



**Research & Training Wing
Planning & Development Department
Government of Sindh**



**RESEARCH HIGHLIGHTS
2022-23
'A Year in Review'**

FOREWORD

With the aim of creating a holistic amalgamation of its research portfolio after its revitalization and restructuring in 2018-19, the Research & Training Wing has initiated a series of 'Research Highlights'. This publication delineates the key research undertaken by the Wing during 2022-23.

The Research Highlights comprise the research that culminated in reports and was subsequently published on the Research & Training Wing's website. The Wing provided analytical support to the P&D Department on the 'Post-Disaster Needs Assessment (Floods 2022)', 'Assessment of Malnutrition (Stunting) in Tharparkar' (International Ombudsman Institute), and 'Sindh Strategic Policy Framework and Action Plan for Floods 2022'.

The in-house research reports developed by the Wing during 2022-23 were the following:

- Multidimensional Poverty Index as a Planning Tool

The report focuses on utilizing global and local lessons to propose how Multidimensional Poverty Index can be adopted as a Planning Tool in Sindh to foster an evidence-based approach for poverty reduction

- Strategizing for Sindh SMEs Development: A Roadmap for Growth

The report focuses on developing a provincial strategic action plan aligned with the National SME Policy of 2021 to foster the development of small & medium enterprises in Sindh

- Evaluation Framework for Development Projects 2022

The report proposes a comprehensive 'evaluation framework for public sector development projects' that encompass ex-ante, mid-term, terminal, and ex-post evaluation techniques

- Sindh Strategic Action Plan for Floods 2022

The action plan serves as an operational guide for post-flood planning and implementation along the prioritized sectors to harness local and international investments optimally.

I would like to acknowledge the efforts of the research team of the Wing, especially Mr. Obaid Arshad Khan (Social Sector Advisor), who spearheaded the research initiatives under the strategic guidance of the Chairman P&D Board, Members of the P&D Board and Senior Management of P&D Department.

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TABLE OF CONTENTS

01	Multidimensional Poverty Index as a Planning Tool	03
02	Strategizing for Sindh SMEs Development: A Roadmap for Growth	13
03	Evaluation Framework for Development Projects 2022	24
04	Sindh Strategic Action Plan for Floods 2022	59



Multidimensional Poverty Index as a Planning Tool

Introduction

Multidimensionality of poverty and interconnectedness of dimensions need to be recognized to design policies and programs that tackle poverty in a comprehensive and holistic way. Government, in this regard, has a crucial role in addressing the root causes of poverty and creating an enabling environment for each segment of the population. Clear identification of the vulnerable and marginalized groups is needed such as women, children, persons with disabilities, the elderly, victims of sexual orientation discrimination, Indigenous communities, members of lower castes and outcasts, undocumented migrants, refugees, etc. For many of these groups or individuals, constant stigmatization and discriminations push them into a vicious circle of poverty, powerlessness and exclusion. Poverty is not only about having not enough money to meet basic needs including food, clothing and shelter. It is also the absence of an enabling environment to flourish and reach one's potential.

According to the World Bank's official definition, "Poverty is hunger. Poverty is lack of shelter. Poverty is being sick and not being able to see a doctor. Poverty is not having access to school and not knowing how to read. Poverty is not having a job, is fear for the future, living one day at a time".¹

Globally, poverty is measured under two methods determined by the World Bank & United Nations. A person who earns less than US\$ 1.90 per day is said to be below the poverty line. This method is considered the income method that takes into account income denominated poverty. Hence, its unidimensional focus on income makes it unreliable in terms of capturing the true incidence of poverty.

Measuring poverty through multidimensionality is considered a more reliable source to capture the true poverty incidence. The Multidimensional Poverty Index (MPI) is prepared by the UNDP & OPHI² to track deprivation across different dimensions. For example, there can three dimensions and 10 indicators to assess deprivations: health (child mortality, nutrition), education (years of schooling, enrollment), and living standards (water, sanitation, electricity, cooking fuel, floor, and assets).

Multidimensional Poverty Index (MPI), typically uses the household as its unit of analysis, though this is not an absolute requirement. A household is considered 'deprived' for a given indicator if they fail to satisfy a given 'cutoff' (e.g. having at least one adult member with at least six years of education). A household is assigned a 'deprivation score' determined by the number of indicators they are deprived in and the 'weights' assigned to those indicators. Each dimension (health, education, standard of living, etc.) is typically given an equal weighting, and each indicator within the dimension is also typically weighted equally in terms of global parameters.³ However, in-case of Pakistan, the MPI weights may vary across all three dimensions and also across indicators within each dimension (Refer Table#1). If the household deprivation score exceeds a given threshold, then a household is considered to be 'deprived', or 'poor'. The final 'MPI score' (or 'Adjusted Headcount Ratio') is determined by the proportion of households deemed 'poor', multiplied by the average deprivation score of 'poor' households.

¹ <https://openknowledge.worldbank.org/handle/10986/32354>

² United Nations Development Program (UNDP) and Oxford Poverty & Human Development Initiative (OPHI)

³ <https://multidimensionalpoverty.org/>

Table: 1 (Pakistan’s National MPI Cut-offs and

Pakistan’s National MPI – Indicators, Deprivation Cut-offs and Weights								
Education	Indicator	Weights	Health	Indicator	Weights	Standard of Living	Indicator	Weights
	Years of schooling	1/6 = 16.67%		Access to health facilities/clinics/Basic Health Units (BHU)	1/6 = 16.67%		Water	1/21 = 4.76%
	Child school attendance	1/8 = 12.5%		Immunisation	1/18 = 5.56%		Sanitation	1/21 = 4.76%
	Educational quality	1/24 = 4.17%		Ante-natal care	1/18 = 5.56%		Walls	1/42 = 2.38%
		Assisted delivery	1/18 = 5.56%	Overcrowding	1/42 = 2.38%			
				Electricity	1/21 = 4.76%			
				Cooking fuel	1/21 = 4.76%			
				Assets	1/21 = 4.76%			
				Land and livestock (only for rural areas)	1/21 = 4.76%			

Source: Pakistan Bureau of

MPI advocates state that the method can be used to create a comprehensive profile of people living in poverty beyond the income parameter. The granularity permits comparisons both across countries, regions and the world and within countries by ethnic group, urban/rural location, as well as other key household and community characteristics. MPI is useful as an analytical tool to identify the most vulnerable people – the poorest among the poor, revealing poverty patterns within countries and over time, enabling policy-makers to target resources and design policies more effectively.

Global Evidence of MPI

According to the report published by the UNDP (Global Multidimensional Poverty Index 2020), across 107 developing countries, 1.3 billion people 22 percent people are living in multidimensional poverty. Among its recipients, children show higher rates of multidimensional poverty. About a half of multidimensionally poor people (644 million) are children under the age of 18. Comparatively, one in three children is poor as compared with one in six adults.

About 84.3 percent of multidimensionally poor people live in Sub-Saharan Africa (558 million) and South Asia (530 million). 67 percent of multidimensionally poor people are in middle-income countries. Every multidimensionally poor person is considered ‘deprived’ in a critical mass of indicators. For example, 803 million multidimensionally poor people live in a household where someone is undernourished, 476 million have an out-of-school child at home, 1.2 billion lack access to clean cooking fuel, 687 million lack electricity and 1.03 billion have substandard housing materials. 107 million multidimensionally poor people are aged 60 or older, a particularly important figure in the context of COVID-19 pandemic.

65 countries reduced their global Multidimensional Poverty Index (MPI) value significantly in absolute terms. Those countries are home to 96 percent of the population of the 75 countries studied for poverty trends. The countries with the fastest reduction in MPI value in absolute terms were Sierra Leone, Mauritania and Liberia, followed by Timor-Leste, Guinea and Rwanda. North Macedonia had the fastest relative poverty reduction, followed by China, Armenia, Kazakhstan, Indonesia, Turkmenistan and Mongolia. Each of these countries cut its original MPI value by at least 12 percent a year. Between 2006 – 2016, India reduced the incidence of poverty nationally and among children and also had the biggest reduction in the number of multidimensionally poor people (273 million).

From December 2013 to March 2016, the Ebola crisis spread in West Africa. As terrible as the tragedy was, it did not create a widespread slide into poverty. The fastest reduction in multidimensional

poverty was in Sierra Leone, where the percentage of people in multidimensional poverty fell from 74 percent in 2013 to 58 percent in 2017; the same years as the Ebola crisis. The percentage of people who were multidimensionally poor and deprived declined for all 10 indicators, with the biggest reductions related to deprivations in cooking fuel and electricity. Sierra Leone also had the largest annualized absolute reduction in deprivation in clean cooking fuel and in child mortality among the 75 countries studied. It had the fastest absolute reduction in MPI value among children of all countries, though poverty among adults declined faster.

The major areas of improvement at the community level were the Free Healthcare Initiative (FHCI) launched in 2010 in Sierra Leone. This initiative provides pregnant women, new mothers, and young children with access to basic healthcare in order to reduce infant mortality rates. Although the FHCI is not a solution to poverty in Sierra Leone, it led to several healthcare reforms, including adequate pay for healthcare workers.⁴

Solving infrastructure-related problems, such as access to water, sanitation and hygiene was the next big challenge for Sierra Leone. The Tiger Worms Toilet Project had a significant contribution to improving the Hygiene conditions of the deprived citizens of Sierra Leone. This project helped prevent communicable diseases by addressing sewage concerns through enhanced sanitation practices. It also helped prevent diseases by educating those in Sierra Leone about their spread. Significant improvement in the educational infrastructure was also evident coupled with other targeted areas. All of the aforementioned initiatives created a holistic impact on reducing the incidence of poverty in the country.

Box:1 Case Study of Costa Rica: MPI as a Resource Allocation Tool for Social Programs

The Multidimensional Poverty Index (MPI) can cover a wide range of socio-economic areas that makes it is a potent identification tool of deprivations. It can show areas where the most improvement is needed to alleviate deprivation and even the areas where funding needs to be cut back. In case of Costa Rica, the Multidimensional Poverty Index, one interesting point to note is that Costa Rica's MPI, called the MPI-CR, included some non-conventional measurements, such as the availability of access to the internet, as well as "non-compliance with minimum wage or other labor rights" (MPPN).

While studying the case of Costa Rica many senior figures of Costa Rica's political leadership, such as the President, Mr. Luis Guillermo Solís, Second Vice President Ms. Ana Helena Chacón, and Human Development Minister Mr. Carlos Alvarado, were of the view that the MPI "will be used to reduce extreme poverty by allowing the government to target government resources to those that need it". This was when Costa Rica and El Salvador were jointly launching a Multidimensional Poverty Index, on the 29th of October, 2015. The UNDP representative of El Salvador, Christian Salazar, felt that there was a need for a poverty-measure that went beyond income, and one that would not be susceptible to changes in prices and currency volatility.

The Government of Costa Rica set up a commission that would ensure that the Costa Rican MPI would be followed as the official measure for allocating resources and monitoring and evaluating social programs; this committee involved representatives from Costa Rica's Ministry of National

⁴ <https://borgenproject.org/poverty-in-sierra-leone/>

Planning and Economic Policy, Presidential Social Council Advisory Team, the Ministry of Finance, the Fund for Social Development and Family Benefits, and the Horizonte Positivo association. Trends for each dimension and indicator at the national and regional level were identified by this commission using the MPI-CR. This commission also compared the actions of the central government's social programs with trends of deprivations, which resulted in an eye-opening discovery. There was clearly much room for improvement with resource allocation to ensure that the more resources were earmarked towards areas of deprivation where they were needed the most.

In March 2016, the government was presented with the proposal by the commission for the usage of the MPI as the basis for resource allocation. The Presidential Directive N-045 was passed in May of the same year, making the MPI-CR the basis of the allocation of budgetary funds as well as for monitoring and evaluating social programmes. Seven main institutions or government departments used the MPI-CR to plan their budgets for 2017, as a result of a pilot plan stemming from the publication of the president's directive.

While resources were allocated according to Costa Rica's National Development Plan, Costa Rica's version of the Multidimensional Poverty Index identified the beneficiaries as well. These institutions were trained on how to target resources using the MPI-CR, with 2017 set as the baseline. The use of the MPI in the budget planning process can guarantee, to some extent, a reduction in multidimensional deprivations and poverty.

