environmental sector to distinguish between the "green" and "brown" environment, and map policy, legal, and institutional aspects to the management of each.

5.4.4 Where the green environment refers more to a conservation focus and is concerned with preserving forests, wetlands, coasts, and other ecosystems (even urban ecosystems), and various flora and fauna that these ecosystems are a home. The brown environment is focused more on the pollution and subsequent human health aspects of various domestic, commercial, and industrial processes such as cooking, heating, transport, hazardous wastes and industrial production.

5.4.5 The Balochistan Environmental Protection Agency (BEPA) is well positioned legally, but underfunded, to carry out air, water, and soil quality monitoring as well as effluent discharge monitoring from residential, commercial, and industrial activities.

5.4.6 Economic growth and environmental protection are no longer at odds, economic growth and urbanisation shall help lift the people of Balochistan out of poverty to middle class affluence, and improved access to basic services. With the current state of affairs however, these achievements will come with heavy costs to natural capital, biodiversity, ecosystem functioning and human health. These stressors also contribute to gender and economic inequalities and undermine regional economic growth itself. Climate change, air pollution and ecosystem disturbance could reverse any progress in human development. *Healthy Planet, Healthy People*.

[106] Balochistan Conservation Strategy, 2004

Climate Change

5.4.7 Pakistan is ranked among the most vulnerable countries to climate change impacts and Balochistan is the most vulnerable out of all Pakistan's provinces to the ravages of climate change (witness recent periods of droughts and flashfloods).

5.4.8 Balochistan shall need to develop a climate change policy by tapping into the knowledge and data that exists at the local level. Establishing an effective and coherent policy space will allow subsequent strategies and actions for enhancing resilience and adaptive capacity to climate change impacts.

Solid Waste

5.4.9 Solid waste management is almost non-existent in Balochistan. With increasing population and the CPEC projects, solid waste is only going to become a bigger problem with time. Aside from being an eyesore, solid waste has very real impacts on air, water and soil quality and subsequent negative human health impacts and ecological impacts especially in the case of plastic pollution in the oceans.

5.4.10 Sanitary conditions have become more serious year by year and people are suffering from living in such condition. The scope of problem regarding solid waste management is very wide and involves the consideration of all the aspects relating to solid waste and its management either directly or indirectly. The municipal institution in Quetta city does not have sufficient resources and technical capacity to accommodate the needs of increasing urban population.

5.4.11 Under the recently prevailing system of local government, water and sanitation services including solid waste management are the responsibility of Town/Tehsil Municipal Administration (TMAs).

5.4.12 New and complex waste streams like e-waste, food waste, construction/demolition waste, disaster waste, and marine litter are emerging. Uncontrolled dumping is still the main waste disposal method in the region, leading to leachate run off, methane emission, spontaneous combustion, and other environmental problems. However, recent emergence of waste to energy investment programmes could be further enhanced to provide better waste disposal.

Forest and Wildlife

5.4.13 The Forests and Wildlife Department has history of over a century, initially established under the British Colonial Rule. Later on, the department was working under the West Pakistan Forest Service and ultimately separated in 1970s as a Provincial Department. Its mission is the "Conservation and development of natural living resources on sustainable use basis through stakeholders' participation to ensure healthy environment and to continue supply of goods and services for the benefit of people".

Marine Resources

5.4.14 Balochistan has an 800 km coastline and, therefore, significant marine resources from the fish to potential undersea oil and gas. The marine resources fall under the purview of the Fisheries Department, and Balochistan Coastal Development Authority which works under the Fisheries Department. The coastal development includes protection of

the coast and developing tourism potential. The Fisheries Department develops fishing policy and infrastructure. Almost no planning with regards to total allowable catch and monitoring of species in abundance is carried out.

Wetlands

5.4.15 Wetlands are covered in the section on water, however, their protection and management come under the Forest and Wildlife Department, though the Fisheries and Irrigation departments have significant roles to play as does the BEPA through monitoring and control of effluents polluting wetlands.

Environmental Monitoring

5.4.16 Environmental monitoring includes monitoring the quality and quantity of air, water, and land resources, as well as emissions to these receptors by residential, commercial and industrial activities.

5.4.17 Very little environmental monitoring is carried out in Balochistan. Most of the monitoring is done on an ad-hoc basis as one-time exercises such as a commercial vehicle emissions monitoring drive by the BEPA or groundwater quality monitoring by the Irrigation Department.

5.4.18 A holistic, integrated environmental monitoring programme and infrastructure needs to be put in place. This would house data and maps on forests flora, fauna, rangelands and other natural resources as well as quality of air, water and soil.

5.4.19 An emissions monitoring programme for air emissions and effluent monitoring for effluents.

Sustainable Development Goals

The three main SDGs that the environment sector targets are:

SDG 13: Climate Change

5.4.20 Taking Urgent Action to Combat Climate Change and Impacts. The goal aims to strengthen resilience and adaptive capacity to climate related hazards and natural disasters. It also aims to integrate climate change measures into national policies, strategies and planning. Furthermore, it encourages countries to improve education, awareness raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning amongst other targets. Detailed indicators and targets for SDG 13 to be achieved by Balochistan are provided at **Table 13 of Appendix A**.

SDG 14: Life below Water

5.4.21 Conserve and sustain the use of the oceans, seas and marine resources for sustainable development. The aim of this goal is to reduce marine pollution, manage marine and coastal ecosystems, address impacts of ocean acidification, regulate harvesting and over fishing, conserve marine areas and increase scientific knowledge, and develop and

transfer marine technology amongst other targets. Detailed indicators and targets for SDG 14 to be achieved by Balochistan are provided at **Table 14 of Appendix A**.

SDG 15: Life on Land

5.4.22 Protecting, restoring and promoting sustainable use of terrestrial ecosystems sustainably, managing forest, combating desertification, and halting and reversing land degradation, and biodiversity losses are directly related to climate change. The goal ensures conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems, promotes sustainable management of all types of forests, halts deforestation and restores degraded forests. Detailed indicators and targets for SDG 15 to be achieved by Balochistan are provided at **Table 15 of Appendix A**.

Opportunities under CPEC

5.4.23 The GoB will need to monitor and control environmental emissions to air, water and land as a result of project operations and construction activities under the CPEC. Also, long-term planning for future impacts relates to economic growth and increased migration.

Priority Areas

5.4.24 To counteract the socioeconomic drivers leading to environmental degradation, an economic transformation that is particularly based on improved energy and transportation systems and smart green growth for urban areas is urgently needed.

5.4.25 The SDGs will help to promote a more integrated and holistic approach to resource management and ecosystem preservation. With increasing and large investments in new infrastructure expected over the next two-to-three decades under the CPEC and the CAREC and other regional developments, there is opportunity to leapfrog to smarter solutions for resilient development and lasting prosperity.

5.4.26 Decarbonise development and improve resource efficiency for transition to an inclusive green economy. The province is on a development path, which is carbon-intensive and is contributing to emission levels unsafe for life, and disruptive to the global climate. Most important areas for decarbonising are energy, infrastructure, cities and transportation. There is a large potential for achieving energy efficiency through energy demand management combined with regulations and economic instruments.

5.4.27 Transition to sustainable production and consumption (SDG 12) practices would curb demand for materials and a range of policy tools are available to help change resource use patterns. Taxes and market-based instruments that shift consumer preferences and promote green investment and innovation are essential. The Government could invest in stimulating green-reforms in key economic sectors and limit spending in areas which deplete natural capital. Many communities in the region already live within ecologically sustainable limits and these lifestyles could be protected as development takes place.

5.4.28 **Protect and enhance natural capital and ecosystem integrity**

Balochistan's diverse ecosystems and rich biodiversity provide food, nutrition, water, clean air, and the materials for infrastructure. Ensuring ecosystem integrity requires accounting for natural capital in the system of provincial accounts and incorporating ecosystem services values into decision-making and policy formulation by governments. Regulatory and incentive-based policies are required for protecting natural capital. Market-based mechanisms such as tax on pollution and non-renewable resource use are effective tools to minimise pressures on natural capital. Regulatory policies would include zoning, establishment of protected areas and Environmental Impact Assessments (EIA) of projects. The Government also needs to invest in conservation and restoration of degraded natural capital. Engaging local communities in the protection and management of natural habitats and protected areas are among the most effective tools for resource protection in many countries which could be up scaled and replicated.

5.4.29 **Build resilience to natural hazards and extreme climate events**

The frequency, magnitude and impact of climate related disasters has increased recently. To ensuring the safety of people, security of their livelihoods, and protecting ecosystems, and their services require multiple measures. One priority is to reinforce early warning systems and build regional capacity for disaster management, recovery and rebuilding. Ecosystems approach addresses the crucial link between land, water and living resources, and provides a promising strategy to increase the resilience of ecosystems and support sustainable livelihoods. Ecosystem-based adaptation measures would include assessment summaries on alternative livelihoods, infrastructure upgrades, soil conservation, and water regulation, etc. Adaptation strategies yield multiple development benefits and maximising these synergies requires mainstreaming climate change adaptation into provincial planning.

5.4.30 **Respond to environmental health risks**

Widespread pollution and the impacts of extreme environmental events are root causes of disease burdens especially among lower economic strata and women. There is widespread risk of environmentally induced mortality and morbidity from indoor and urban air pollution, drinking water contamination, poor sanitation, and vector-borne diseases. Air and water quality standards establishment and enforcement, Cartagena bio-safety protocol enforcement, climate and disaster related responses, and integrated vector management are critical policy responses for the region. Reducing pollution requires both regulatory and economic approaches to accelerate needed energy and resource efficiencies, to promote renewable energy and develop sustainable transportation infrastructure. Integrated land-water-waste management including the agro-forestry sector is necessary to reduce pollution of land and water resources and to control the spread of vector-borne diseases.