(Source: OPHI, News)

Poverty at National Level

Pakistan Vision 2025 is people-centric and aimed at reducing national poverty and enhancing people's well-being. Vision 2025 recognizes poverty as being both multidimensional & multifaceted and stresses a broader definition of poverty, one which includes health, education and other amenities alongside income and consumption. Pakistan's national MPI constitutes three dimensions; health, education, and standard of living and 15 indicators, each weighted at 1/3 equally.

According to the official estimations from OPHI, the scores for National level Poverty Headcount in Pakistan are recorded at 45.65 percent⁵ in the year 2021. Federally Administered Tribal Areas (FATA) has by far the highest poverty rate (headcount), with more than 71.52 percent of its total population living below the poverty line. Sindh's MPI scores for the 2021 show an alarming situation at 50.54 percentage, followed by the Baluchistan and KPK at 65.32 percent & 50.70 percent respectively.

Estimates for the MPI, Incidence of Poverty (H) and Intensity of Poverty (A) suggest that among Pakistan's provinces, multidimensional poverty is highest in FATA and lowest in Punjab. According to the Multiple Indicator Cluster Survey for 2018-2019, the rural areas of Sindh face more multi-dimensional deprivation than the urban areas, with 24.8 Percentage of the urban population and 71.4 Percentage of the rural population of Sindh being classified as multi-dimensionally poor.⁶

⁵ <https://data.humdata.org/dataset/pakistan-mpi>

⁶ <https://resourcecenter.nhnpakistan.org/phocadownload/government/reports/Sindh-MICS-2018-19.pdf>

The Case of Sindh

The multidimensional poverty Incidence in Sindh is relatively on the higher side as compared to that of Punjab, mainly because of multi-faceted deprivations and impoverishments in the province of Sindh.

From as far back as 2018, reports indicate that the Sindh has a problem of malnutrition, “Sindh is severely affected by intensifying malnutrition and stunting indicators. As many as 48 percent of children under the age of five are stunted while 35 percent of them are severely stunted. The incidence of global acute malnutrition (GAM), a measurement of the nutritional status, in Tharparkar is 22.7 percent followed by Sanghar 16.0 percent and Qamber-Shahdadkot 13.8 percent” (Talpur, 2018).

The Pakistan Social and Living Standards Measurement, or PSLM, found that, for the duration of 2014-2015, illiteracy was the biggest contributor to multidimensional poverty in the whole of Pakistan, with only 42.8 Percentage of the entire country’s population being literate at that time (UNDP Pakistan). In the year 2017, “Pakistan's total literacy rate was around 59 percent” (O’Neill, Statista, 2021). It seems that the situation of the literacy rate has not improved very much since then, especially in the province of Sindh. In 2020, the literacy rate of Sindh was reported to be around 57 Percentage (Dawn, 2020), which is not very promising. To counter the menace of illiteracy in the province, the Government of Sindh allocated funds and continues to plan its budget for spending on the education sector. The budget estimate allocated towards education for the period 2017-2018 was 991.038 million Rupees (Finance Department pg. 91).

Education is a ‘good’ or skill that has multiplying benefits, meaning that it has positive externalities that permeate the society. Keeping this in mind, the government of Sindh invested a total of 13150.0 million Rupees in education (2020-2021 Budget, pg. 30) and “earmarked 23 Percentage of the total budget for education” (Tahir, Express Tribune, 2021), because educating the people of today leads to an investment into the education of the people of tomorrow and future generations.

According to the Multiple Indicator Cluster Survey (MICS) for 2018-2019, the rural areas of Sindh face more multi-dimensional deprivation than the urban areas, with 24.8 Percentage of the urban population and 71.4 Percentage of the rural population of Sindh being multi-dimensionally poor.

For the duration of 2018-2019, the funds allocated towards the eradication of malnutrition and stunted growth were increased by 112 percent from Rs.2.4 billion to Rs.5.1 billion”, as part of the ‘Accelerated Action Plan’ for reduction of stunting & malnutrition (pg. 16, Finance Department). The ‘throw-forward’ of funds allocated for public expenditure on food in the 2019-2020 budget, as of the 1st of July 2019, was 100.0 million Pakistani Rupees (Finance Department, pg. 1).

The computation of Multi-Dimensional Poverty Index (MPI) in Sindh as per MICS 2018-19 along with the district-level scores are provided below to delineate the disaggregated snapshot of multi-dimensional poverty in the province along with deprivations across the dimensions of health, education and living standard along with the corresponding indicators.

Table# 2: Dimensions, Indicators, Cut-Offs and Weights of MPI – MICS 2018-19

Dimension	Indicators	Deprivation cut-off	Relative weight
Health	Nutrition	Any adult under 70 years of age or any child for whom there is nutritional information is undernourished in terms of weight for age or height for age. For MICS this is restricted to children under age 5.	1/6=16.7%
	Child mortality	Any child has died in the family in the five-year period preceding the survey	1/6=16.7%
Education	Years of Schooling	No household member age 10 years or older have completed six years of schooling	1/6=16.7%
	Child School Attendance	Any school-aged child is not attending school in years 1 to 8	1/6=16.7%
Standard of living	Electricity	The household has no electricity	1/18=5.6%
	Sanitation	The household's sanitation facility is not improved or is shared	1/18=5.6%
	Drinking Water	The household does not have access to improved drinking water or drinking water is at least a 30-minute walk from home, roundtrip.	1/18=5.6%
	Housing	The household has natural or rudimentary roof or walls or natural floors.	1/18=5.6%
	Cooking fuel	The household cooks with 'solid fuel', e.g. dung, wood or charcoal.	1/18=5.6%
	Assets	The household does not own more than one of these assets: radio, TV, telephone, computer, bicycle, motorbike, animal cart or refrigerator, and does not own a car or truck.	1/18=5.6%

Source: MICS 2018-19 -SBOS

Table# 3: District-wise MPI scores Sindh – MICS 2018-19

Table D.EQ.5.1: The Multidimensional Poverty Index (MPI)											
Distribution of households by dimensions and indicators of poverty, poverty headcount ratio, intensity of poverty, and the MPI, by selected characteristics, Sindh, 2018 ¹											
	Percentage of the Population who are MPI poor and deprived in each indicator										Percentage of MPI-poor people (H)(1)[A]
	Education		Health		Living Standards						
	Years of Schooling	School Attendance	Child Mortality	Nutrition	Electricity	Sanitation	Drinking Water	Floor	Cooking fuel	Assets	
Total	33.5	37.5	5.2	43.0	14.9	40.4	21.2	45.4	49.0	24.1	47.4
District											
Badin	63.4	63.1	11.1	56.0	55.2	85.4	34.9	82.6	87.0	47.4	82.3
Dadu	58.6	46.3	5.0	54.7	13.3	39.1	9.2	77.3	71.2	37.1	67.4
Hyderabad	22.5	26.2	6.2	41.7	3.7	13.0	8.9	17.9	25.3	15.8	28.5
Jamshoro	47.9	50.9	2.3	53.7	17.2	34.4	43.1	56.3	55.9	34.5	62.3
Matiari	50.6	50.9	0.0	47.8	12.8	59.7	6.5	63.7	70.1	38.8	63.4
Sujawal	79.4	67.9	2.1	51.2	56.3	89.4	19.3	87.9	89.0	85.0	85.4
Tando Allahyar	35.1	41.3	5.2	55.2	13.6	60.4	8.2	55.3	50.3	32.0	48.5
Tando Muhammad Khan	55.7	50.5	14.2	56.5	45.7	73.2	21.1	74.2	76.8	57.9	76.0
Thatta	75.5	69.3	15.6	66.2	38.4	78.8	43.1	72.9	76.7	33.2	86.3
Karachi Central	9.0	11.3	4.5	14.6	0.0	0.7	26.1	1.1	0.0	3.4	10.5
Karachi East	25.5	28.1	2.8	16.4	0.7	2.3	23.5	2.7	3.0	4.4	23.3
Karachi West	19.8	25.0	1.6	27.9	0.5	6.2	48.6	8.6	1.1	6.2	17.7
Karachi South	9.3	6.7	6.5	21.7	0.0	4.1	20.5	0.2	1.0	7.2	10.9
Korangi	10.8	16.6	1.3	19.9	0.0	0.8	24.1	1.2	0.0	3.6	7.6
Malir	22.8	15.8	0.0	21.1	2.2	16.3	15.8	9.8	9.9	9.6	17.7
Jacobabad	62.3	64.1	5.6	66.1	16.1	83.5	23.1	83.2	77.7	46.8	81.0
Kambar Shahdadkot	36.7	46.4	4.1	54.0	4.2	57.1	42.9	82.5	82.1	40.3	70.9
Kashmore	42.2	67.7	12.2	59.0	15.7	78.6	1.7	83.9	84.0	25.9	83.5
Larkana	23.8	33.5	0.6	48.6	10.4	51.9	0.8	48.4	39.3	22.3	41.0
Shikarpur	51.4	52.8	4.8	59.5	6.6	82.5	0.0	69.1	73.8	35.8	71.6
Mirpur Khas	35.1	41.0	7.6	59.9	31.4	54.6	22.1	61.8	77.6	20.5	59.9
Tharparkar	33.9	48.6	4.8	50.3	61.6	66.1	53.4	85.1	99.2	78.2	78.5
Umerkot	42.3	50.1	0.0	67.9	57.3	67.8	52.9	87.6	90.2	47.2	75.3
Naushahro Feroze	29.4	47.0	2.6	52.4	2.9	41.5	0.0	55.1	66.5	28.4	58.0
Sanghar	45.0	41.9	2.8	42.4	27.4	54.6	13.2	68.8	80.8	26.6	59.8
Shaheed Benazir Abad	35.9	37.1	8.3	57.5	9.6	42.8	1.9	62.7	64.9	23.8	51.0
Ghotki	35.0	49.5	10.4	54.8	17.2	67.4	3.8	52.0	79.3	13.2	64.5
Khairpur	24.3	28.8	9.9	48.7	10.0	52.6	2.1	61.2	72.9	18.5	46.1
Sukkur	33.0	42.9	7.6	47.8	4.3	38.1	19.8	43.3	57.3	11.0	51.6

¹ MICS indicator EQ.8 - Multidimensional poverty
^A Household members are identified as poor if the household is deprived in at least one third of the weighted indicators listed. The proportion of the population that is poor is the product of H, calculated in this table, and A, presented in Table EQ.5.2.
^B The MPI is the product of H, calculated in this table, and A, presented in Table EQ.5.2.
^C Household members that live in households deprived in one fifth to one third of the weighted indicators are considered vulnerable to poverty.
^D Household members that live in households deprived in at least half of the weighted indicators are considered in severe poverty.

Using MPI as a Planning Tool

Since the MPI points out the areas and extent of deprivation that people in a certain geography face (in this case, Sindh), it also sets an indicative benchmark for where most funds are needed. If the government of Sindh uses the novel approach of an outcome-based or result-based budgeting system and introduces it for its future budgetary allocations, then it may perhaps be the first provincial government in Pakistan to move away from the incremental system. The government of Sindh could make the Multidimensional Poverty Index one of its important statistical bases by which it can annually plan how much money it will allocate to the required sectors.

The Government of Sindh has certain funds allocated to social protection, meaning the protection of those segments of society that are the most vulnerable. Sindh's Social Protection initiatives included the establishment of the Inter-sectoral Nutrition Strategy for Sindh, or the 'INSS' in 2013, with support from the United Nations and the World Bank, which in turn includes the Accelerated Action Plan. The

multi-sectoral Accelerated Action Plan is being undertaken across the 23 prioritized districts of Sindh with >40% stunting prevalence. From 2012-2017, the Government of Sindh kept the field 'Social Protection' in its 'Priority Expenditure' list as shown in the Budget Analysis of 2018-2019 (pg. 41), alluding to how important the provincial government of Sindh held 'Social Protection' to be, at least on paper.

For 2012-2013, the Sindh Government spent 4,213 million rupees on social protection; for 2013-2014, this amount was 1,923 million rupees, for 2014-2015 it was 1,865 million rupees, then 5,290 million rupees for 2015-2016, and 6,526 million rupees for 2016-2017 (Finance Department 2018-2019, pg. 41). From its published budget for 2018-2019, the Government of Sindh had projected to allocate 5981.578 million rupees for the duration of 2020-2021, and 2295.000 million rupees for 2021-2022 (Finance Department, Budget 2019-2020, pg. 5). The purpose of stating these figures here is to point out the possibility that the allocation of these funds to the field of 'Social Protection' may not be evidence or outcome-based, and may simply be based on an incremental allocation among other factors.