5.4.31 **Strengthen environmental governance for effective policy diffusion at multiple scales**

Environmental regimes and institutions are still inadequate which leads to inadequate policy responses, weak enforcement of laws and regulations, and poor compliance with MEAs. mandates, operational arrangements and capacity of these institutions need to

be assessed and revitalised so that they are able to effectively discharge their current responsibilities and, in the future, respond to increased demand from the SDGs which call for governments to take strong and decisive environmental actions. Since governments are organised by sectors, a new way of thinking about environment and development, including the gender dimensions based on the SDG's integrated approach, needs to be established across ministries and among political leadership. In addition, implementation of the SDGs requires strong science-policy dialogues, effective environmental assessments and monitoring, and the finance and technology support. The Government could also promote civil society and public participation in solutions to improve environmental quality.

5.4.32 **Strengthen science-policy interface and access to knowledge**

Environmental issues and their links to development are complex, so scientific knowledge of this relationship is fundamental to achieving sustainable development. Provincial platforms and other mechanisms are necessary to facilitate science-policy discussions on provincial environmental issues among the government, business and scientific/research community, a high priority is to strengthen or establish a mechanism for regular reporting on environment to parliamentary and planning processes. Awareness raising among the local business and civil society communities through education or media outfits is necessary. Education targeting provincial administrations would help build an equitable and gender-balanced workforce able to effectively diffuse environmental policy across all economic and societal sectors. Better monitoring and data management systems combined with continuous building of analytical capacity are necessary to support the assessment and research that underpins policy making.

5.4.33 **Enhance international/regional cooperation on climate, air quality and other environmental issues**

Balochistan is party to many MEAs at the global and regional levels but implementation has been insufficient as it lacks implementation capacity. An urgent need is to strengthen capacity to effectively implement the obligations under these MEAs, including the development and enforcement of provincial legislation and regulations. In that regard, implementation of the ASEAN Agreement on Transboundary Haze Pollution is a priority. Regional cooperation on disaster management, e-waste management and illegal wildlife trade are also priorities. Elements of a regional support system are in place to support disaster response and emergency relief efforts but need reinforcing with the expected increase in disasters and extreme climate events. Implementation of the SDGs will require international cooperation mechanisms to support knowledge sharing, technology transfer and technology financing.

Strategy

5.4.34 Because of the crosscutting nature of the environment sector, the strategy for addressing the priority areas shall be executed by all concerned departments and in coordination with the BEPA. NGOs and private sector shall also be focused.

5.4.35 A study on DD&IRE shall be conducted focusing on energy, infrastructure, cities and transportation including energy demand management combined with regulations and economic instruments for stable regulatory regimes aligned with long-term vision for energy systems.

5.4.36 Developing innovative low-carbon policies, market-based instruments and technology solutions to ensure that the development is environmentally sustainable, generate technology innovation, business development and job creation, contribute to broader socioeconomic development shall be the priority.

5.4.37 The GoB shall study on transition to sustainable production and consumption practices through a range of policy tools available to help change resource use patterns i.e. taxes and market-based instruments. Investment options for stimulating green-reforms in key economic sectors and limiting spending in areas which deplete natural capital.

5.4.38 Studies on accounting for natural capital in the system of provincial accounts, incorporate ecosystem services values into decision making and policy formulation; Regulatory and incentive-based policies for protecting natural capital; market-based mechanisms such as tax on pollution and non-renewable resource.

5.4.39 Regulatory policies such as zoning, establishment of protected areas and Environmental Impact Assessments (EIA) of projects.

5.4.40 Investment in conservation and restoration of degraded natural capital and engaging local communities in the protection and management of natural habitats and protected areas.

5.4.41 Reinforce early-warning systems and build capacity for disaster management, recovery and rebuilding and assessment summaries on alternative livelihoods, infrastructure upgrades, soil conservation, water regulation, etc.

5.4.42 Mainstreaming climate change adaptation into provincial planning.

5.4.43 Air and water quality standards establishment and enforcement; Cartagena bio-safety protocol enforcement.

5.4.44 Integrated vector management and land-water-waste management including the agro-forestry sector.

5.4.45 The GoB shall study on mandates, operational arrangements and capacity of institutions and how to revitalise them so that they are able to effectively discharge their current responsibilities, and in the future, respond to increased demand from the SDGs, which call for governments to take strong and decisive environmental actions.

5.4.46 The GoB shall promote civil society and public participation in solutions to improve environmental quality through the BEPC.

5.4.47 The GoB shall establish a mechanism for regular reporting on the environment to parliamentary and planning processes and disseminate awareness raising among the local business and civil society communities through education or media outfits.

5.4.48 The GoB shall strengthen capacity to effectively implement the obligations under MEAs including the development and enforcement of provincial legislation and regulations. Cooperation on disaster management, e-waste management and illegal wildlife trade shall be promoted.

5.4.49 Carbon Neutral City Model shall be taken into town planning of all major towns.

5.4.50 Smart Pollution Censors shall be installed in cities / towns. This shall be a component of an Environment and Climate Information Centre (with cooperation among BEPA, F&WD, Irrigation, PMD, Agriculture, Fisheries, PDMA) for integrated monitoring and data management systems combined with continuous building of analytical capacity.

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Table 5.8: Environment		Rupees in Million				
Sr. No.	Strategy	FY1, FY2	FY3, FY4	FY5, FY6	Total	Proposed FA Portion
1	Decarbonize Development and Improve Resource Efficiency	3,000	3,000	3,000	**9,000**	4,500
2	Protect and Enhance Ecosystem Integrity and Natural Capital	2,000	2,000	2,000	**6,000**	-
3	Build resilience to natural hazards and extreme Climate events	5,000	5,000	5,000	**15,000**	7,500
4	Respond to environmental health risks	4,000	4,000	4,000	**12,000**	6,000
5	Strengthen Environmental Governance	1,000	1,000	1,000	**3,000**	-
6	Strengthen Science-Policy Interface and access to Knowledge (Environment and Climate Information Center)	4,000	4,000	4,000	**12,000**	-
7	Enhance international/ regional/ national cooperation on climate, air quality and other environmental issues	200	200	200	**600**	-
8	Throw Forward Schemes (PSDP 2021-22)	286	250	179	**714**	-
	Total	**19,486**	**19,450**	**19,379**	**58,314**	**18,000**

5.5 Religious Affairs

Baseline

5.5.1 The GoB reorganized the Hajj and Auqaf Department in 2010 as Religious and Minorities' Affairs Department. The department was renamed as Religious and Inter-Faith Harmony Department in June 2011 with the mandate to handle matters relating to Zakat, Ushr, Hajj and Minorities Affairs. The Zakat and Ushr have been devolved to the provincial governments subsequent to the promulgation of the 18th Amendment. Given the wider role of the department in coming days, it will be important to strengthen the institutional framework for gearing it up for the expanded responsibilities.

Sustainable Development Goals

SDG 16: Peace, Justice and Strong Institution

5.5.2 The SDG 16 places its emphasis to promote peaceful and inclusive societies for sustainable development, to provide access to justice for all, and to build effective, accountable and inclusive institutions at all levels. Balochistan has been a victim of poor law and order situation since a long time due to unscrupulous governance and lack of strong institutionalised policies. This SDG encourages to eliminate violence from its root cause and promotes the rule of law at national and international level to provide even and equal justice in the society. Detailed indicators and targets for SDG 16 to be achieved by Balochistan are provided at **Table 16 of Appendix A**.

Strategy

Presently, the Department has very few resources both in terms of human resource as well as budgets. A few important steps required for strengthening the institutional framework would involve:

5.5.3 Strengthening the Zakat disbursement mechanism through greater use of ICT by computerising the data, online disbursements through mobiles, for instance. Making the beneficiary identification more transparent by cross checking with BISP data and updating regularly;

5.5.4 Greater reliance on rehabilitation grants and facilitating sustainable incomes through trainings and micro enterprise development;

5.5.5 Undertaking robust Madrassa reforms by introducing compulsory teaching of important subjects like math, science etc.;

5.5.6 Developing and enforcing guidelines to tackle inter and intra-faith disharmony, and sensitise religious leaders, teachers, media and councilors on promoting understanding and engagement among the common people;

5.5.7 Adopting a uniform revised curriculum for Madrassa students that covers both religious and contemporary education subjects which can capacitate the students;

5.5.8 Assessing and reforming the revenue generation mechanism of Awqaf properties to avoid misuse and to ensure proper channeling of those funds to social safety causes; and

5.5.9 Exploring possibilities of converting Awqaf properties into real-estate waqf, which has high potential of revenue generation in form of rent. Funds to develop those properties can be explored from multi-lateral and Islamic Finance Institutions in the form of grants or concessional loans.

Budget 2021-2026

Table 5.9: Religious Affairs		Rs. in Million				
Sr. No	**Strategy**	**FY 1, FY 2**	**FY 3, FY 4**	**FY 5, FY 6**	**Total**	**Proposed FA Portion**
1	Endowment Fund for Rehabilitation of Mosques	100	100	70	**270**	-
2	Grants for Madressa Reforms	100	200	200	**500**	-
3	Strengthening Zakat Institutions and ICT for Zakat Disbursements	100	200	200	**500**	-
4	Resilience Building against Radicalization: Promoting sustainable inter/intra Faith and Ethnic Harmony	35	20	10	**65**	-
5	Establishing Real-Estate Awqaf for Revenue Generation	30	-	-	**30**	-
6	Revamping Charity Collection System	35	-	-	**35**	-
7	Grants for Minorities (religious places, festivals, stipends)	100	200	140	**440**	-
8	Throw forward of schemes (PSDP 2021-22)	254	222	159	**635**	-
	Total	**754**	**942**	**779**	**2,475**	**-**

5.6 Social Welfare, Sports and Youth Affairs

Baseline

5.6.1 The GoB accords importance to social welfare for reaching out to the marginalised and weaker sections of the society. It plans to support and expand the existing interventions especially in the context of containing the increasing drug menace. Simultaneously, it aims to support the nurturing and development of youth by engaging them in meaningful activities. Given the huge youth bulge and possibilities of the role that youth can play in containing conflict and promoting peace in the province, the Government plans to encourage their involvement in multidimensional activities.