According to the Multiple Indicator Cluster Survey for 2018-2019, the literacy rate of the age group 15-24 in the province of Sindh was 54.7 Percentage. This is not a very encouraging statistic and does not show any significant change in Sindh's potential for increasing its literacy rate. In 2019, the gender-gap in literacy levels for the age group 6-15 was on an increasing trend in urban areas in the whole of Pakistan (ASER National-Urban Report 2019, pg. 49). This same report also mentions that 72 Percentage of children enrolled in grade 5 of private schools in the urban areas of Pakistan were able to read at least to the level of a story, either in Sindhi, or in Urdu, or in Pashto. However, this figure for the same population demographic was 67 Percentage in government schools (pg. 49). The difference of 5 percentage points here between the public sector and private sector schools illustrates a key finding that highlights disparity along the theme of 'Learning Levels by School Types'. In the year 2019, in Sindh's district Sukkur, 13.4 Percentage of children were in none of the educational institutes, be they public or private. This figure was 7.8 Percentage in Larkana, 2.3 Percentage in Korangi, 2.6 Percentage in Karachi-South, 4.3 Percentage in Karachi-East, 1 Percentage in Central Karachi, and 5.3 Percentage in Hyderabad, bringing the total proportion of children out of school in Sindh's urban areas for 2019 to 36.7 Percentage (ASER National-Urban, pgs. 81-101). Keeping in mind that Sindh is Pakistan's second-most populous province, it can be safely inferred that 36.7 Percentage of the total number of children in Sindh is a very large number. The Budget Estimate during the financial year of 2018-2019 spent by the provincial government on education was 165.117 billion rupees (Budget Analysis 2018-2019, pg 43, Finance Department), while it was 230.189 billion rupees for 2019-2020 (Budget 2019-2020, Finance Department, pg. 27). This increase of almost 39.41 Percentage in the funding of a department/sector i.e. education within a year cannot be unequivocally substantiated with credible evidence. Surveys/indices such as the Multidimensional Poverty Index should be made the basis of budgetary allocations, especially for the sectors covered by MPI, in the province of Sindh, to help the government allocate funds according to specified targets and achievable goals. Optimal allocations using evidence should be the benchmark to make the most of scarce financial resources for the betterment of the people of the province.

For earmarking resources towards developmental projects in Pakistan, there may be no particularly calculated or methodological/systematic rationale for the allocation of money. Juxtaposing health sector allocations and outcomes also demonstrates that the incremental approach to budgeting is not yielding the intended results or outcomes. For example, the Annual Development Programme's allocation for the health sector in Sindh was Rupees 15.7 billion in the financial year of 2014-15 which

was increased by more than Rs. 3 billion to Rs.18.8 billion in the financial year of 2017-18. However, comparisons of the Multiple Indicator Cluster Surveys of 2014-15 with those of 2018-19 show that nutrition outcomes have not improved, and, in fact, have even worsened for some indicators. The example of stunting prevalence can be seen, which increased from 48 Percentage in 2014-15 to 50.2 Percentage in 2018-19. The prevalence of wasting witnessed only a marginal decrease from 15.4 Percentage in 2014-15 to 14.8 Percentage in 2018-19. In the absence of sector plans or costed implementation plans, it is incomprehensible to have accurate goals or achievable development targets in consideration while planning the Annual Development Programme. This is another reason why the Multidimensional Poverty Index and other indices must be utilized as a planning tool to help with budget allocation. Depending on the granularity of data, it may show specific sub-indicators within a deprived dimension (such as, child mortality within the broader category of 'healthcare') that need improvement or increased funding.

Conclusion

The incremental approach towards budgeting must be replaced with an 'evidence-based' approach for better use of existing resources. As part of this evidence-base, the Planning & Development Department of the Government of Sindh could mandate 'returns on investment' in the planning system by incorporating 'RoI' indicators as a mandatory condition for all PC-I proposals submitted by administrative departments or executing agencies.

Strengthening of evidence-generating organizations like the Sindh Bureau of Statistics, the SBoS, is imperative, informed decision-making for the formulation of the Annual Development Programme for the province. This would ensure that the proposed schemes/projects are not duplicating efforts and are addressing the actual quantifiable needs of the province. With limited resources, optimized sectoral and departmental allocations must be ascertained beforehand in order to identify areas of investments to achieve intended outcomes. Relevant development indicators and indices, like the Multidimensional Poverty Index, must be developed and adopted to cover key performance indicators that are aligned with the policy imperatives of government. The dimensions of MPI can be adapted to the local context. For example, the 'food security' dimension can be added with indicators covering food availability, access to food, utilization of food, and stability of food. Similarly, other dimensions deemed to be interconnected with poverty in local context can be incorporated so that such areas are prioritized to address multi-dimensional poverty at provincial and even district level.



**Strategizing for Sindh SMEs
Development:
A Roadmap for Growth**

Introduction

The recent approval of the National SME Policy of 2021¹ by the Government of Pakistan has signaled a pivotal shift towards the inclusive economic growth agenda by spurring the growth of Small & Medium Enterprises in the country. The policy is centered on a competitiveness paradigm with a vision of a 'SME sector that is globally competitive and innovative, creates high-value jobs and encourages SMEs to scale up and move towards value-added exports. With ambitious targets, the Policy aims to address both the supply-side and demand-side challenges faced by SMEs in the country.

The supply-side priority areas include:

- 1) Access to Finance,
- 2) Skills, Human Resource & Technology,
- 3) Infrastructure,
- 4) Entrepreneurship, Innovation & Incubation,
- 5) Business Development Services, and
- 6) Women Entrepreneurship Development.

The demand-side priority areas include: **Market Access** and **Public Procurement**.

In addition to many pro-growth facets of the SME Policy, a key development was a consensus on the uniform definition of SMEs with 'Small Enterprises defined as enterprises having annual sales turnover of up to PKR 150 million and Medium Enterprises defined as enterprises having annual sales turnover of above PKR 150 million and up to PKR 800 million.' A small or medium enterprise of up to five years will be considered as a 'Start-Up'. A uniform definition entails that coherent SME development policy measures, strategies, and incentives can be designed to uplift the SMEs and have a positive multiplier effect across the economy.

There are an estimated of 5.2 million SMEs in the country based on the growth extrapolation from Census of Economic Establishments of 1988 and 2005². Harnessing the potential of SMEs can be instrumental in catalyzing the economic growth of Pakistan as they 'contribute 30% towards the country's GDP, employ more than 80% of non-agricultural workforce and generate 25% of country's total export earnings.'³ Productive investments by the public and private sector, and an enabling environment for SMEs can help the businesses thrive and flourish. Indigenous and inclusive growth of the economy can be realized by strengthening the business support network for SMEs.

The key targets of the National SME Policy of 2021 to be achieved by 2025 include⁴:

- Increasing the economic contribution of SMEs via sustaining a growth rate of small-scale manufacturing by 9 percent, services sector SMEs by 10 percent, average employment by 5 percent and exports by 10 percent per annum
- Making SMEs more competitive & productive via increasing credit to Rs 800 billion and number of borrowers from 172,893 to 700,000
- Number of registered businesses to grow by 10 percent per year
- Public and private incubators, accelerators, and co-working spaces to increase by 20% in 5 years

¹ Small and Medium Enterprise Development Authority. (2021, December 15). National SME Policy 2021.

² Pakistan Bureau of Statistics. (2005). Economic Census 2005

³ Karandaaz. (2020, June 29). Businesses in Pakistan and their access to financial services.

⁴ Pakistan Economic Survey 2021-22. Finance Division, Government of Pakistan.

Provincial Development: Sindh SMEs Competitiveness Strategy

The National Coordination Committee (NCC) on SMEs Development, headed by the Federal Minister for Industries & Production, was constituted to lead the agenda of SMEs Development and oversee the implementation of National SME Policy of 2021. NCC on SMEs Development also has representation from Provincial Chief Secretaries. Subsequently, Provincial Working Groups, under the chairmanship of respective Chief Secretaries, were constituted to undertake initiatives for SMEs development to complement and support the National SME Policy. Government of Sindh constituted the Provincial Working Group on 22nd December 2020 with the Chief Secretary, Sindh, as its chairman and representation from both the public and private sector.

The Provincial Working Group, during its meeting on 6th October 2021, initiated the formulation of a robust 'Sindh SMEs Competitiveness Strategy' as the National SME Policy was on the precipice of being approved. Industries & Commerce Department, with technical assistance from International Trade Center (ITC) through EU-funded Growth for Rural Advancement and Sustainable Progress (GRASP) project, initiated multi-stakeholder consultations to define the scope of the Strategy including Vision, Strategic Objectives and Priority Areas. The consultations culminated in a 'technical paper' with the following framework for Sindh SMEs Competitiveness Strategy:

Vision: "Prosperous Sindh powered by progressive and globally competitive SMEs"

Strategic Objectives

1. To upscale SMEs, encourage digital transformation, and skill upgradation
2. To strengthen and expand a well-coordinated SME business support network
3. To increase inclusive and sustainable business practices

Prioritized Focus Areas

1. Technology and Innovation
2. Entrepreneurial and Business Skills
3. Digitalization
4. Access to Finance
5. Institutional and Business Development Support Services
6. Inclusive and Responsible Business

Figure 1: Sindh SME Competitiveness Strategy Priority Areas



Recommended “Quick Wins” activities

The technical paper also identified a few ‘quick-win’ activities that may be pursued simultaneously with the Strategy design and its finalization. A few quick-win activities are mentioned below:

Financial Activities – Provincial (Projects):

- Develop a training plan for the relevant staff of Industries & Commerce Department and its attached offices (focused on provision of SME support services) to build their capacity to support SME development throughout Sindh
- Consider expanding the mandate of Sindh Enterprise Development Fund (SEDF) to include non-agricultural SMEs.
- Enhance the scope of Sindh Small Industries Corporation (SSIC) to include financing of SMEs in its mandate. Make SSIC self-sustaining through restructuring and securing a new modern office premise/building for it
- Establish and allocate a budget for SME Strategy Development Unit/Secretariat in the Industries & Commerce Department for provision of monitoring and coordination support to the implementation of the SME Strategy

Financial Activities – Federal (Projects):

- Increase the number of SMEDA's Regional Business Centres to expand outreach in Sindh, especially in rural areas
- Digitalize SMEDA's One Window to increase the reach of SMEDA's services to SMEs and to access market intelligence

Non-Financial Activities (Reforms):

- Develop Key Performance Indicators (KPIs) for SME Development to guide the workplan (assignments and timelines) of the Provincial Working Group and Sub-Working Group.
- Identify emerging and high-potential sectors/industries for designing measurable and actionable sector development roadmaps
- Ensure the availability of small and medium-sized plots for SMEs in the Industrial Estates that are being developed by Industries & Commerce Department across all districts of Sindh

The technical working paper was endorsed by the Provincial Working Group in the meeting convened on 29th March, 2022. The Strategy design is now at an advanced stage with all of the six thematic strategies being designed through a consultative process that would culminate into respective plans of action.

Thematic Priority Areas

Technology and Innovation

Sindh is unique in the sense that the province is home to Karachi that has a vibrant entrepreneurial ecosystem with progressive and innovative businesses. The private sector has been amenable to the modernization of technology and innovation for value-addition and improved competitiveness. Leveraging Karachi's potential as a metropolitan, port city, and financial capital of the country, for modern technological adoption can facilitate development of a niche market in the global value-chain in products and services that the province has competitive advantage in. The Federal Ministry of Information Technology and Telecommunication is in the process of setting up an Information Technology (IT) Park in collaboration with South Korea with an estimated cost of Rs. 31 billion. The IT Park is envisioned to house 210 IT Companies and 8,400 employees. Sindh, like South Korea, can evolve a Triple-Helix Model to drive technology and innovation reforms in the province. Triple-Helix approach can provide a platform with strong linkages between university, industry and the government to 'to generate new institutional and social framework for the production, transfer, and application of knowledge.'⁵ The government's role should be to provide an enabling environment for entrepreneurs and enterprises to adopt technology and innovative practices for value-addition in products and services.

⁵ Rahmatullah. (2018). Twelve Things That Can Drive Triple Helix in Pakistan. Triple Helix Association.

Entrepreneurial and Business Skills

A binding constraint in SMEs, especially for small enterprises, is the inadequate skills to compete and thrive in the global market. One of the reasons for the lack of skills might be a mismatch between the demand and supply. Skills development services might be lacking in relevance, accessibility and affordability to bring about a transformational shift. Similarly, on the demand- side, many SMEs might not have a growth-oriented approach which translates into low or no demand for acquiring entrepreneurial and business skills. An unskilled or semi-skilled labor force means that quite a few potential economic opportunities are lost. For example, China would like to relocate its industrial units to Pakistan, but a lack of relevant skills means that the country will not be able to leverage the potential benefits from China Pakistan Economic Corridor projects.⁶ Sindh Technical Education and Vocational Training Authority (STEVTA), in collaboration with private and public skills service providers, can play a pivotal role in upskilling the province's youth to effectively compete in the regional and global economy. The quality of relevant skills must be coupled with effective outreach to reach out to the rural SMEs that can considerably revitalize the rural economy through improved agricultural productivity.

Digitalization

In the COVID-19 context, the pivot towards the digitalization has been catalyzed within the SMEs ecosystem. As the internet and smartphones penetration has been increasing in Sindh, the potential for harnessing this improved coverage for digitalized services provision by SMEs. Ministry of Information Technology & Telecommunication is investing PKR 5 billion in providing high-speed connectivity to 6 districts of Sindh (Larkana, Hyderabad, Badin, Qamber Shahdad Kot, Dadu, and Jamshoro) with an estimated 4.2 million beneficiaries.⁷ Within the public sector, Government of Punjab has been at the forefront of e-Governance with many digital initiatives launched by the Punjab Information Technology Board (PITB). From SMEs perspective, digitalized services can offer potential avenues for SMEs to improve business operations, amplify efficiency and catalyze growth. As digital tools become more prevalent across public and private sectors, SMEs can benefit immensely in receiving and providing services to a larger market more efficiently. An influx of digital services can trigger enormous growth in e-Commerce, FinTech, and other digital core business areas. Government of Sindh should also focus on creating an institution, like PITB, for a rapid transition towards e-Governance. Considerable headway can be made in the realm of 'Ease of Doing Business Reforms' through digitalization of government's regulatory processes.

Access to Finance

Access to finance is considered a binding constraint for SMEs as many small enterprises lack financing sources to expand operations and to foster modernization. Traditionally, risk-averse commercial banks have been reluctant to provide financing for SMEs. Flexible financing products for SMEs can help expand potential avenues for growth-oriented SMEs. State Bank of Pakistan has recently introduced notable initiatives for SMEs Financing, like the SME Asaan Finance Scheme

⁶ Bano, N., Yang, S., & Alam, E. (2022). Emerging challenges in technical vocational education and training of Pakistan in the context of CPEC.

⁷ Ministry of Information Technology and Telecommunication. (2022, June 2). Federal IT Ministry launched 3 more projects of OFC worth PKR 5 billion for 6 Districts of Sindh

(SAAF). Under SAAF, SBP has introduced 'collateral-free' lending to ease the restrictions for SMEs to borrow from the banks⁸.

Sindh Enterprise Development Fund (SEDF) of the Government of Sindh focuses on improving opportunities to improve agriculture sector value-chains. One of its primary initiatives is subsidizing mark-up on loans to agro-based SMEs. SEDF has 'mobilized private investments to the tune of PKR 7,000 million through provision of mark-up subsidy worth PKR 500 million.'⁹ Expanding the scope of SEDF beyond agro-based SMEs financing can help improve the financing landscape for SMEs across all sectors in Sindh. As the recent floods have wreaked havoc on the entire country, especially Sindh, there is a need to design flexible financing instruments and mechanisms to mitigate the adverse impact on SMEs and support their economic recovery.

Institutional and Business Development Support Services

'Institutional and Business Development Support Services' can be termed as a set of support services for SMEs that are aligned with their demands and modern needs. Business Development Support Services (BDSS) are 'the services that small and medium enterprises need in order to improve their business operations so that they can succeed and grow.' BDSS can broadly be categorized across the core areas of information, advice, consultancy, and training. The sub-set of focus areas of support services are human resources, business strategy/planning, accounting, regulatory compliance, marketing, distribution, and sales. The kind of BDSS required by SMEs can vary across different strata, like sector, size of the SME, product-specificity, market dynamics, and other relevant factors. 'Institutions' in this case can be used interchangeably with 'Business Support Organizations' that can span across public & private sectors and are mandated to support SMEs. SMEDA's recent BDS Needs Assessment Survey 2021¹⁰ is a welcome initiative to gauge the needs of SMEs in order to provide demand-based support services.

Inclusive and Responsible Business

An important facet when devising 'Sindh SMEs Competitiveness Strategy' is the thematic pillar of inclusive and responsible business. When designing a holistic strategy, gender and environmental mainstreaming is imperative. Women-led businesses need to be encouraged with special incentives. State Bank's 'Refinance and Credit Guarantee Scheme for Women Entrepreneurs' is a notable initiative to improve access to finance for women with mark-up rate of up to 5% per annum with 60% risk coverage by SBP.¹¹ With a global reorientation towards environmental-friendly businesses, the government can undertake initiatives to encourage green growth. Women- focused policies and strategies should be devised to improve female labor force participation. Similarly, youth-centered programming should be undertaken to promote youth-oriented SMEs. Sindh's Youth Policy 2018 can be used as a frame of reference to harness the youth potential and capabilities for SMEs development in the province. In the light of recent floods, it is imperative that the SMEs that are oriented towards 'green growth' and 'climate change adaptation & resilience' are especially incentivized to develop their capacities and competitiveness. Environmental quality standards and regulations must be streamlined and strictly enforced to ensure that the emissions are kept in check.

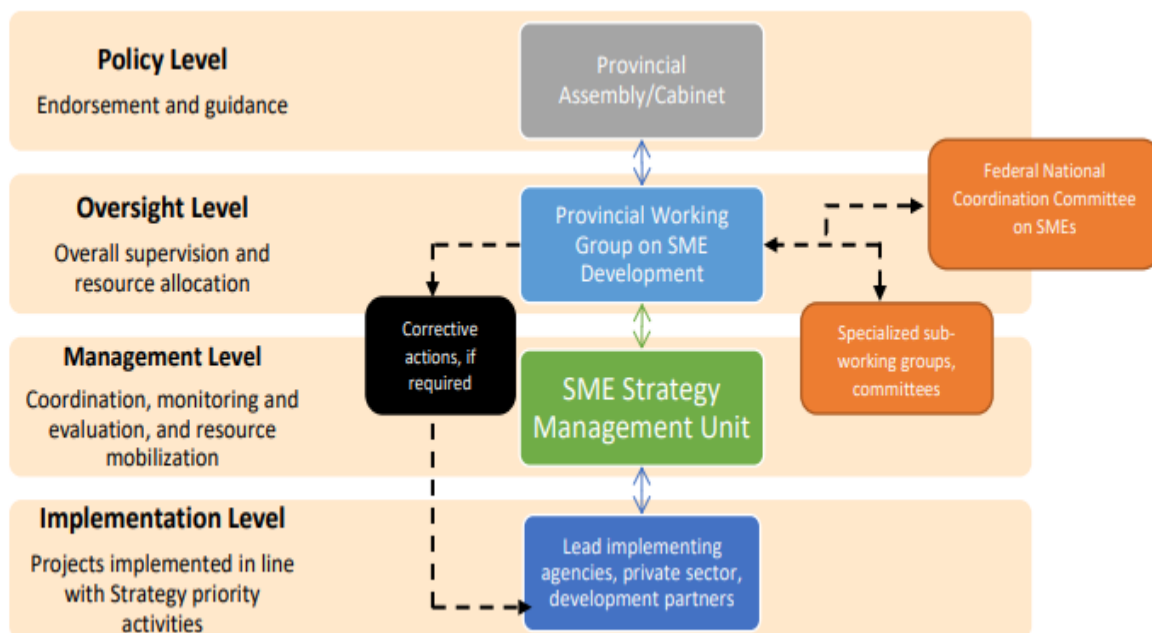
⁸ SBP. (2021, August). SME Aasaan Finance scheme (SAAF) for lending to SMEs without collateral. State Bank of Pakistan.

⁹ SEDF. (2022). Introduction. Sindh Enterprise Development Fund Government of Sindh.

¹⁰ SMEDA. (2021). BDS Needs Assessment Survey 2021. Small and Medium Enterprises Development Authority

¹¹ SBP. (2017). Refinance and Credit Guarantee Scheme for Women Entrepreneurs. State Bank of Pakistan.

Figure 2: Sindh SME Competitiveness Strategy (Governance and Implementation Framework)



Global Evidence: Case Study

Singapore: Creating an Enabling Environment for Spurring Digital Economy¹²

In the post COVID-19 context, considerable countries have pivoted towards digital transformation. Singapore has mainstreamed and accelerated the digital transformation of local SMEs with a package of initiatives. The Government’s “SMEs Go Digital program” is centered on augmenting the digital skills, and enhancing digital ‘capabilities in cybersecurity, data protection and analytics.’ Similarly, Singapore has also launched the “Worker 4.0 Digital Readiness Certificate training program” to enhance the digital skills in the manufacturing sector to boost productivity.

Singapore is also leveraging the concept of ‘agglomeration economies’ to spur local industrial growth. Enterprise Singapore (ESG) is centered on creating linkages between different industries, based on their respective comparative advantage, to foster competitiveness and export-oriented enterprises. These digital initiatives ‘are expected to create 10,500 skilled jobs and add S\$10.2b (US\$7.5b) to the economy.’

¹² Ernst & Young. (2019, October). Redesigning for the digital economy: A study of SMEs in Southeast Asia.

Box:1 Case Study of Malaysia: SME Corp. as 'One-Stop Solution' and 'National Entrepreneurship Policy'¹³

Malaysia has made considerable strides in terms of prioritizing core focus on SME development by embedding the high impact areas and institutional arrangements in public policy and strategic planning. The monumental shift toward SME Development was reflected in the Government's SME Masterplan 2012-2020 with SME Corporation (under the Ministry of International Trade & Industry) as the focal agency for coordinating efforts across 14 ministries and the high-powered National SME Development Council (NSDC) headed by the Prime Minister of Malaysia. The Masterplan marked a pivotal shift toward an implementation approach through actionable High Impact Programs (HIP) for SME growth and development in Malaysia.

The SME Masterplan envisioned increasing the participation of SMEs in the national economy and set ambitious targets to attain by 2020, including increasing the contribution of SMEs to national GDP to 41 percent, employment to 65 percent, and exports to 23 percent. To achieve these objectives, the government developed four key strategic goals:

- a) Increasing the rate of business formation;
- b) Expanding the number of high-growth and innovative SMEs;
- c) Raising the productivity of SMEs; and
- d) Intensifying the rate of formalization

The Masterplan did yield results as in 2020, SMEs (including microenterprises) account for approximately 97.2 percent of business establishments in Malaysia. However, SMEs contribution to 48 percent of national employment is well below the target of 65 percent. The contribution of SMEs of 38.2 percent to the overall GDP is laudable, but they only contribute to 13.5 percent of the nation's overall exports as larger firms dominated the export market.

While Malaysia has made significant progress in terms of SME development through its Master Plan, the ambitious targets coupled with generic objectives have somewhat hindered the catalyzation of overall SME productivity and creation of niche markets in the global value chain. SME Corp. has established itself as a 'one-stop shop' for SME solutions, but the agency finds itself overwhelmed in coordinating 150 programs a year for SME Development. In 2019, the Government introduced Malaysia's 'National Entrepreneurship Policy 2030'.

The six core strategies embedded in the policy are:

1. Inculcation of entrepreneurship at every level of society
2. Optimizing regulatory systems and access to financing
3. Stimulating integrated development and holistic entrepreneurship
4. Spurring growth through innovative enterprises
5. Improving capabilities and performance of SMEs
6. Internationalizing high-growth companies.