5.6.2 In terms of evolving strategy for containing the drug menace, an important element is containing the drug addiction amongst the youth. Drug smuggling is apparently strongly linked with both human trafficking and arms trafficking. The Ministry of Narcotics together with the Anti-Narcotics Force and UNODC – and supported through USAID is responsible for dealing with drug problem.

5.6.3 Border communities and major settlements like Quetta are the most affected. A drug addict in a family affects not only the family, but also the neighborhood and the whole community. There is very strong social stigma associated with drug addiction – with addicts being often treated as undesirable outcasts. Officials in Balochistan consider the drug menace as both a social and humanitarian crisis that deserves urgent attention. But it is also a security and a potential trigger of violent conflict.

5.6.4 There is only one facility for drug rehabilitation in Balochistan. The new sprawling 8-acre complex - *The Detoxification and Rehabilitation Complex for Drug Addicts, Eastern Bypass, and Quetta"* - caters for a possible 250 patients at a time, but because of shortage of funding, it presently offers only 60 beds. But this is a tiny drop in the ocean of abject poverty and misery. The centre also provides counseling services to those addicts who opt out of rehabilitation. In addition, it runs school awareness programmes. Whereas, post-rehabilitation relapse rates are normally quite high (as much as 95%) in similar situations, the centre claims a success rate of 33% fully rehabilitated patients but there is no third-party validation of this figure. Further, there are no facilities for drug addict women patients**.**

Sustainable Development Goals

SDG 4: Quality Education

5.6.5 The SDG 4 places its emphasis on ensuring inclusive and equitable quality education and promote lifelong learning opportunities for all. Balochistan falls last in provision for education amongst all the provinces and also faces unemployment issues. Detailed indicators and targets for SDG 4 to be achieved by Balochistan are provided at **Table 4 of Appendix A**.

Strategy

5.6.6 Establish a "Youth Dialogue Forum" where youth can discuss challenges affecting and opportunities available to the youth. The youth would, through this mechanism, collectively develop strategies and programmes that feed into district and/or provincial processes.

5.6.7 Establish school social cohesion/bridge-building clubs to promote a culture of dialogue. Organise study tours for women leaders and youth leaders (jointly or separately) to engage with and share development and education approaches in other provinces.

5.6.8 Undertake a systematic programme for rehabilitation of playgrounds, stadiums and other places of sports. Create a mechanism for registering Youth Organizations for supporting and sponsoring sports events through local community networks and greater documentation.

5.6.9 Registering and supporting the Youth Organizations for other activities like exchange programmes, leadership trainings, facilitating their participation in debates, dramas, and international conferences.

5.6.10 Plan awareness raising activities in close collaboration with other private stakeholders to sensitise the local people about the importance of sports and extracurricular activities for a healthy lifestyle.

5.6.11 Training programmes for youth in sports, under possible public private partnerships, with special focus on identifying new kind of sports in the region.

5.6.12 Strengthening PPP for increased fishery and other type of sports activities in the region.

5.6.13 A study shall be carried out, to determine the extent of the drug problem, including approximate quantities of drugs crossing into Balochistan, the trafficking and gender disaggregated data on usage of the drugs within Balochistan, usage in schools and

colleges, etc. Undertake a need analysis of the Detoxification and Rehabilitation Complex for Drug Addicts, Eastern Bypass, and Quetta with a view to supporting the rehabilitation programme including establishment of a women's facility at the centre. Support the schools' awareness programmes in the most affected areas of Balochistan.

5.6.14 Sports complexes will be established at the district level, covering all of the major kinds of sports, to provide opportunities for all to gain skills and to enjoy recreations.

5.6.15 Youth helplines will be established by the GoB to provide a secure and confidential gateway for resolving issues related to emotional, psychological and reproductive health of young people and also to provide career counselling and guidance to those who seek help. The helpline staff/ team shall consist of clinical psychologists and career counsellors etc. The purpose is to provide information, extend support, provide referrals and suggest prevention.

5.6.16 With reference to the same agenda as above, a free of cost application will be launched, acting as a counselling bridge to the youth, specially dealing with severe depression and suicidal behavior. The application can help the users to get guidance on their queries and by bringing onboard experts and therapists from the relevant fields.

Budget 2021-2026

Table 5.10: Social Welfare, Sports and Youth Affairs		Rs. in Million				
Sr. No.	**Strategy**	**FY 1, FY 2**	**FY 3, FY 4**	**FY 5, FY 6**	**Total**	**Proposed FA Portion**
1	Rehabilitation of Existing Stadiums, Playgrounds; Gymnasiums etc.	250	300	340	**890**	-
2	Establish a Youth knowledge sharing point or a forum to explore opportunities and discuss challenges	2	2	2	**6**	-
3	Instigating awareness dissemination programs and activities in collaboration with PPP	130	130	130	**390**	-
4	Conduct drug awareness and investigative programs to gauge the extent of impact from use and loss of efficiency	41	41	41	**123**	-
5	Need Assessment for Drug Rehabilitation	17	-	-	**17**	-
6	Establishing an incubation facility for supporting youth activities to encourage training programs and cultural activities	34	-	-	**34**	-
7	Endowment Fund for Supporting various Social welfare Activities	250	400	340	**990**	-
8	Institutional Development of the Dept. for Support to Youth Organizations	30	30	30	**90**	-
9	Constructing sports complexes at district level	1,000	1,000	1,200	**3,200**	-
10	Youth Helpline (emotional, psychological, reproductive health, career counselling etc. for youth)	17	16	16	**49**	-

Table 5.10: Social Welfare, Sports and Youth Affairs		Rs. in Million				
Sr. No.	**Strategy**	**FY 1, FY 2**	**FY 3, FY 4**	**FY 5, FY 6**	**Total**	**Proposed FA Portion**
11	Youth counseling application (emotional, psychological, reproductive health, career counselling etc. for youth)	5	5	-	**10**	-
12	Throw Forward of Schemes (PSDP 2021-22)	5,402	4,728	3,377	**13,507**	-
	Total	**7,178**	**6,652**	**5,476**	**19,306**	**-**

5.7 Disaster Preparedness

Baseline

5.7.1 Disaster is a sudden adverse or unfortunate extreme event, which causes great damage to human beings as well as plants and animals. Disasters occur rapidly, instantaneously and indiscriminately. Extreme events either natural or human induced exceed the tolerable magnitude within or beyond certain time limits, make adjustment difficult, result in catastrophic losses of property and income and paralysis of life. These events which occur aggravate natural environmental processes to cause disasters to human society such as sudden tectonic movements leading to earthquake and volcanic eruptions, continued dry conditions leading to prolonged droughts, floods, and atmospheric disturbances, etc.

The Global Context

5.7.2 To reduce disaster losses globally, in 2005, Hyogo Framework for Action 2005-2015 was designed as the international strategy for disaster risk reduction. The framework was adopted by 168 nations of the world in Hyogo, Japan in 2005 to make their respective communities' disaster resilient by year 2015. In March 2015, the world has adopted a new framework replacing the Hyogo framework named 'Sendai Framework on Disaster Risk Reduction (SFDRR)' which sets the targets for 2030. Now Pakistan along with other countries is in the process of reviewing its progress against SFDRR targets ahead of a mid-term review 7 years on.

The National Context

5.7.3 Disasters have an enormous and significant negative impact on development of key sectors of economy like agriculture, infrastructure, housing, health, and education and, above all, the environment. They result in a serious social and economic setback to the sustainable development. Disasters also pose threat to increasing poverty and resultantly backslide the national development targets set to achieve the Sustainable Development Goals. Climate change-induced disasters pose even greater threat to sustainable development in developing country like Pakistan, which is ranked quite amongst the most vulnerable countries. Continuous floods of 2010, 2011, 2012 and 2014 are seen as an indication of more intense and frequent extreme events in the future.

Historical and Existing Position

5.7.4 At the government level, disaster management was implemented only after the 2005 earthquake. In 2007, the Government of Pakistan established NDMA for addressing all aspects of disaster risk management. Since establishment of NDMA, a number of milestones have been achieved. The Pakistan NDRM Framework is fully compatible with the globally accepted Hyogo and Sendai Frameworks and identifies the following nine priorities areas.

a. Institutional and legal arrangements for DRM
b. Hazard and vulnerability assessment
c. Training, education and awareness
d. Disaster risk management planning
e. Community and local level programming
f. Multi-hazard early warning system

g. Mainstreaming disaster risk reduction into development and sectoral policies
h. Emergency response system
i. Capacity development for post disaster recovery

In 2011, NDMA decided to initiate a CBDRM Programme at the country level following the ERRA Programme model. Further adjustments were made in the ERRA Programme design keeping in view the need to scale up. The NDMA Programme envisaged entrusting ownership of the Programme to the provinces and implementation through implementation partners selected on merit for their capacity and expertise.

5.7.5 Disaster risk reduction interventions were being carried out in the country till date by different departments/agencies in isolation at national, provincial and district levels. There was a strong need to give them directions and sound guidelines to align their activities in line with the true spirit of National Disaster Management Act, 2010 to counter the threats of disasters faced by the country. The NDMA, being the lead focal agency for disaster preparedness and management, has therefore embarked upon formulation of a comprehensive National Disaster Risk Reduction Policy through wider consultations with all stakeholders including all provinces, state of AJ&K and regions. This policy covers disasters risk reduction in a more holistic way and introduces a proactive and anticipatory approach by laying special emphasis on risk assessment, prevention, mitigation and preparedness.

5.7.6 Pakistan has also suffered losses due to climate change. Flood of 2010 was huge in impact in all aspects, Pakistan bore loss of almost $10 billion which is a huge amount considering the GDP of Pakistan.

5.7.7 The effects of climate change on Pakistan's society have been amongst the most significantly observed anywhere in the world. The Global Climate Risk Index (CRI) 2017, issued during the United Nations (UN) climate summit in Poland, ranks Pakistan 7th amongst the countries in the bottom 10 of the long-term climate risk index (based on natural catastrophes in the last twenty years, from 1996 to 2015 (Kreft et al. 2017). Even the global CRI 2021 still ranks Pakistan among the top climate change hit countries despite the country’s efforts to adapt to the impacts of climate change.