COVID-19 pandemic has impacted Malaysia's economic growth trajectory along with other countries. In terms of the overall SME development spectrum, Malaysia seems to have been too ambitious in its planning. The generic objectives along with a plethora of programs lead to coordination challenges. Without a focus and actionable strategy, the Policy becomes diluted. Furthermore, other countries (including the Czech Republic, Vietnam and the Philippines) tend to have programs with 'more distinct and focused intermediate objectives, such as skills formation and non-R&D innovation, compared to Malaysia, where the programs tend to have more generic objectives.' Malaysia's SME Development Strategy needs to be more 'targeted and focused' in alignment with its overall economy, especially in the post-COVID-19 context. Recalibration and a pivot towards digitalization of SMEs need to be prioritized as the government is faced with dwindling fiscal space.

The case of Malaysia offers useful insights for Pakistan which has recently introduced its National SME Policy in December 2021. As Sindh delves into the preparation of 'SMEs Competitiveness Strategy', it is imperative that the province prioritizes actionable and high-impact programs that are feasible and would yield good returns on investment.

The capacity of SME-support institutions in Sindh and in Pakistan must be carefully assessed during the design phase of the strategy to avoid the pitfalls of incorporating unattainable goals that would be difficult for the institutions. Public-private partnerships need to be effectively leveraged to ensure that Sindh's SME Competitiveness Strategy translates into substantial economic development for the province and the country.

(World Bank Group – Malaysian SME Program Efficiency Review, 2022)

¹³ World Bank Group. (2022, March). Malaysian SME Program Efficiency Review. Open Knowledge Repository.

Conclusion

With the recent launch of Pakistan's National SME Policy 2021 and the ongoing process of formulation of 'Sindh SMEs Competitiveness Strategy', there is a vast fertile ground for SMEs to prosper and flourish. The Federal and Provincial Government needs to work on creating an enabling environment for SMEs to ensure that private sector led growth spurs the economic development.

Pakistan and Sindh can catalyze the economic transformation by simply providing a conducive environment for SMEs. The recent growth of IT exports from Pakistan is laudable, but there is still a huge untapped economic potential that can be successfully achieved with smart, coherent and sequential reforms to foster the digital economy. The momentum of regulatory reforms for facilitating 'Ease of Doing Business' must continue unfettered in close coordination with the private sector. Linkages across academia, industry, and government must be strengthened to ensure that the economic priorities are aligned. Research & Development is the most important driver of innovation in a country, but is severally lacking in Pakistan. Restructuring of incentives in Higher Education Institutions (HEIs) is urgently needed to improve the quality of research that becomes the impetus for innovations across the economy. Vertical and horizontal coordination and integration across the public and private sectors can prove to be transformational by setting sectoral priorities for the growth of enterprises that foster domestic economic growth and create a niche market in the global value-chain.

Recommendations

- Reorient the focal government departments, like Industries & Commerce Department, as SME-support institutions and functionalize the 'Commerce' Directorate of the Department to streamline provincial commerce & trade imperatives
- Restructure core institutions, like Sindh Small Industries Corporation, to function as the key enabler for SMEs development in the province
- In addition to mainstreaming and operationalizing the 'Sindh SMEs Competitiveness Strategy' after it is approved, earmark sufficient resources for instituting a dedicated 'SMEs Strategy Management Unit' with Six thematic Working Groups on the implementation front
- Prioritize capacity building of institutions, like Sindh Small Industries Corporation, to facilitate the provision of demand-based business development support services
- Coordinate effectively with the core SME-promoting agency of Pakistan, Small & Medium Enterprises Development Authority (SMEDA), to help ensure the adoption of best practices and streamlining SME-development initiatives
- Create and empower public-private platforms for SMEs Development to ensure that the momentum of pro-SME reforms continues with continuous input from the private sector
- Digital transformation needs to proactively pursued for both SME-support institutions, in public & private sectors, and for SMEs
- Strengthen the evidence-base to assess the business development support (BDS) service needs of SMEs and evolve a 'match-making' digital interface between BDS service providers and SMEs
- Develop 'Skills Development' initiatives, like Ministry of IT's Digi-Skills program, to help upskill the youth and women with the capability to earn from home
- Evolve e-Governance models, like Sindh Business Registration Portal, to facilitate businesses in easily navigating the regulatory system of the province

- Foster an ecosystem of rigorous and robust 'Research & Development' institutions that incentivize quality research for catalyzing innovations
- Evolve a 'Triple-Helix Model' of Innovation such that Academia, Industry, and Government work in unison to create phase-wise SME development plans with sectoral priorities to ensure that the resources are efficiently spent on the growth of competitive SMEs
- In light of the recent floods, an extensive damage assessment of the Industrial Estates, Industrial Parks, and overall SMEs in Sindh needs to be undertaken. Government should design dedicated subsidy programs for SMEs to not only mitigate the impact of damage due to the floods, but also incentivize innovations to improve the competitiveness, resilience and sustainability of the enterprises in Sindh.



Evaluation Framework for Development Projects 2022

Acronyms

ADP	Annual Development Programme
ARR	Average Rate of Return
CBA	Cost – Benefit Analysis
CM	Chief Minister
DG	Director General
FD	Finance Department
GoS	Government of Sindh
GoP	Government of Punjab
IEC	Information, Education and Communication
IT	Information Technology
LFA	Logical Framework Approach
M&E	Monitoring and Evaluation
MEC	Monitoring and Evaluation Cell
MIS	Management Information System
MPR	Monthly Progress Report
MSDP	Municipal Services Delivery Program
NPV	Net – Present Value
O&M	Operations & Management
P&D	Planning and Development
P&DD	Planning and Development Department
PBP	Pay – Back Period
PC	Planning Commission
PCFMS	Planning Commission Forms Management System
PERI	Performance Evaluation Rating Index
PEST	Political, Economic, Social & Technological
PSDP	Public Sector Development Programme
RBM	Result – Based Management
ROI	Return on Investment
SAR	Sponsor’s Assessment Report
SPSS	Statistical Package for the Social Sciences
SWOT	Strengths, Weaknesses, Opportunities and Threats

Introduction to Evaluation

Evaluation is a continual process that can take place at three different stages that are, Ex-ante evaluation (pre-inception), on-going project evaluation, and evaluation at-the-end of the project (Terminal Evaluation) or ex-post evaluation (after the project completion) to assess the actual progress or result of an activity, project or programme relative to the anticipated progress or results from a project. The purpose of an Ex-ante evaluation is to pre-emptively assess the viability and feasibility of a project before it is initiated to ascertain returns on investment associated with the project. Ex-post evaluation of a program helps to offer concrete lessons learned and provides valuable information about an executed project or programme for future evidence-based decision-making. The decision is formed and concretized by comparing the evidence as to what it should be (desired results) to the results created by the project or programme (actual results). To fill the information gap between the positive (actual results) and the normative (desired results), an effective evaluation is required. The information generated from the evaluation process is useful for ongoing projects as well as other completed and planned projects. The focus of the 'evaluation' is to determine the relevance and fulfillment of the objectives, development efficiency, effectiveness, impact, and sustainability of a programme.

Evaluation is a very important tool in the overall Monitoring and Evaluation (M&E) System which enables to review the planned and actual inputs and activities to assess how effectively they have achieved the desired outcomes and outputs.

EVALUATION	
Description	
Basic Purpose	Strategic decision-making, Improving effectiveness, impact and future planning
Main action	Assessment
Reporting	By mid-term or after the project has ended, detailed evaluation reports
Focus	Effectiveness, relevance, appropriateness, impact, cost-effectiveness and growth of project
Information Sources	Primary & Secondary data, self-evaluation, interactive evaluation, Interviews, focus group discussions, observations, surveys, progress report (baseline survey, mid-line survey & end-line survey) throughout the project
Undertaken By	Project staff (in conjunction with beneficiaries) & external evaluators
Conclusion	Lesson learned, what has worked & what has not, with recommendations for project improvement

Exhibit 1

[Source: MSDP. (2013, March). M&E Manual – Sindh Municipal Services Delivery Program (MSDP). RSPN]

Monitoring and evaluation of a project play a vital role to offer consolidated information on the assessed progress of a project. The crucial benefits of the monitoring and evaluation (M&E) framework are that it gives explicit and brief information to assist the efficacy and/or effectiveness of a programme/project.

The Planning & Development Department (P&DD)– Government of Sindh has the responsibility of planning, appraising and processing all the development schemes, programs and proposals submitted by other Departments and making recommendations to the government for an annual development

plan, given the fiscal space and resource constraints, to deliver the optimal outcomes. P&DD is the custodian of the Annual Development Plan (ADP) and has to be cautious with the use of public resources and capital investment in any programme, project or any other initiative. Development budget is inextricably linked to strengthening the public finances system through an effective result-based management. The public sector's resources and investment in any programme can be evaluated by different evaluation methods, such as financial & economic evaluation methods to assess and quantify the 'return on investment – ROI' associated with any project/programme.

Evaluation is an efficient method of studying a programme, project, practice, or initiative to determine how well it attains its objectives. Evaluations assist in determining what works well and where improvements can be made in a project or initiative to get the desired results in current/ongoing project or related programs in the future. Evaluating project results helps to provide the answers to key questions like:

- What progress has been made? What has been improved and has to be improved?
- Were the anticipated results achieved? If not, then Why?
- Are there other different techniques that can help refine the project processes and activities to accomplish better and improved outcomes?
- Do the project results justify the project inputs?

Types of Evaluation

There are many types of evaluation undertaken for different types of Projects depending on the nature of project e.g., Internal Evaluation, External Evaluation, Interim Evaluation, Completion Evaluation, Mid-Term Evaluation, Process Evaluation, Impact/ Outcome Evaluation and Summative Evaluation. However, the Planning Commission of Pakistan outlines the following three types of project evaluation:

- I. Ex-Ante (Pre-Project) Evaluation
- II. Mid-Term (Ongoing Project) Evaluation
- III. Terminal Evaluation/Ex-post (Post-Project) Evaluation

I. Ex-Ante (Pre-Project) Evaluation

This type of evaluation which is also known as "Design Evaluation" is carried out at the planning/ designing stage of the project. The purpose of this evaluation is to carefully examine the Program objectives, the strategy to be implemented in order to achieve those objectives and the resources to be made available as inputs. PC-I proforma helps with the ex-ante evaluation, they are prepared to get an idea about the credentials of a project to ascertain its viability at the initial stage i.e., project planning. PC-II proforma is for the Mega Projects (high cost with infrastructure component) that require consultancy for feasibility. This proforma is centered on conducting the feasibility of a project for providing the recommendations in the case of mega projects where the cost of consultancy, project duration, manpower, and financial plan is mentioned. According to the Federal Planning Manual 2021, conducting feasibility is necessary for projects costing more than Rs. 500 million with the infrastructure component making up at least 30% of the cost.

II. Mid-Term (Ongoing Project) Evaluation

Mid-Term Evaluation is carried out at the mid-way of the program implementation period as is evident from its name. From the existing public sector framework, PC-III proforma is used as a monthly progress report for ongoing projects; however, the scope of mid-term evaluation is broader. It is conducted to re-examine the aspects (resource allocation, changes in program design or approach, implementation gaps, etc.) related to the program. This evaluation gives the opportunity to make timely modifications and/or rectifications to ‘problematic’ aspects for course-correction in a programme/project to get the desired results.

III. Terminal Evaluation/Ex-Post (Post-Project) Evaluation

Terminal evaluation is carried out at-the-end/completion of the Program. The purpose of this evaluation is to discover and compare the actual results to the desired results that were expected to achieve by the implementation of a Project/Program. The area of focus of this evaluation is the outputs and/or outcomes of a project which helps depict a holistic picture to analyze if the resources allocated/utilized in the initiative have produced the desired outputs and outcomes. PC-IV and PC-V Proformas help with the terminal evaluation to demonstrate if the actual results were achieved from the project as compared to the target that was desired to be achieved or not. The Project director/ executing agency submits the PC-IV proforma at the time of the completion of the programme/project and PC-V proforma is to be submitted annually after the completion of the project for the next three to five years to ensure that the public sector investment project benefits are sustained with proper O&M beyond the completion period. PC-IV is synonymous with the project completion report and PC-V with impact evaluation.

[Source: MSDP. (2013, March). M&E Manual – Sindh Municipal Services Delivery Program (MSDP). RSPN]

Financial Evaluation Methods

The government invests substantial time and effort in budget planning and formulation every year. The Government of Sindh has a sizeable annual development portfolio with a plethora of new and ongoing projects and such projects are executed to have a long-term positive societal and economic impact. Therefore, a combination of various methods of capital budgeting like Net Present Value – NPV, Internal Rate of Return – IRR and Cost-Benefit Analysis - (CBA) are used to select the best project possible in order to provide the highest quality outcomes and effective results.

Following are the methods that can be used for the financial evaluation of the programme/project. It is ideal to choose the optimal mix of approaches to effectively quantify the ‘return on investment’.

Static Approach

1. Pay Back Period – PBP
2. Average Rate of Return – ARR

Dynamic Approach

1. Net Present Value – NPV
2. Internal Rate of Return – IRR
3. Cost – Benefit Analysis (CBA)

Pay Back Period – PBP

The payback period (PBP) is the time required to earn back the invested cost. It is a simple method to evaluate the risk related to the project. An investment of capital with a lower payback period is considered better.

Pay Back Period can be calculated by using the following formula:

$$\text{Pay Back Period} = \frac{\text{Cost of Investment}}{\text{Average Annual Cash Flow}}$$

Average Rate of Return – ARR

Average Rate of Return (ARR) also known as the “Accounting Rate of Return” refers to the average return expected on investment over the life of the project. It is the method to evaluate the profitability of the investment projects but ARR does not consider the time value of money.

Average Rate of Return can be calculated by using the following formula:

$$\text{Average Rate of Return} = \frac{\text{Average Annual Profit}}{\text{Initial Investment}}$$

Net Present Value – NPV

NPV method is used in investment planning and capital budgeting in order to measure the profitability of the invested capital or projects, similar to accounting rate of return (ARR) except the fact that NPV it considers the time value of money, translating future cash flows into the value of today’s dollars.

Net Present Value can be calculated by using the following formula:

$$NPV = \frac{\text{Cash flow}}{(1+i)^t} - \text{initial investment}$$

Where:

i = required return or discount rate and

t = number of time periods.

Internal Rate of Return – IRR

If there are multiple projects to be executed by the government, where the cost of investment remains the same, then IRR will be used to rank the projects and select the most profitable one. The Internal Rate of Return (IRR) is the discount rate that makes the net present value (NPV) of a project zero. The higher an internal rate of return, the more desirable an investment is to undertake.

Internal Rate of Return can be calculated by using the following formula:

$$NPV = \frac{\sum_0^t C_t}{(1 + IRR)^t} - C_0 = 0$$

Where:

Ct = Net cash inflow during the period t

Co = Total initial investment costs

IRR = The internal rate of return

Cost – Benefit Analysis (CBA)

A cost-benefit analysis (CBA) is a method that is used to estimate the costs and benefits decisions in order to find the most cost-effective and profitable alternative among the projects. An effective CBA evaluates the following costs and benefits:

COST	BENEFIT
Direct Cost	Direct Benefits
<ul style="list-style-type: none"> Labor Cost 	Revenue
<ul style="list-style-type: none"> Manufacturing Cost 	Sales
<ul style="list-style-type: none"> Material Cost 	Profit
<ul style="list-style-type: none"> Inventory Cost 	Indirect Benefits – Benefits that can't be measured (E.g., Programme Awareness, Community Interest, etc.)
<ul style="list-style-type: none"> Additional Cost 	Total Benefits <ul style="list-style-type: none"> Direct/indirect benefits Intangible benefits (such as improved public safety and morale, high satisfaction, etc.) Benefits to the communities and society (such as healthcare, education, welfare services etc.) Benefits as positive externalities/spillovers –such as government providing the facility of libraries for community use, free education system, free vaccination for public etc.)
<ul style="list-style-type: none"> Indirect Cost (Fixed Expenses, Utilities, Rent, Transportation) 	Net Benefits
<ul style="list-style-type: none"> Intangible Cost (Any current and future costs that are difficult to measure and quantify) Lower Satisfaction, Decrease in productivity levels, etc. 	
<ul style="list-style-type: none"> Opportunity Cost 	

If the benefits of the project outweigh the project's costs, it can be decided (subject to resource availability) that it is a viable decision to invest in a project. Whereas, if the costs of the project outweigh the benefits, then it is usually not advisable to undertake the project.

The Payback Period and Accounting rate of return are easier to calculate being a static method. However, the dynamic approach i.e., Net Present Value, Internal Rate of Return and Cost- Benefit Analysis are highly preferred as they are more effective and these methods consider a greater number of factors and also the time value of money. Every method yields different results to the question "Which is the best project to choose?", but it depends on the project's objective, necessity, social welfare impact and advice from technical experts (financial/economic analyst).¹

Benefits Of Project Evaluation

Project evaluation is a continuous strategical process that is used to determine the efficacy and/or effectiveness of the programme/project. Some of the benefits of project evaluation are as follow:

i. Budget/Resource Utilization

Project Evaluation will help in tracking the project's budget and resources to ensure if the resources are being under- or over-utilized. Budget and resource tracking can also help increase the profitability/effectiveness by highlighting any project risk related to cost & resources for effective mitigation measures.

ii. Achievement of Goals and Objectives

Project evaluation increases the chance that the project's desired goals and objectives are being achieved.

iii. Indicating Areas for Improvement

Through project evaluation, it is easy to identify the areas that need to be improved and identifying the stumbling blocks that need to be redesigned with improved strategy or a better approach. As one tracks project progress, he/she can precisely assess what practice/approach should continue and what needs to be changed for the better during the project or for the next project of a similar nature.

iv. Provides Direction

Project evaluation provides direction to make more strategic decisions for effective results. Furthermore, evaluation of completed projects helps generate credible evidence of subsequent planning and designing for future similar projects.

¹ For detailed financial & economic analysis, refer to Research & Training Wing's (P&DD) '[Practical Guide for Financial & Economic Analysis of PC-I Proposals](#)'

Benefits and Challenges in Monitoring and Evaluation

Benefits:

- Transparency and accountability of a project
- Problems are identified at an early stage which helps to provide quick effective solution(s).
- Helps ensure resources are used efficiently
- Learning from mistakes, course-correction and rectification
- Improves decision-making by embedding evidence-based approach
- Helps to replicate the best projects/programs – what works best and what not, based on prior evaluations results

Challenges:

- Doing comprehensive Monitoring & Evaluation with time and cost constraints
- Conducting baselines at the initiation phase of every project might not be possible
- Identifying the realistic quantitative indicators and qualitative indicators
- Buy-in (lack thereof) from the entire spectrum of stakeholders for conducting evaluations
- Robust evaluation cannot function in a vacuum without a holistic decision-support system with a continuous feedback loop
- Project Cycle in Public Sector Development may not allow for in-depth evaluation of the entire development portfolio

Evaluation, if done properly, helps create a credible evidence-base for distinguishing programme/projects and interventions that make a significant impact from those that don't. Robust evaluation system can be a driving force for developing and adapting effective strategies, improving existing plans & programs, and demonstrating [and quantifying] the results of public sector investments. Although the evaluation process may be time consuming, costly and labor intensive, it helps embed evidence-based decision making in the public sector development process.

Introduction to Monitoring and Evaluation Cell (MEC)– Planning & Development, Government of Sindh

Monitoring Vs. Evaluation

Monitoring	Evaluation (Ex- Post)
Monitoring is done to compare the program's progress against the goals and targets laid down. It keeps a track of the project: what you are doing, while you are doing it	Evaluation is implemented to check the effectiveness of the overall project. It helps to identify if the project has achieved what it was aimed to achieve after the implementation of the activities has been finished

Monitoring and Evaluation

Monitoring and evaluation are essential quality management tools to observe and analyze the progress of development schemes and to proactively raise an alert where interventions are required by the decision taking authorities. Not only the government benefits from the evaluation, but so does the community for which these projects are designed and implemented. Based on the in-depth knowledge and objective input of the Monitoring & Evaluation Cell (Planning & Development Department), the Administrative Departments rectify or modify the designs and their activities for a more effective, efficient and better results in their respective works. M&E Cell has established an ADP Progress Monitoring Dashboard with the World Bank support to monitor the progress of development schemes.

[Source: MEC - P&DD. (n.d.). Monitoring and Evaluation. Monitoring and Evaluation Cell (MEC), Planning and Development Department, Govt. of Sindh]



Exhibit 2

[Source: MEC - P&DD. (n.d.). Effective Result Based Monitoring & Evaluation [Image]. Monitoring & Evaluation Cell (MEC), Planning and Development Department, Govt. of Sindh]

Functions of Monitoring & Evaluation (M&E) Cell

The M&E Cell deals with the following subjects:

- Monitoring of Provincial ADP
- Verification of physical & financial progress of development schemes
- Provide Proactive Indicators from the Field for Stronger
 - accountability in the use of resources;
 - focus on achievement of results;
 - resolution of bottlenecks/issues;
 - basis for timely decision-making.
- Use IT to increase efficiency & build the knowledge-base
- Coordinate & Review PSDP projects executed by GOS, Directives & Assembly Questions
- Provide MIS knowledge to P&D Department and other organizations

Additional Assignments:

- CM directives
- President & Prime Minister Directives
- Supporting World Bank Reforms Initiative
- Scrutiny & submission of PC-IV to the Finance Department
- Department and District wise reporting of monitoring
- Conduct Mid-year Review meeting of ADP schemes with all Departments
- Maintain Monthly Progress Reports (MPR) of all departments
- Summarize, Analyze & Circulated financial release position of ADP
- Coordinate & maintain record of PSDP executed by Sindh

[Source: MEC - P&DD. (n.d.). Functions. Monitoring and Evaluation Cell (MEC), Planning and Development Department, Govt. of Sindh]

Organizational Structure of the Monitoring and Evaluation Cell (MEC) – Planning and Development Department (P&DD)

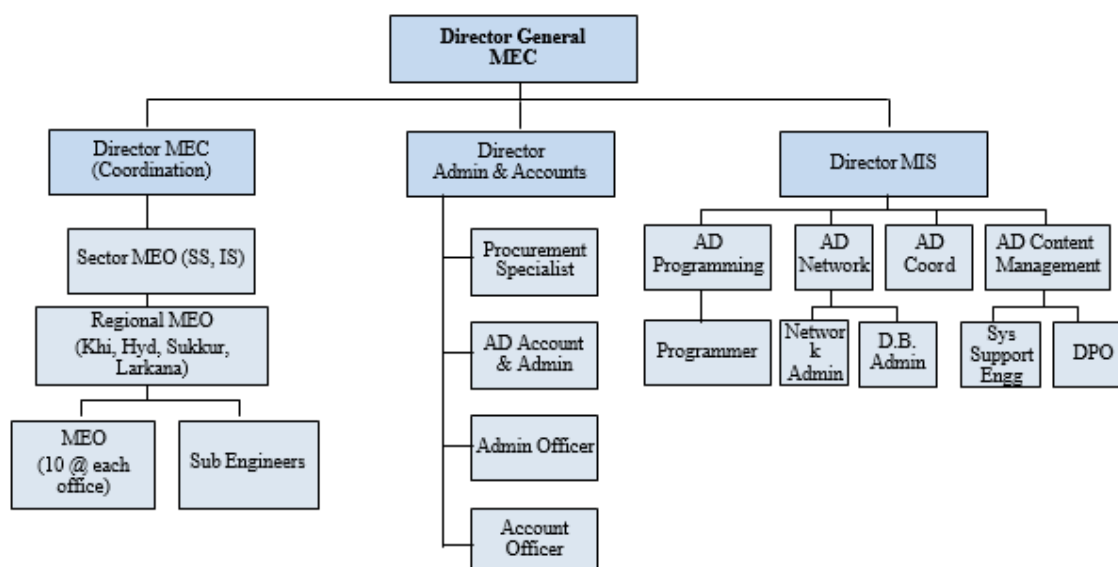


Exhibit 3

[Source: Sindh Planning Manual Draft. (2022). Planning & Development Department, Govt. of Sindh]

Project Evaluation W.R.T. Monitoring & Evaluation Cell (MEC) – Planning & Development Department (P&DD)

As we can see in the above functions of Monitoring & Evaluation Cell (P&DD), the main focus of MEC is on monitoring of projects rather than both holistic monitoring and evaluation. The purpose of this evaluation framework is to provide a roadmap to evaluate the development projects (ongoing and completed) of the Government of Sindh. In order to ensure the effective management of provincial budget and financial resources, it is imperative to implement suitable methods for evaluating programs and projects of Planning & Development.