5.7.8 In addition to the poor social and economic indicators, Balochistan is also exposed to a number of natural hazards. Due to fast rate of population growth, urbanisation, poverty, climate change and geographical location, most of the regions of Pakistan including Balochistan have become highly susceptible to natural disasters such as flood, cyclone, drought, earthquake, landslide, extreme temperature, heavy rain, and epidemics, etc. In the recent past, these hazards have resulted in some major disasters, such as Ziarat earthquake of 2008, Awaran earthquake of 2013 and the flood of 2010. Drought from 1998-2004 worsened the situation and the rural economy has still not fully recovered from the effects. This has severe repercussions on Balochistan’s sustainable development process. The increased demand for suitable human settlements, food, land and fuel wood following increasing population has resultantly in clearing of the natural vegetation cover and consequently the depletion of native species of plants and animals.

5.7.9 This has negative impacts in the long run if left unchecked. Groundwater is getting depleted due to unsustainable use of tube wells. Balochistan lies in an active seismic zone. Similarly, the province has a 1,129 km long coastline, which is expected to develop fast due to development of Gwadar port city and coastal highway. Development initiatives, without fully taking into consideration element of disaster

proneness, and lack of an integrated and holistic approach towards addressing development problems have made the environment rather a complex issue in Balochistan thus complicating the disaster risks and vulnerabilities in the province. Furthermore, unregulated use of natural resources, rangeland degradation, dichotomy of water scarcity and inefficient use, loss of forests, wildlife, habitats, biodiversity and increased level of population all combined have led to an increase in disaster risk and vulnerability in Balochistan.

5.7.10 Due to the crosscutting nature of climate actions, Balochistan must take measures to devise a legal, policy and institutional framework to facilitate the implementation of the SDGs at the sub-national level. Numerous climate related laws and policies exist at federal level; however, the majority of these policies, plans and strategies are yet to be adopted and localised according to development priorities and needs of the province.

5.7.11 Climate Change Impacts: Sea level rise, flooding, rising temperatures, desertification, seasonal shifts, increasing intensity and frequency of extreme weather events, drought, erratic rainfall and changes in precipitation[107].

5.7.12 Climate change has altered the hydrological cycle in the province. Balochistan is now experiencing erratic and sparser rainfall. Many places in the province which were used to receive snowfall, the frequency and intensity of which has reduced over the years, in some places, quite drastically. This is having harmful impacts on the quality and quantity of water resources in the province. Droughts are a result of reduced water availability for human, plant, and animal consumption. According to the IPCC report, temperature changes of 2-3 degrees centigrade will affect parts of South Asia including Pakistan. These temperature changes will reduce average precipitation thereby impacting water availability. As a result, some districts of the province will experience droughts while most others will experience drought-like conditions and floods[108].

5.7.13 To stop these hazards from having negative devastating effects once they interact with humanity, certain timely and effective measures need to be put in place for effective disaster risk reduction and preparedness.

Sustainable Development Goals

SDG 13: Climate Change

5.7.14 Taking Urgent Action to Combat Climate Change and Impacts. The goal aims to strengthen resilience and adaptive capacity to climate related hazards and natural disasters. It also aims to integrate climate change measures into national policies, strategies and planning. Furthermore, it encourages countries to improve education, awareness raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning amongst other targets. Detailed indicators and targets for SDG 13 to be achieved by Balochistan are provided at **Table 13 of Appendix A**.

Opportunities under CPEC

5.7.15 Gwadar forms one of the four pillars of the CPEC; the other three being energy, infrastructure and industrial development. Pakistan and Balochistan, in particular, will

[107] (IPCC 2014) (UNDP 2015).
[108] Pakistan Balochistan Economic Report from Periphery to Core (In Two Volumes) Volume I: May2008

benefit tremendously as all the four pillars are strengthened along the western route which will traverse through Balochistan.

5.7.16 The CPEC offers an opportunity to cooperate for planning of water resources such as comprehensive planning of water resources and river basin, improve the capability of Pakistan to coordinate the Long-Term Plan. Key cooperation areas include planning of water resources development and utilisation, conservation and protection, food and drought prevention and disaster relief[109].

Priority Areas

5.7.17 Based on the compatibility of the Government of Balochistan with SDG 13 and the systematic challenges faced by the province relating to disasters, some of the critical ingredients required for better preparedness are listed below.

5.7.18 **Resource Management**

a. Development of Rangelands and Drought Mitigation Programme including huge forestation in the province by engaging all stakeholders (Public and Private Sector, general masses, etc.).

b. Development and re-enforcement of existing mangroves along with coastal belt by using and adapting to highly responsive best practices of management.

c. Introduce and adapt the best practices of watershed management by classifying the highly flash flood and drought pronged catchment areas in all regions of Balochistan.

5.7.19 **Integrate Climate Change Actions**

a. Establish Climate Change Cell to increase coordination, planning, and regulation for climate action and split between different departments such as Environment, Forest, Wildlife, and P&DD. The climate change centre at province shall be supported by academia and CSOs – to cater to research and training requirements to meet the objectives and targets of the SDG 13. However, proposed integrated approach shall add to the benefits of **goal-based planning** and possibly contribute to the implementation of other relevant SDGs in the province as well.

b. Allocation of significant portion of funds for climate change actions and disbursement through a tailored legal and policy framework.

c. Establish Mechanism for ensuring the effectiveness and inclusiveness of climate action through capacity building and training.

[109] Long term plan for China-Pakistan Economic Corridor (2017-2030)

5.7.20 **Policy and legal framework**

a. The diverse landscape of the districts of Balochistan requires pro-people policy measures with the support and experience of NDMA (adopted policy frame where permissible) or tailored to provincial needs and backed by legislative instrument.

b. Integrate disaster risk reduction, core climate change concepts, mitigation, adaptation, and early warning system at primary and secondary schools curricula.

c. Re-enforced the Implementation Framework for Drought Mitigation and Preparedness Projects with an aim to strengthen resilience to drought by improving access to water and making it available for agriculture, livestock and domestic consumption and resultantly, reducing vulnerability to drought, developing resilient livelihoods and adapting to absorbing climate shocks.

5.7.21 **Capacity building and Institutional Strengthening**

a. Introduce and roll out the tested version of CBDRM to develop disaster resilient communities and enable them to reduce risk of disaster and develop capacity to adopt to climate change.

b. Establishing multi hazards early warning system at central and divisional level with the technical and financial assistance of national and international agencies, federal institutions including; NDMA, National Disaster Risk Management Fund (NDRMF), etc.

c. Update and develop information dissemination system especially for disaster prone districts of Balochistan.

d. Comprehensive capacity building trainings on disaster risk reduction, climate change concepts mitigation, adaptation, early warning system to enhance institutional capacity to implement adaptation, mitigation and technology transfer, and development actions.

e. Enhancing resilience by strengthening government institutions to roll out inclusive community-based disaster risk reduction.

f. Strengthening PDMA with adequate human resource, systems, and equipment, and enabling it to conduct multi-hazard vulnerability assessment and contingency planning.

g. Induce Structural Measures promotes a culture of disaster risk reduction and management by integrating DRR through preparedness, prevention and mitigation across all its programmes, and recognising the need as part of its institutional mandate.

Strategy

5.7.22 The GoB shall establish Protection and Development Resource Management Unit (PDRMU) with in the Forest Department of Balochistan. This Unit shall exclusively identify the needs of protection related to coastal vegetation (e.g. mangroves, etc.), water harvesting and water storage, improvement and capacity needs of rangelands and

forestation etc. During the period of seven years, the Unit shall develop a short term, medium term and long-term protection and development plan to improve the mangroves, increase the water retention capacity of highly flood pronged areas by adopting multiple interventions of watershed management (both biological and Bio-engineering) and improve the rangeland grazing capacity and increase the forest cover by carrying out community based forestation and reforestation across the districts of Balochistan. The main interventions are to:

a. Evolve a long-term coastal protection programme including gradual built up of mangroves, and other cyclone mitigating natural resources on incremental basis to mitigate challenges of climate change. In this context, the technical support shall be attained by the GoB from international donors and conservation agencies like UNDP, WWF, IUCN, GTZ etc.

b. Make required investments in flood harvesting through development of storages and moving towards more responsible water management at river basin level. The Unit shall develop a seven year plan of watershed management of highly flood and drought pronged districts with the involvement of community and all related ultimate users of the area.

c. Undertake a comprehensive Rangeland Development and Drought Mitigation Programme including greater forestation in the province. Under this plan by collaborating with the national campaign of green and clean Pakistan, the GoB shall launch aggressive campaign of improving existing rangelands and increase the plant/forest cover by carrying out planting (7 to 10 million plants/year) improve range land area of about 10,000 Acre and introduction of 6 to 10 new indigenous and exotic grasses with the active participation of community.

5.7.23 The GoB shall establish a Climate Change Cell with in the PDRMU and notify the Cell as a central point for mainstreaming and integrating all the efforts of climate change and adaption at the provincial level. The prime function of the Cell shall be to increase coordination, planning, and regulation for climate action and split between different departments such as environment, forest, wildlife, agriculture and livestock, industries and P&DD etc.

5.7.24 The GoB shall establish an endowment fund with the value of money Rs. 300 million which shall be supported by international conservation agencies and donors. In addition, the NDRMF can also be requested to support for adoptive research and training component of the centre at the initial years of the Cell.

5.7.25 The GoB shall strengthen the PDMA with adequate human resource, system development and equipping it with important equipment and machinery. The GoB shall with the support of the NDMA and the NDRMF and the Federal Government shall strengthen the operations of the PDMA Balochistan and in this context, the PDMA shall incrementally improve its capacity and capabilities of preparedness, mitigation and response. The five year's development and strengthening plan of the PDMA shall be developed with technical assistance of the NDMA and other relevant stakeholders.