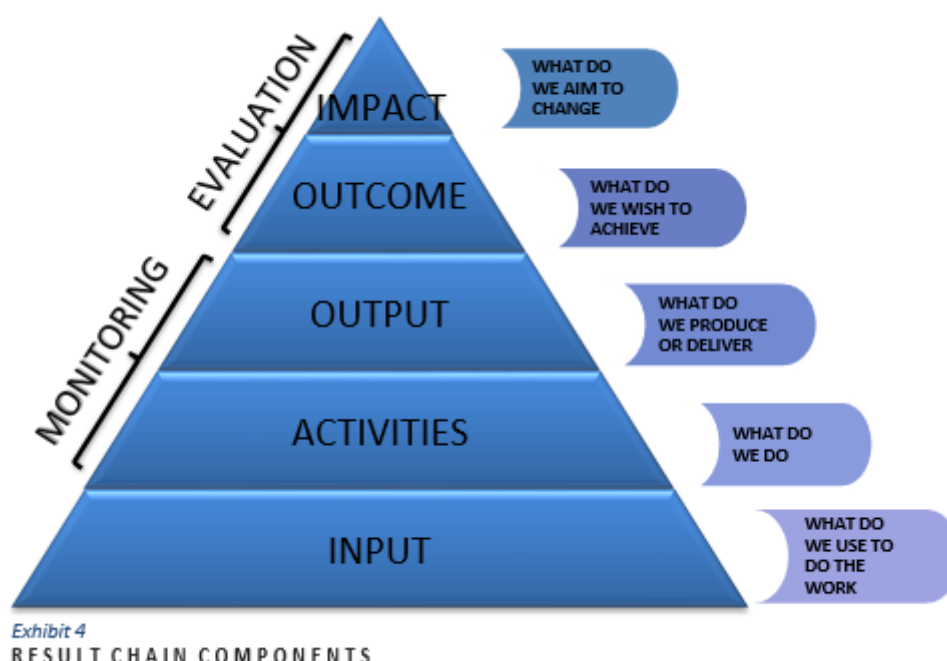
Components of M&E System/Result Chain

An M&E System delivers comprehensive evidence on inputs, activities, outputs, outcomes, and Impact/result. This can be done by formulating a comprehensive Monitoring & Evaluation Plan.

- **Inputs:**
The resources used/deployed to commence various programs/initiatives are the “Inputs” that produce the “outputs”. Input can also be defined as the human resources, finance, equipment, knowledge, information, and other resources necessary for carrying out the planned outputs and reaching expected results. In simple terms, these are the financial, human, and material resources necessary to produce the intended outputs of program/project.
- **Activities:**
Activities are the actions or a process performed in a program/project to produce specific outputs by using the above-mentioned inputs. The procedure is undertaken to reach the program’s objectives and these activities are designed and executed to produce the intended results (outputs).
- **Outputs:**
Outputs are the tangible or intangible things produced by the project through comprehensive management of the agreed inputs. It is easy to Measure and quantify the outputs of a program. Outputs include goods, services or infrastructure produced by a project. For example; the number of trainings conducted/number of people trained, number of workshops held, number of recycling bins installed, etc. can all be termed as outputs of a project.
- **Outcomes:**
An outcome is a change we hope to achieve as a result of what we do. Which will help to achieve the ultimate goal of the intervention/project. Outcomes are often difficult to measure as compared to outputs as they often relate to an individual’s perceptions, self-esteem, emotions, or other second-level results that are not in direct control of the program. Simply put, establishing a causal chain to link the change in ‘outcomes’ attributable to the project can be difficult.

- Impact:**
 The impacts are long-term or indirect effects of the outcome of a program/project, Impact is an ultimate objective and long-term goal that you seek to achieve. It's very challenging and most difficult to measure the impacts of a project/intervention. Example of Impact may include; Poverty reduction, Improved quality of education, reduced unemployment, etc.

[Source: Analytics in Action. (2021, July 8). Definition of output, outcome and impact with examples]



Result Chain Components with Examples

COMPONENT	DEFINITION	EXAMPLES
INPUTS	The resources that are required for the project, programme or intervention (financial, human resources, material and information resources)	<ul style="list-style-type: none"> Finances and resources for constructing a road Human Resources and Investment for building a school Information, Education and Communication (IEC) materials required for conducting awareness campaigns
ACTIVITIES	Actions taken by the use of input in order to produce the desired outcomes	<ul style="list-style-type: none"> Road Construction Schools/Hospitals Construction Trainings Conducted

OUTPUTS	End product or services available that result from the completion of activities within specific time period	<ul style="list-style-type: none"> • Building of 100 Km Road from farm to market • Building of double story secondary school for girls in rural area • Training for 300 health workers on polio vaccination
OUTCOME	A change that is expected to occur in targeted population once one or more outputs have been delivered	<ul style="list-style-type: none"> • Increased access to and use of roads by farmers of the specified area • Increased access and use of the school by girls of the specified area • Increased ability of health workers to address the polio problem in the specified area
IMPACT	It is a long-term aim of a project or intervention that a project seeks to achieve. It implies changes in living situation of targeted people which can be the changes in knowledge, skill, behavior, health or living conditions for children, adults, families, communities and overall economy	<ul style="list-style-type: none"> • Increased economic prosperity of a rural areas due to use of Farm to market roads • Improved equitable learning outcomes of all girls and boys in rural area • Polio free area

[Source: Sindh Planning Manual Draft. (2022). Planning & Development Department, Govt. of Sindh]

Recommendation – M&E Cell (Evaluation Unit)

Monitoring and evaluation, being a critical part of the project cycle of the Planning and Development Department, should not only concentrate on the 'Monitoring' part of ongoing development schemes but also prioritize the 'Evaluation' part equally. The better approach, to evaluate the projects of Sindh Planning & Development, is to follow a suitable evaluation framework and having a dedicated Evaluation unit with the requisite expertise to focus on the evaluation of projects, especially the completed projects.

The Evaluation Unit should focus on developing an online evaluation report database as an electronic catalogue to store evaluation reports by the categories as per year, type, location/district or department. The report's abstracts can be made available publicly and full reports can be provided upon specific request.

The Evaluation Unit can be responsible to look over all the evaluations. With proper assistance from project managers and concerned officials, the evaluation unit could prepare an annual report highlighting the significant lessons learned from the evaluation of the project during the year which will help in the execution of potential projects.

The role of 'Evaluation Unit' can be defined and centered on 'coordination' as transparency dictates 'third-party' evaluation of projects. With a well-defined evaluation framework, 'Evaluation Unit' can function as a coordination body to oversee evaluations by third-party evaluators and preparation of annual meta-assessment/evaluation reports that consolidate the findings of evaluations for major sectors.

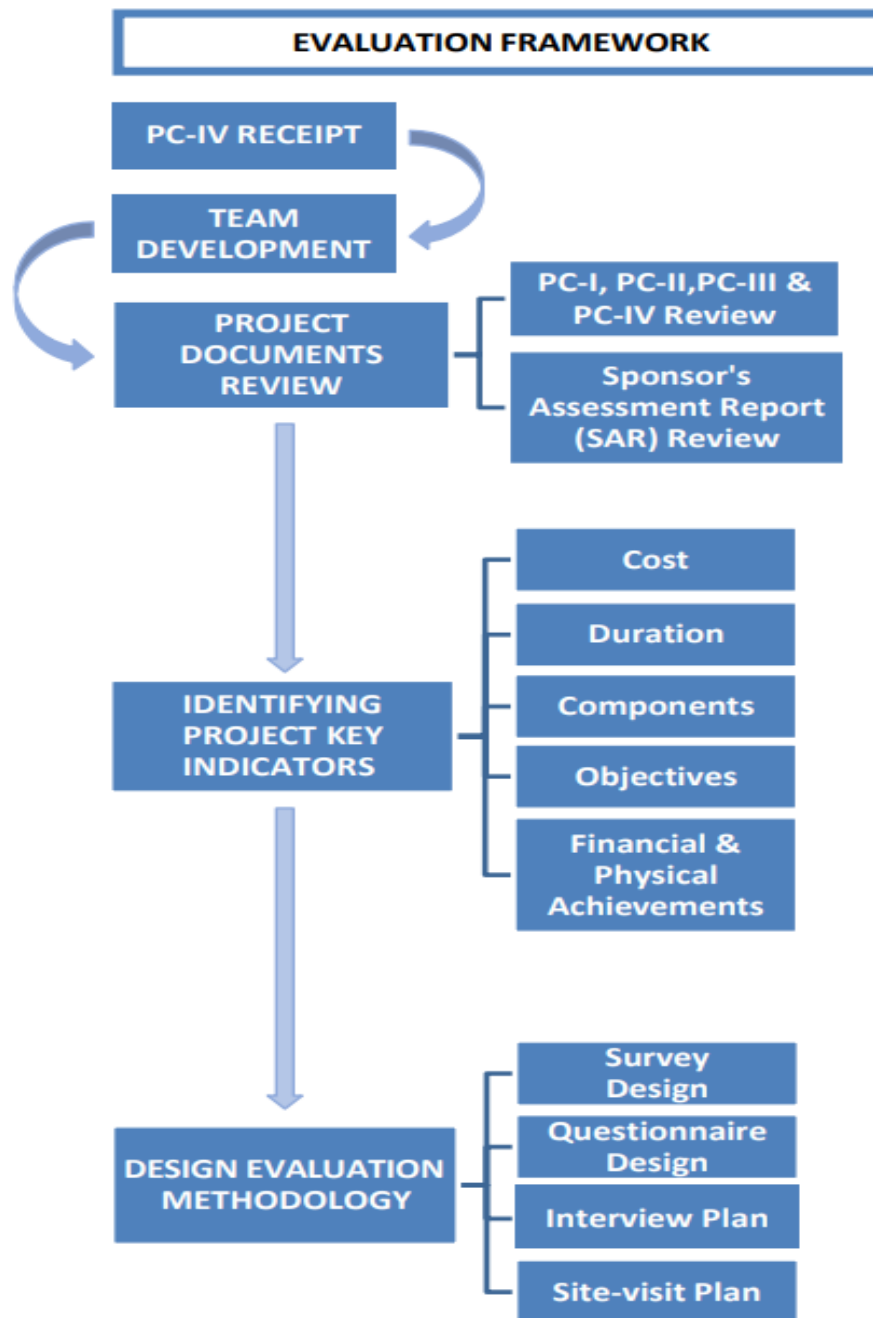
The findings and recommendations that emanate from the 'evaluations' must be incorporated to inform subsequent planning. For example, if an evaluation recommends that a 'Theory of Change' must be delineated in the PC-I of Social Sector Projects, then such recommendations must be embedded in the planning system for future project proposals.