5.7.26 The GoB shall establish early warning mechanism in collaboration with the MET and other federal agencies for regular weather updates and developing Information Dissemination System for coastal communities.

Budget 2021-2026

Table 5.11: Disaster Preparedness		Rs. in Million				
Sr. No.	**Strategy**	**FY 1, FY 2**	**FY 3, FY 4**	**FY 5, FY 6**	**Total**	**Proposed FA Portion**
1	Establishment of protection and development resource management unit	1,050	1,250	1,450	3,750	-
2	Establishment of Climate Change Cell	500	700	1,100	2,300	1,000
3	Strengthening the PDMA	250	365	819	1,434	-
4	Establishing Early Warning mechanism	50	100	200	350	-
	Total	**1,850**	**2,415**	**3,569**	**7,834**	**1,000**

CHAPTER 6:
IMPLEMENTATION OF BCDGS 2021-2026

6. Implementation of BCDGS 2021-2026

The implementation of the Balochistan Comprehensive Development and Growth Strategy (BCDGS) at all sectors' level is the key mission of the Government of Balochistan. This is a critical element in ensuring successful achievement of the strategy's objectives. In order to achieve these objectives, the strategy shall be implemented by organising comprehensive dissemination of objectives, missions, and development orientation at all government levels and sectors in the province as well as unifying thoughts, viewpoints and development orientations for the provincial economy set out in the strategy.

The implementation of the BCDGS is based on a medium-term budgetary framework (MTBF). The MTBF is an approach to budgeting which integrates strategic planning and budgeting within a medium-term framework. The Government of Balochistan is committed to prioritise the implementation arrangements for the BCGDS to ensure implementation of the strategy with institutional arrangements. The strategy is a living document, which will be reviewed and updated as the implementation proceeds to keep it flexible without compromising its overall spirit and main features.

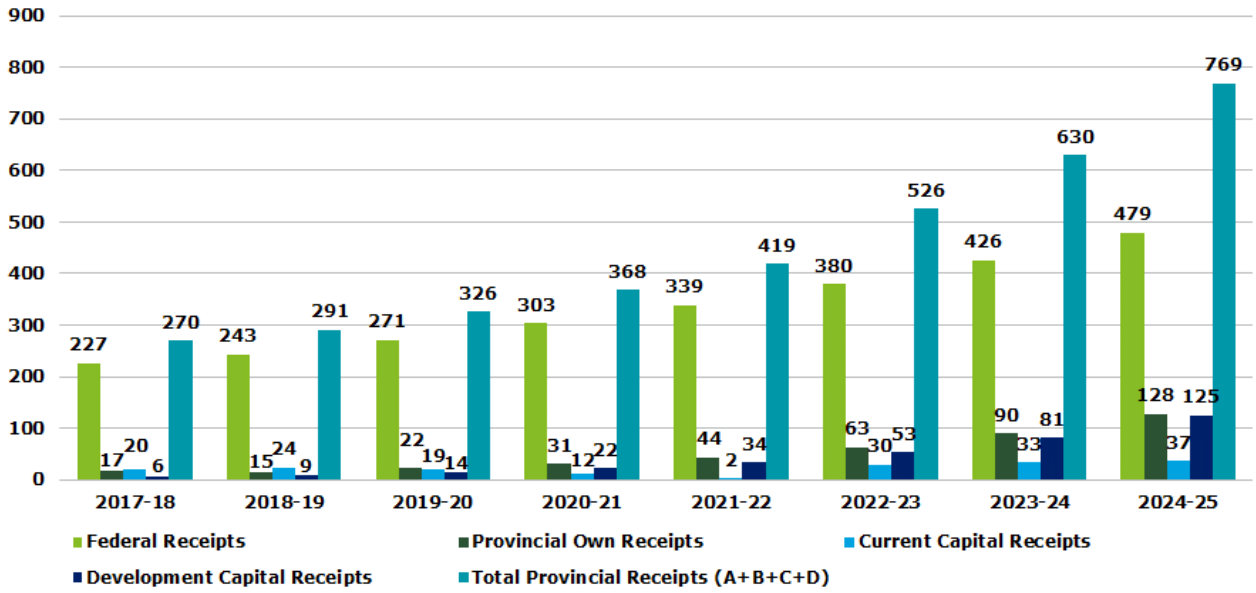
In terms of implementation, regular review of the implementation of the BCDGS shall be undertaken in P&D department. The DG (Implementation), P&D Department, to lead review exercise. Under the strategy, most of the M&E units of major departments have been proposed to be strengthened. As such, the departmental M&E Units shall be responsible for implementation of the relevant components of the strategy.

6.1 Fiscal Projection

On the revenue side, the provincial resource position has been improved subsequent to the 7th NFC Award both on account of increase in the provincial share in the divisible pool as well as due to change in the distribution criteria amongst the provinces from population-based formula to a multi-criteria formula.

In the 7th NFC Award, the requirement of Balochistan was recognised. The province's share from the divisible pool was guaranteed at Rs. 83 billion in financial year 2010-11 which was more than double from the actual divisible pool share of financial year 2009-10. It has also been ensured that Balochistan province would receive its share from the divisible pool, based on the budgetary projections instead of actual FBR collection. Any shortfall, based on the actual collection, will be made up by the Federal Government out of its own share. This arrangement shall continue till 7th NFC Award remains in place.

Figure 33: Balochistan's Revenue Projections (Rs. in billion)



As a result, there has been a significant improvement in the provincial revenues. In post NFC during 2014-15 and 2018-19, the overall Federal Receipts increased on an average by 10% per annum from Rs 167 billion to Rs. 243 billion including the revenue from the divisible pool which increased at an average annual growth rate of 13% from Rs. 141 billion to Rs. 224 billion. However, other grants from the Federal Government including Gas Development Surcharge Arrears remained stagnant at around Rs.10 billion per annum. On the other hand, provincial own receipts including both tax and non-tax increased 66.67% from Rs. 9 billion to Rs. 15 billion.

Based on the previous trend during the last five years and allocations for 2018-19, the Revenue Projections of all major components of revenues have been made for next six years. It may be seen from Fiscal Table (See **Table 7.1**) that a dominant portion of the current revenues approximately 83% comes from the Federal Tax Assignment. The Federal Tax Assignment has been projected to increase at an average annual growth rate of 10% from Rs. 243 billion in FY 2018-19 to Rs. 479 billion in FY 2024-25. This will, however, be contingent to the federal tax revenues and also on the next NFC Award after 2019.

Table 6.1: Balochistan's Revenue Projections (Rs. in millions)

RECEIPTS	Revised Estimate	Budget Estimate	Projections					
	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
General Revenue Receipts	**244,677**	**258,586**	**293,071**	**334,161**	**383,491**	**443,261**	**516,465**	**607,206**
Federal Receipt	**227,235**	**243,177**	**271,157**	**302,983**	**339,113**	**380,067**	**426,439**	**478,899**
– Divisible Pool	202,691	224,116	252,883	285,343	321,969	363,296	409,928	462,545
– Straight Transfers	11,954	9,061	9,444	9,842	10,258	10,690	11,142	11,612
– Other Grants from Federal Govt. - GDS Arrears	10,308	10,000	8,831	7,798	6,886	6,081	5,370	4,742
– Development Grants	2,282	-	2,738	3,286	3,943	4,732	5,678	6,813
Provincial Own Receipt	**17,442**	**15,409**	**21,914**	**31,178**	**44,378**	**63,194**	**90,026**	**128,307**
– Provincial Tax Revenue (Including GST on Services)	7,518	10,211	14,310	20,054	28,103	39,383	55,191	77,345
– Provincial Non-Tax Revenue	9,924	5,198	7,604	11,125	16,275	23,811	34,835	50,962

Current Capital Receipts	**19,540**	**22,781**	**24,141**	**25,711**	**27,585**	**29,912**	**32,939**	**37,072**
– Recoveries of Loans and Advances	96	285	476	794	1,325	2,211	3,690	6,158
– Debt	15,725	15,725	16,217	16,725	17,248	17,788	18,345	18,919
– State Trading - (A/c. No. II)	3,719	6,771	7,448	8,193	9,012	9,913	10,904	11,995
Development Capital Receipts	**5,588**	**9,230**	**14,255**	**22,014**	**33,996**	**52,501**	**81,079**	**125,212**
Total Provincial Receipts (A + B + C)	**269,805**	**290,597**	**331,467**	**381,886**	**445,072**	**525,674**	**630,483**	**769,490**

The provincial own receipts together presently constitute about 5.9% of current revenue and their share is projected to increase to 21% by 2026 (from Rs. 15 billion to Rs. 128 billion). The Provincial Tax Revenue including GST on Services shows inconsistent trend for growth and increased by 40% per annum over the last few years. In line with this trend, the Provincial Tax Revenue is projected to grow from Rs. 10 billion in 2018-19 to Rs. 77 billion in 2024-25. The Provincial Non-Tax Revenue also indicates analogous trend over the past few years and thus projected to increase from Rs. 5 billion to Rs. 51 billion during this period.

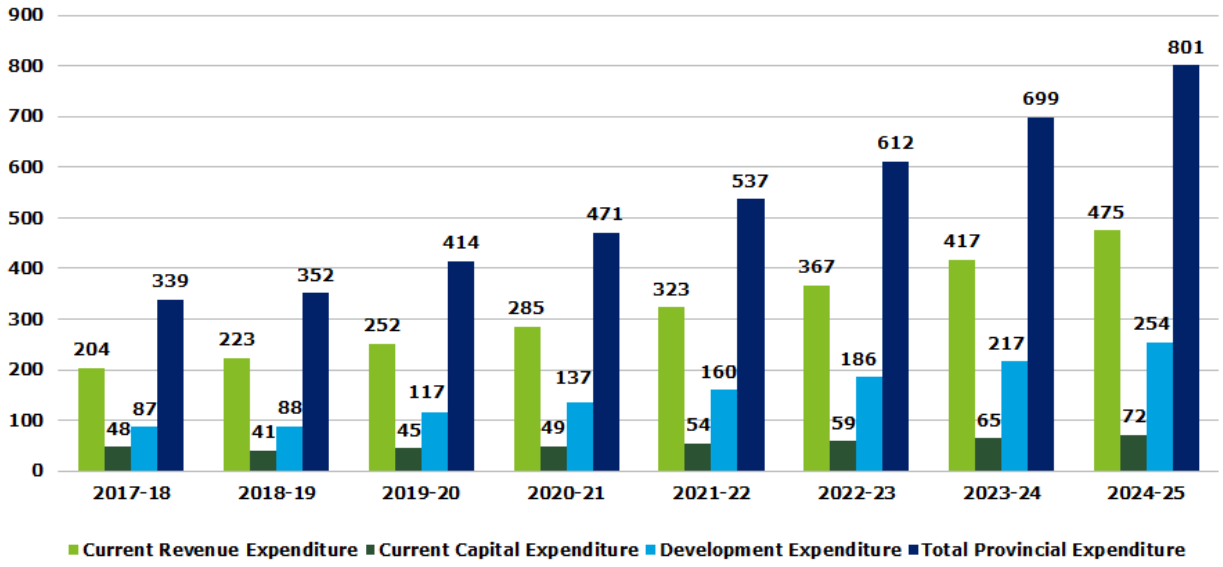
Likewise, the Development Capital Receipts also indicate inconsistent trends for growth and are projected to increase from Rs. 9 billion to Rs. 125 billion. To sum up, the total Provincial Receipts are projected to increase by 18% per annum from Rs. 290 billion in 2018-19 to Rs. 769 billion by 2024-26.

6.2 Expenditure Projections

On the expenditure side, the major expenditure is on account of general public service and public order and safety affairs, which presently constitutes 39% followed by economic services at 37% and social services at 21% of the total current revenue expenditure. As a result, the projected expenditure both on economic and social services will increase respectively from Rs. 82 billion to Rs. 190 and Rs. 46 billion to Rs. 62 during the BCDGs period by 2023-24. These projections are promising as they are in line with the SDGs requirements and will help achieve the SDGs.

On the other hand, the current capital expenditure, which includes, public debt, loans and advances and state trading is projected to increase by 33% annually from Rs. 41 billion in 2018-19 to Rs. 71.5 billion by 2024-25.

Figure 34: Balochistan's Expenditure Projections (Rs in billion)



Based on the last five years' trend, the projection indicates that the share of current expenditure in total provincial expenditure will decline from 74.9% in 2018-19 to 68.3% at the end of the BCDGS period by 2024-25 whereas the share of development expenditure will increase from 25.1% to 31.7% during the above period indicating that more resources would be available for development expenditure keeping in view the need for infrastructure development under the CPEC.

On the development expenditure side, public sector development programme (PSDP) is projected to increase from Rs. 77 billion in 2018-19 to Rs. 191 billion by 2024-25. Whereas, development grants (federal funded projects) are projected to increase from Rs. 9.7 billion to Rs. 29 billion during this period. On the other hand, foreign project assistance loans/grants will increase from Rs. 11 billion in 2018-19 to Rs. 33 billion by 2024-25. The above projections augur well since they appear to be consistent with the development requirements for infrastructure development under the CPEC as well as the SDGs.

Table 6.2: Balochistan's Expenditure Projections (Rs. In million)

Expenditure	Revised Estimate	Budget Estimate	Projections					
	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Current Expenditure (A)	**251,990**	**264,037**	**296,733**	**334,118**	**376,903**	**425,908**	**482,084**	**546,526**
Current Revenue Expenditure	**204,158**	**223,047**	**252,038**	**285,258**	**323,354**	**367,070**	**417,271**	**474,953**
General Public Service	48,672	49,518	56,945	65,487	75,310	86,606	99,597	114,537
Public Order and Safety Affairs	34,439	38,093	44,651	52,339	61,350	71,914	84,295	98,809
Community Services	8,512	6,309	6,625	6,956	7,304	7,669	8,052	8,455
Social Services	43,418	46,792	49,131	51,588	54,167	56,876	59,720	62,705
Economic Services	69,117	82,335	94,686	108,889	125,222	144,005	165,606	190,447

Table 6.2: Balochistan's Expenditure Projections (Rs. In million)

Expenditure	Revised Estimate	Budget Estimate	Projections					
	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Current Capital Expenditure	**47,833**	**40,991**	**44,696**	**48,860**	**53,549**	**58,839**	**64,814**	**71,573**
Public Debt	21,354	22,068	22,934	23,834	24,769	25,741	26,752	27,802
Loans and Advances	15,000	10,010	11,512	13,238	15,224	17,508	20,134	23,154
State Trading	11,479	8,914	10,251	11,788	13,556	15,590	17,928	20,617
Development Expenditure (B)	**86,640**	**88,249**	**117,299**	**136,805**	**159,591**	**186,215**	**217,332**	**253,710**
Public Sector Development Programme (PSDP)	70,858	77,160	92,266	106,766	123,544	142,959	165,424	191,421
Development Grants (Federal Funded Projects)	9,771	-	11,725	14,070	16,884	20,261	24,313	29,176
Foreign Project Assistance Loans/Grants	6,011	11,090	13,308	15,969	19,163	22,996	27,595	33,114
Total Provincial Expenditure (A + B)	**338,630**	**352,287**	**414,033**	**470,924**	**536,494**	**612,124**	**699,416**	**800,236**

6.3 BCDGS Expenditure and Financing

The BCDGS estimated expenditure totals to Rs. 843.0 billion for the period 2021 to 2026. Components of the BCDS have been costed (in 2020-21 prices) and in many cases, very detailed costing has been undertaken to support preparation of PC-Is.

Table 6.3: BCDGS Expenditure (Provincial)		Rs. in Million				
Sr. No.	**Strategy**	**FY1, FY 2**	**FY3, FY 4**	**FY 5, FY 6**	**Total**	**Proposed FA Portion**
1	Political Will, Governance and Security	6,405	10,262	14,411	**31,078**	10,097
2	Social Safety and Pro Poor Programs	3,306	6,075	11,029	**20,410**	7,620
3	Education	29,597	37,795	42,898	**110,289**	60,443
4	Technical Training and Tertiary Education	6,804	10,010	13,740	**30,553**	4,115
5	Health	29,524	31,178	36,132	**96,834**	26,877
6	Religious Affairs and Interfaith Harmony	500	720	620	**1,840**	-
7	Culture and Tourism	1,015	2,224	3,818	**7,057**	-
8	Social Welfare, Sports, Youth affairs	3,732	3,880	4,053	**11,666**	-
9	Water and Sanitation	21,541	21,540	21,540	**64,621**	15,000
10	Energy and Power	7,868	7,717	7,716	**23,301**	9,000
11	Agriculture	29,364	33,563	40,612	**103,539**	11,500
12	Livestock and Rangeland	10,083	14,182	18,042	**42,307**	2,750
13	Fisheries	3,866	5,579	8,788	**18,233**	-
14	Industry and Trade	5,055	4,647	5,087	**14,789**	5,710
15	Minerals and Natural Resources Development	2,495	4,100	11,800	**18,395**	-
16	**CPEC and Urban Development**	-	-	-	**-**	-
16.1	Linking CPEC and Urban Development	7,410	10,246	17,363	**35,019**	700
16.2	Road and Transportation Infrastructure	19,221	23,804	42,360	**85,385**	30,515
17	**Cross Cutting**	-	-	-	**-**	-
17.1	Gender	2,985	6,475	10,540	**20,000**	13,495
17.2	Environment	19,512	19,356	19,200	**58,068**	18,000
17.3	Disaster Preparedness	1,850	2,415	3,569	**7,835**	1,000
	Total	**212,133**	**255,767**	**333,318**	**801,219**	**216,822**

CHAPTER 7:
MONITORING AND EVALUATION

7. Monitoring and Evaluation

Performance measurement and Improvement based management systems allow an organisation to align its processes, activities, project, programme and strategy to achieve its targeted objective. High performing interventions actively identifies key performance indicators and measure their progress against pre-established targets and results. Continuous performance monitoring ensures successful project management and results achievement against strategic plan and specific goals. Performance measurement enables manager to control process by eliminating variances to achieve desired intended outcomes.

Strategy evaluation and continuous improvement can be measured through, Quality Circles (QC) and Continuous Improvement Cells (CIC)[110]. Quality Circles are teams of top-level management, who are accountable for project overall achievement, and financial management, Balochistan Comprehensive Development and Growth Strategy evaluation team, P&DD officials and the Chief Minister. The QC team may comprise of three to twelve members who may meet periodically to review performance, PC-III (Updated 2019) analyse issues and guide and support project team for target achievement. The QCs were successfully used in Japan and recognised as a significant contributor to the country's economic growth after the Second World War[111].

The deployment of the QCs shall be based on evaluation strategy and programme logic. The stated objectives of the QCs shall be to:

i) reduce errors and enhance quality of services or products;
ii) inspire more effective teamwork and job involvement;
iii) improve internal and external communication and coordination;
iv) promote a problem identification and solving capability;
v) create an attitude of "right first-time" and problem prevention;
vi) develop effective relationships between management and workers; and
vii) increase employee motivation[112] .

QCs effectiveness is dependent upon continuous Improvement Cell (CIC). The CIC team comprise a Project lead, Operations lead, Subject Matter Expert (SME) and M&E lead. The CIC periodically reviews programme/project progress and results to track programme logic model and output, and the immediate, intermediate and ultimate impact.

Globally, about 70% change initiatives have failed[113] in the corporate sector. Social change is an exceptionally complex process and the ability, acceptability and authority to change are major drivers of unsuccessful change management. For successful change initiation and management specific planning is required to minimise resistance. An M&E framework based on continuous performance measurement (Tracking for Results) and improvement to achieve desired outcome and impact is required to bring change in Balochistan through effective implementation of BCDGS 2021-2026 and achievement of the SDGs.

[110] Miron, L., Talebi, S., Koskela, L., and Tezel, A. (2016). "Evaluation of Continuous Improvement Programmes." In: Proc. 24th Ann. Conf. of the Int'l. Group for Lean Construction, Boston, MA, USA, sect.1pp. 23–32. Available at: <www.iglc.net>
[111] Hunt, B. (1984). Quality circles: Square deal for productivity. Engineering Management International, 2(4), 271-278.
[112] Rafaeli, A. (1985). Quality Circles and employee attitudes. Personnel Psychology, 38(3), 603-615.
[113] McKinsey & Company (2008), Global survey, Bernard Burnes (2011). Introduction: Why Does Change Fail, and What Can We Do About It?,Journal of Change Management, 11:4, 445-450

7.1 Purpose of M&E Strategy

The main purpose of the M&E Strategy is to measure, track and improve ongoing strategy/ programme/project implementation as proposed under the BCDGS 2021-2026 for the achievement of sustainable development goals (SDGs) and related targets for Balochistan. Another objective is to outline various roles and responsibilities of M&E department in-view of tracking progress and demonstrating results, monitoring progress both in physical and financial terms. The M&E Strategy allows the government of Balochistan:

- To assess if strategy/programme/project goals and objectives are being achieved using 4E's *(Economy, Efficiency, Effectiveness, and Equity)* and value for money parameters;
- To outline specific process steps and tools to make informed decision;
- To devise methods for data collection, management analysis and data quality assurance;
- To carry out periodic performance review for continuous improvement and outcome achievements; and
- To plan and manage various M&E activities that must take place for tracking progress towards achieving results envisioned under the BCDGS in a sustainable manner.

Specific objectives of the M&E Strategy are to:

- Develop strategic mechanism for continuous performance measurement and improvement system;
- Strengthen the M&E culture within and intra department;
- Prepare strategy for successful change management and rational resistance minimisation;
- Devise strategy for periodic review at various levels;
- Devise a mechanism of quality data collection, reporting and knowledge management;
- Create guidelines for institutional capacity assessment and improvement;
- Outline specific activities required for strengthening the organisational capacity to conduct effective M&E; and
- Ensure greater utilisation of data available in routine from official and semi-official sources.

7.2 Monitoring and Evaluation for the BCDGS

In order to ensure the effective implementation of the BCDGS, the M&E strategy shall be managed at three levels, i) Small workgroup/team at project implementation level, ii) Quality Circles: Top management level at (P&DD and Chief Minster Secretariat), and iii) Continuous Improvement Cell: project team level.

In addition, to the purposed strategies for sustainable development goals achievement may face stakeholders' resistance, therefore, management shall strictly observe strategy implementation process and evaluate real time data to determine the causes of resistance to strategy and updated project design/process/activity to manage project successfully.

To manage change successfully, management should evaluate employee/stakeholder according to below cited parameters.

7.2.1 Change Management

Balochistan Comprehensive Development and Growth Strategy (BCDGS) may comprise incremental or radical changes to the existing situation, process or design. Strategy/Programme/Project may initiate changes to achieve strategic objectives and may experience resistance from stakeholders who do not want to change. The stakeholder or employee resistance in an organisation is one of the most important barriers in successful change management. Predicting and neutralising resistance to change is a challenge for management[114]. Most of the managers/supervisors believe that they want to change, but others do not. For successful change management, managers need to know why people are resisting to change, or what initiatives they could take to minimise resistance. Organisational change is only successful, if management is able to change the stakeholders' conduct and attitude[115].

Change initiatives fail due to stakeholder opposition to change. A global survey by McKinsey & Company found that some 2/3rd of all change initiatives failed. Researchers also quoted that this figure is between 60% and 90%.[116] In a survey of the change literature, Smith (2002 and 2003) found a similar failure rate. In the 1990s, Hammer and Champy claimed that 70% of all business process-reengineering initiatives failed.

Researchers have identified various reasons for failure of change initiatives. To manage the BCDGS strategy successfully, the management has to understand resistance to strategic change. The managers need to know the reasons for and the intensity of resistance. Knowledge about the type and level of resistance enable managers to understand why someone or group is against the change and what proactive or reactive action should be in place to neutralise resistance. Change initiatives always require some adjustments to get employee acceptance or address rational issues and concerns of employees or environment. Throughout the evolution of the successful change management studies, various issues of unsuccessful change management were identified, cited from a plethora of research papers and journals.
In this connection, the P&DD department shall ensure to manage project successfully and to achieve desired objective resistance shall be measured through five factors, Rational, Non-Rational, Management, Cultural and Social and Political factors.

i. Rational Factor

Employees/Stakeholder's level of education into why changes are being implemented, understanding of the vision and need for change, readiness to change, commitment to change, disagreement and dissatisfaction with the change, weakness of the proposed changes, obsolescence of job skills, threat to interpersonal relations, management increasing the control, workload, acceptability to change, ability to change and changes in authority develop rational resistance about change. Rational resistance occurred when proposed immediate, intermediate and ultimate outcome predicted by management differs from employee's own rational assessment. Differences of outcome develop doubt in the employees'minds, therefore they may be against the change.

ii. Non - Rational Factor

The reaction of an individual worker to a proposed change is also a function of tendencies and preferences that are not necessarily based on rational assessment. These may include instances of resistance workers who simply do not wish to move offices, prefer working near

[114] Bennebroek, Werkman, & Boonstra, 2003; Heller, Pusic, Strauss, & Wilpert, 1998
[115] (Whelan-Berry 2003).
116 Burnes, B. (2004) Managing Change: A Strategic Approach to Organizational Dynamics, 4th edn (Harlow, UK: Prentice Hall).

a particular friend, or are uncertain of the outcomes of implementing new technology/strategy. Dimension of non-rational factors are strategic, implementation and job related uncertainty, fear of loss, loss of control, risk of failure, threat to comfort, and economic insecurity

iii. Management Factor

Management's vision, communication, training, and participation are prominent drivers of successful change management. Leadership actively supports the change vision, communication, participation and training from change initiative to change implementation to process, then employee acceptance will be high. The trust in management, leadership inaction, manager's employee relationship, past positioning and resentment generate employees/stakeholders to management.

iv. Cultural and Social Factor

Every individual has social needs like friends, belongingness, social relationship but social displacement may be major contributing factors of resistance. Organisation existing cultural may incompatible with new strategy. Management should identify social concerns and ensure a compromise and synergy of local and organisation culture to achieve desired results from new strategy.

v. Political Factor

Politics play leading role in change management. Politics and self-interest often dictate how people feel about change to their work or the work that they control. Change leader have to understand the specific political situation and then attempt to employ this knowledge in getting support for lasting change. Change leaders must exploit political factors and use them for effective implementation of change.

Understanding of political factors include; distinguish acts of individuals and groups out of self-interest, understand the political self-interest of employees and their supervisors through direct observation and casual conversation and watch people's reactions to know power alliance and peer pressure.

7.2.2 Digital Hub

Continuous performance monitoring and improvement increases project achievement rate. Keeping in-view of Balochistan's geographic spread, a divisional level digital hub shall be established to gather project performance monitoring reports and real-time data. Digital hub is a physical co-work space fixed or mobile, focused on vertical (P&DD provincial Level) and horisontal (Regional/District/Project level) connectivity, synchronisation information with the aim to measure real time project performance and corrective actions for improvement.

Role of digital hub shall be to:

- Deliver internet access and field level connectivity to internet.
- Projects internet access point
- Stakeholders meeting and networking place
- Institutional capacity assessment and development centre
- Regional level socio economic indicators data hub
- Advise, training and support space
- Foster business development (PC-1 preparation)

- Report using updated PC –Forms **(For Detail See Annexure – Updated PC Forms)**
- Sector specific space for planning and designing project
- Improve digital competency and empower stakeholder to manage data and develop new knowledge.

7.2.3 Quality Circles and Continuous Improvement Cells

For effective implementation of strategy, quality circles (QCs) shall translate programme/project process into small group activities (SGAs) and continuous improvement cells (CICs) shall review and track the performance within the project. The QCs and the CICs shall review periodically:

- Results Framework and best performance indicators and share with Pⅅ
- Annual Development Programme (ADP) review on monthly basis;
- Review project performance at monthly, quarterly, Biannual basis; and
- Analyse results with respect to the BCDGS and the SDGs targets.

Figure 35: Quality Circles

Planning and Development Department (P&DD) M&E Wing shall carry out overall responsibility of establishing effective coordination and communication for periodic information sharing for performance review and continuous improvement. In this connection, dedicated M&E task force (QC Members) shall be formed to monitor and evaluate SDGs strategies. Task group comprises Lead, M&E, MIS, Research expert, Statistician and survey expert along with team associate. Lean structure at divisional level is recommended and mid-career level human resources may be appointed to manage field operations. The M&E task force shall be responsible for:

- Facilitation of various allied departments to form Quality Circle and Continuous Improvement Cell and evaluate the QCs and the CICs performance.
- Facilitation of allied department for effective implementation of monitoring, evaluation and research function
- Prepare survey and research data repository completed by government, corporate, social services (NGO) and UN system.
- Perform institutional capacity assessment and design capacity development trainings for all tiers involved in the project.
- Devise mechanism for performance data collection and presentation in periodic performance review meetings. Performance review level may be at the Secretary, DG, Divisional, District, Tehsil, UC and community level.
- Perform and supervise data quality audit and prepare data quality protocols for allied departments

- Review and endorse M&E frameworks and performance management plan for all projects and programmes.

7.2.4 Result based M&E framework

A clear result-based M&E framework along with mechanism of continuous performance measurement and improvement shall be developed at each department /programme/project level. The P&DD's M&E task force shall ensure that standard protocols are used in framework development and key stakeholders agree with the M&E framework. In addition, relevant risks and assumptions to carry out planned monitoring and evaluation activities shall be seriously considered for effective implementation of the M&E plan.

Each department/programme/project M&E framework shall be designed in three phases. First, a consultative stakeholder meeting will be held to finalise TORs for the QCs and the CICs, stakeholder and intervention and the SDGs requirement. Second, Design M&E framework to achieve the SDGs and in the third phase devise a system of continuous performance measurement, review and improvement. Following process and sub process will be performed to develop the M&E policy framework for the BCDGS to achieve specific goals.

Concern department/programme/project will adopt the following process step to result based M&E Framework.

Stage 1:

- Validate theory of change/programme logic (If <->Then) to achieve strategic objective;
- Develop cause and effect relationship to derive Immediate, Intermediate and ultimate impact; and
- Conduct a readiness assessment – understanding the enabling environment and institutional capacity, Resistance to change.

Stage 2:

- Setting up process, norms, standards and guiding principle for result achievement;
- Identify performance measures and measurement scale;
- Selecting key performance indicators and setting baselines and target; and
- Identify risk and assumption.

Stage 3:

- Identifying data sources for the best performance indicators;
- Designing data collection methods: CAPI, CATI, PAPI;
  - CAPI (Computer Assisted Personal Interviewing)
  - CATI (Computer Assisted Telephonic Interviewing)
  - PAPI (Paper and Pencil Based Interviewing)
- Designing, Consolidating, Reporting, Comparing and showcasing project progress on dashboard.

Stage 4:

- Designing and institutionalising M&E system and tools;
- Connecting provincial, divisional and projects M&E systems for continuous measurement and improvement; and
- Devise reporting templates for the SGAs, the QCs and the CICs.

The M&E taskforce develops capacity of concerned staff to prepare M&E framework and MIS and ensure that the system developed aforementioned protocols are followed. Concerned department/project/programme shall plan stakeholder's consultative meeting with the help of the M&E taskforce to increase project monitoring and evaluation acceptance and overall strategic objective achievement. Agenda point for a series meeting shall be as under:

- Stakeholder existing planning, monitoring, evaluation, accountabilities and learning system at department, divisional and district level;
- Barriers to effective implementation of the M&E;
- Established reporting lines (Collect, Analyse, Utilise and Report);
- Institutional arrangements for reporting on the SDGs;
- Institutional capacity level to implement and evaluate intervention;
- Gap Analysis (Data collection, management, analysis and reporting);
- Readiness Assessment (Ability, Acceptability, Authority);
- Risk Assessment; and
- Resistance to strategic change/results achievement

a. Programme/project monitoring for outcome

To monitor project immediate and intermediate outcome, the QCs and the CICs periodically review project implementation progress to track programme/project.

i. Project Implementation Progress

- Process/activity tracking for achievement against preset target;
- Resources utilisation tracking against targeted deliverable; and
- Financial allocation unitisation in targeted period.

ii. Project Design/Theory of change Performance:

- Best performance indicator assessment against baseline or target;
- Validate theory of change or project/programme design so that desired intended results shall be achieved as per project stipulated timeline; and
- Project is implemented as per defined designed/SoPs.

iii. Project/Intervention Results

- Programme/Project assessment for desired intendent results achievement.

b. Strategy design evaluation

Implementation of proposed strategies and performance on achievement of SDGs shall be evaluated by following method. Concerned project shall be responsible to develop detailed ToRs for each type of evaluation.

i. System Oriented Evaluation

QCs and CICs evaluate how input, process, output and environment achieve desired outcome- Validate theory of change with respect to value for money.

ii. Operation Evaluation

Technical working group (QCs, and CICs) review progress and performance to track programme project results.

iii. **Strategic Evaluation**

Advisory/ steering committee - provides guidance and oversight.

7.2.5 Data Collection, Management, Analysis and Reporting

A Knowledge Management System (KMS) at digital hub shall be used to collect, analyse, report and showcase performance of the project. User friendly dashboard portraying project performance, a mandatory component of KMS to be established at project level and directly report to Principal Accounting Officer (PAO) and QCs.

Under the supervision of Digital Hub lead, the M&E taskforce lead, the P&DD's MIS section, allied project/programme/department shall jointly develop data collection, management, analysis and reporting protocols. The P&DD's MIS section and digital hub will extend its support to allied project/programme/department for i) local database design ii) Primary data collection software application iii) Data synchronisation iv) Data analysis and v) Reporting. In this connection establishment digital hub at provincial and regional levels are recommended to fulfill need of the BCDGS M&E strategy.

Digital Hub team may use CSPro or ODK open data source application to design primary data collection application for real time performance evaluation. Digital hub lead may develop the capacity of local project/programme team to manage CSPro/ODK application for data gathering at field level; project field staff shall use developed App on personal android phone for M&E data collection and posting to distributed or centralised KMS database. MIS expert shall ensure that the quality product is produced and desired results are achieved from application. Also ensure data synchronisation at various levels is fully functional and sharing of performance data to all designated stakeholders is effectively and efficiently managed.

The concerned project M&E team shall devise, structure and use data collection instrument to measure performance. Field staff shall gather both quantitative and qualitative data and analyse to rate performance achievement and evaluate theory of change.

a. Qualitative Data Preparation and Analysis

Gathered qualitative data uploaded to centralised database after transcription and research team with the help of concerned expert perform content coding. Analyse data communicated and showcased at dashboard as per project requirement and communication strategy. Following process steps shall be performed to prepare and analyse qualitative data:

i. Field and Centralised Editing;
ii. Perform content coding using approached conventional, directed, or summative;

- Developing and applying codes to categorise data
- Identifying themes, patterns and relationships
- Summarising the data: link research findings to hypotheses or research aim and objectives

iii. Compare primary, secondary and quantitative data devise knowledge; and
iv. Disseminate information, knowledge and wisdom using dashboard.

b. Quantitative Data Preparation and Analysis

Project M&E team and field staff use structured instrument, comprise nominal, ordinal, ratio and interval measurement scale. Following protocols shall be opted to convert raw data into analytical dataset.

i. Pretesting of instrument to validate required response;
ii. Data validation to ensure logical consistency;
iii. Data triangulation to increase reliability;
iv. Field Editing in case of PAPI, Centralized Editing in case of CAPI or CATI;
v. Data cleansing to ensure consistency and non-response/missing data handling; and
vi. To get information, knowledge and wisdom from quantitative data, analytical dataset (Cleansed) is used to generate:

- Unidimensional tables – frequency distribution
- Cross tabulation: Linking two or more variables to see relationship
- Descriptive statistics: Average, Variation, Correlation, Proportions
- Inferential Statistics: Hypothesis testing
- Multivariate analysis: Model testing

c. Dimensions of Data Quality

Data quality audit is mandatory to make well informed consistent decisions. If quality of data is poor, then information and knowledge derived from data shall not be reliable to make well informed decisions. To maintain both qualitative and quantitative data quality project the SGAs, the QCs and the CICs must adhere to the following data quality audit protocols:

i. Accuracy

Correct values with respect to defined response scale shall be collected and stored with no transcription errors and any invalid responses shall be validated through respondents for accuracy.

Parameters of data accuracy

- Minimise recording, interviewer bias and interviewee bias
- Minimise transcription error
- Minimise non response error
- Validate invalid response
- Verify Outlier and record
- Listening respondent
- Build rapport with respondent

ii. Precision

Precision refers to the closeness of two or more measurements. Precision is independent of accuracy.

Parameters of data precision

- Ensure response rating consistency;
- Develop question/variable understanding by context and requirement;
- Achieve learning curve peak during training; and
- Perform field mock to minimise error rate.

iii. Reliability

Data is sufficiently error free, satisfies intended purposes and used unbiased standard protocols consistently that do not change regardless of frequency or who is using them.

Parameters of data reliability

- Integrated systems developed
- SoPs for every process is developed and SoPs implementation is ensured
- Community/stakeholder are contacted and involved in data collection and verification/Triangulation
- Enumerator are well trained and secure high marks in training assessment
- Continuous monitoring and improvement ensured via accompanied visits, back check, spot check and process evaluation

iv. Completeness

All the requisite information should be collected/available with very minimum non-response.

Parameters of data Completeness

- No missing response in data cell
- Reasons for outlier exists
- 100% sample inclusion in data

v. Timeliness

Completion of task/deliverables as per detail implementation plan/work plan

Parameters of data timeliness

- Progress Tracking: Target Vs Achievement along with reasons for variance
- Deliverable Tracking: DLIs Vs Timeline

d. Statistics and Data Management

Each concerned project shall establish a Statistics and Data Management (SDM) section, which will be responsible to develop inter and intra department linkages for performance and data sharing. SDM shall further comprise of following three teams:

i. MIS Manager

- Manage database, dashboard and synchronised data within project and P&DD's CIC;
- Manage database to cater to the need of the SDGs strategies measurement; and
- Link CICs dashboard with the Chief Minster's Monitoring Cell.

ii. Statistician

- Gathered secondary data and prepare primary for data analysis;
- Perform trend analysis using periodic data;
- Compare result indicators with secondary data available;
- Prepare sample design for research study, baseline or impact evaluation; and
- Facilitate research team continuous performance measurement and improvement.

iii. Researcher

- Translate management question to research question and analyse and compare data to measure performance and recommendation for continuous improvement;
- Develop technical methodology for research studies;
- Prepare research reports periodically to measure most significant change and performance trend;
- Develop Knowledge for Evidence Based Strategic Planning;
- Perform Factor Analysis to Identify Cause and Effect; and
- Validate Programme/Project Results from secondary data.

e. Performance review data collection flow

i. Horizontal data information flow within Institution/Programme/Project;
ii. Vertical data information flow from QCs and CICs;
iii. Centralized for performance and the SDGs target tracking and the P&DD levels;
iv. Primary Source: Institution/Programme/Project internal implementation data, Process monitoring, Spot check, baseline, midline and end line data;
v. Secondary Sources: Public organisation published data, UN system, local and international NGOs survey reports collected from Balochistan;
vi. Data collection approaches may be used PAPI, CAPI and CATI;
vii. ODK/CSPro will be used to develop CAPI and CATI App; and
viii. ODK/CSPro may also use to digitise PAPI data.

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