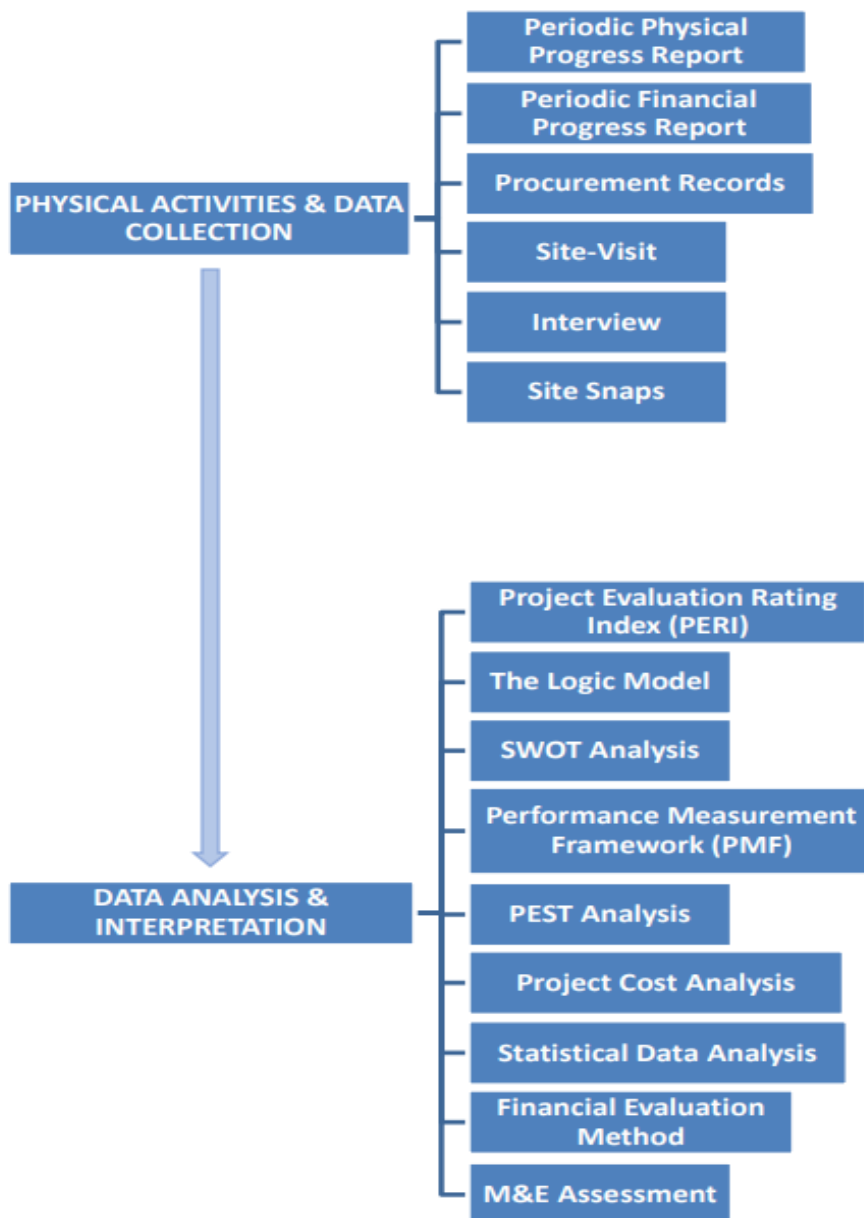
Evaluation Framework

An Evaluation framework offers an overall outline for evaluations for different programs/projects giving a clear understanding of objectives and goals. Using an evaluation framework is crucial to effectively and efficiently assess the progress and impact of the program. An evaluation framework is a significant tool to classify and link evaluation objectives, outcomes, indicators, data sources, and data collection methods and techniques. A framework helps inform and streamline how the programme is supposed to work by highlighting the key components of the programme, process or the steps needed to achieve the desired results.

From the planning perspective, the evaluation framework can be especially useful in clearly defining a results-based framework with a logical causal chain from inputs to impacts along with corresponding quantifiable indicators for each aspect of the project. An evaluation framework can help appraise, analyze, and scrutinize all the aspects of a proposed, ongoing, and/or completed project. Ideally, the framework must be incorporated in the project proposal in order to streamline the project monitoring & evaluation process throughout the project cycle. The evaluation framework can help streamline the process for both Monitoring & Evaluation Cell (P&D Department) and the Executing Agencies/Provincial Line Departments.

There are several common types of frameworks used in evaluation processes such as Results Chain, Logical Framework Approach (LFA), Result Framework, Performance Measurement Framework (PMF). The frameworks are key elements of M&E Plans which delineate the components of a program/project and the sequencing of various steps that are required to achieve the desired outcomes. The framework for evaluation is defined below to have a clear understanding.





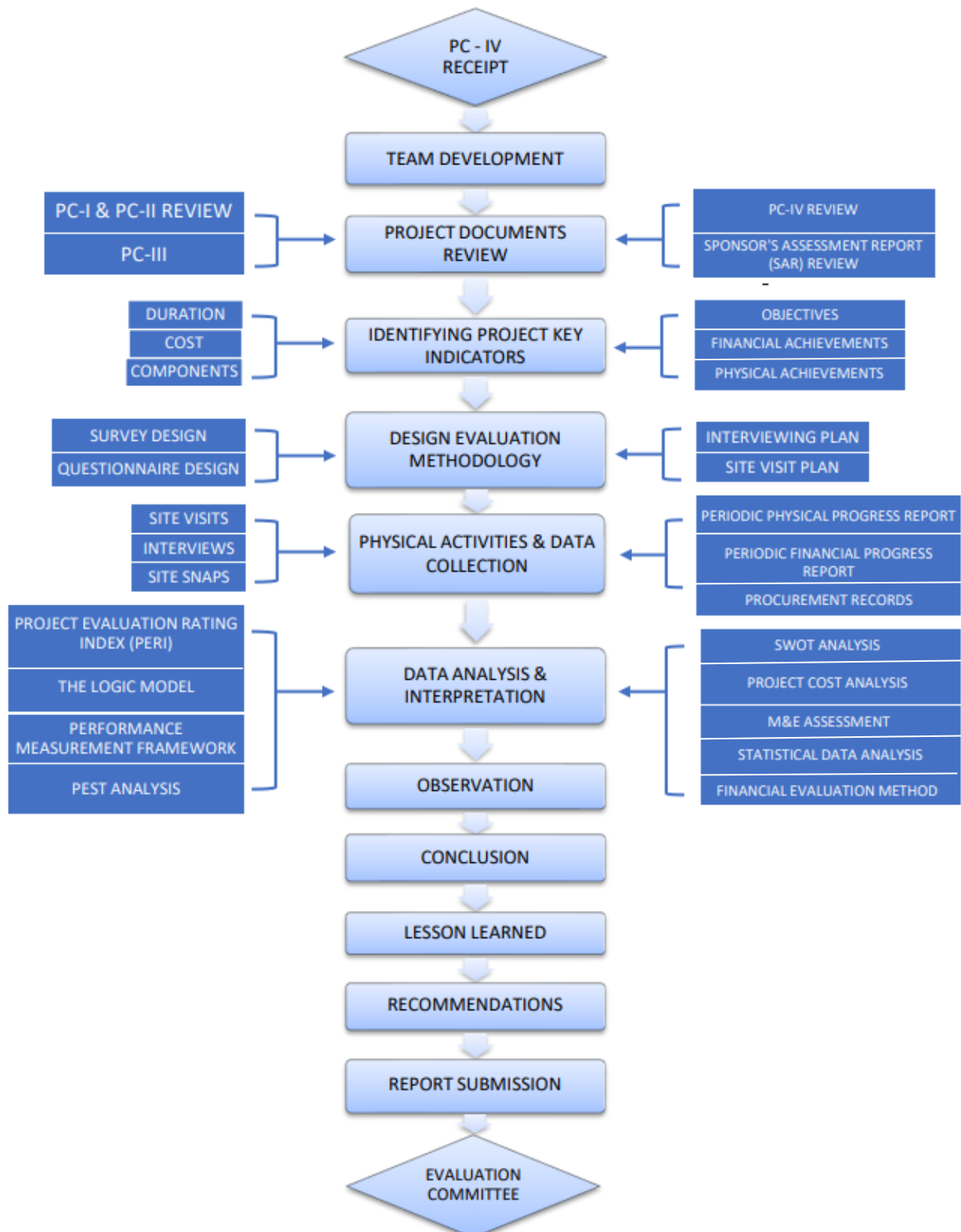


Exhibit 5

[Source: DGM&E. (2012, June). DGM&E Evaluation Guidelines]

S.No.	PROCESS COMPONENTS	DESCRIPTION
1	PC-IV RECEIPT	<ul style="list-style-type: none"> PC-IV of the completed ADP projects is submitted to MEC by line departments to identify the purpose of the evaluation MEC officials categorize the project for evaluation
2	TEAM DEVELOPMENT	<ul style="list-style-type: none"> Development of team is done on the basis of the qualification & experience of individuals
3	PROJECT DOCUMENTS REVIEW	<ul style="list-style-type: none"> Before proceeding with evaluation plan, a thorough review of the project data and documents is to be done to have a wide picture of a project, following are the documents to be reviewed:
		PC-I, PC-II, PC-III and PC-IV Review
		<table border="1"> <tr> <td>SPONSOR'S ASSESSMENT REPORT (SAR) REVIEW</td> <td> <ul style="list-style-type: none"> SAR report is submitted by sponsoring department, it is reviewed to know about the project description summary, financial/physical achievements against planned targets and objectives and later these details are discussed & included in evaluation report </td> </tr> </table>
SPONSOR'S ASSESSMENT REPORT (SAR) REVIEW	<ul style="list-style-type: none"> SAR report is submitted by sponsoring department, it is reviewed to know about the project description summary, financial/physical achievements against planned targets and objectives and later these details are discussed & included in evaluation report 	
4	IDENTIFYING PROJECT KEY INDICATORS	<ul style="list-style-type: none"> The input of the project is converted into the measurable indicators to obtain a comprehensive understanding regarding project's objective. Following can be some major Key Indicators of a programme:
		○ FINANCIAL ACHIEVEMENTS
		○ PHYSICAL ACHIEVEMENTS
		○ OBJECTIVES
		○ COST
		○ COMPONENTS
○ DURATION		
5	DESIGN EVALUATION METHODOLOGY	<ul style="list-style-type: none"> After selecting key indicators of a programme, an evaluation methodology design is planned for the collection of data for the analysis to be done later in order to get outcome/results of a programme. one or all of the following methods can be used to gather data.
		<table border="1"> <tr> <td>SURVEY DESIGN</td> <td> <ul style="list-style-type: none"> A survey design is made based on the programme/project, some projects require multiple site visits, some projects require interviewing plan which can be a focused group discussion/one-on-one interview from influenced party and depending on project a questionnaire survey is also conducted. </td> </tr> </table>
SURVEY DESIGN	<ul style="list-style-type: none"> A survey design is made based on the programme/project, some projects require multiple site visits, some projects require interviewing plan which can be a focused group discussion/one-on-one interview from influenced party and depending on project a questionnaire survey is also conducted. 	

		QUESTIONNAIRE DESIGN	<ul style="list-style-type: none"> • Before the site visit, different questionnaires are designed to gather data and information for evaluation analysis. Their responses are essential for the evaluation purpose.
		INTERVIEWING PLAN	<ul style="list-style-type: none"> • Interviewing plan is made to evaluate the response of the officials and beneficiaries which is essential for the evaluation analysis • The interviews can be conducted for the project officials, project managers or target group (All parties involved in a project)
		SITE VISIT PLAN	<ul style="list-style-type: none"> • The multiple site visit plans are made for the verification of the objective. • The sponsor's department are informed well before the visit to make arrangements
6	PHYSICAL ACTIVITIES & DATA COLLECTION	<ul style="list-style-type: none"> • Data will be gathered through a right method of data collection, one or multiple methods can be used to collect data depending on the project and its indicators which can be Qualitative/Quantitative or both. <p>The methods that are used commonly are:</p> <ul style="list-style-type: none"> ○ Literature review, Secondary data and Statistical review ○ Observation ○ Questionnaire Survey ○ Interviews, Focus Group Discussion 	
		PERIODIC PHYSICAL PROGRESS REPORT	<ul style="list-style-type: none"> • Physical progress report includes the items used for project including their units & quantities, this progress report shows the progress monthly, quarterly or annually.
		PERIODIC FINANCIAL PROGRESS REPORT	<ul style="list-style-type: none"> • Financial progress report includes cost of the project, funds, donations, provincial/federal shares, installment details etc.
		PROCUREMENT RECORDS	<ul style="list-style-type: none"> • The record of all of the materials, expenditures and services required for the project.
		SITE VISITS	
		INTERVIEWS	
		SITE SNAPS	

7	DATA ANALYSIS & INTERPRETATION	<ul style="list-style-type: none"> After the collection of data, all the information will be interpreted through various methods of interpretation and depending on project, the data analysis is to be done to get the results of a project which later be shared with concerned parties. Some of the different analysis models/approaches are as followed:
	PROJECT EVALUATION RATING INDEX (PER)	<ul style="list-style-type: none"> A score-sheet to rate the performance of the project which will be analyzed for the evaluation (See Exhibit 12)
	THE LOGIC MODEL	<ul style="list-style-type: none"> This model will provide a helpful guide to what you want to achieve and how you'll get there. (See Exhibit 7)
	PERFORMANCE MEASUREMENT FRAMEWORK	<ul style="list-style-type: none"> This framework recognizes the indicators that are essential to monitor and measure the performance of a program/project (See Exhibit 8)
	PEST ANALYSIS	<ul style="list-style-type: none"> The PEST analysis reveals the political, social, economic and technological position of a project, i.e., all these factors influence project's activities, process, performance and outcome. (See Exhibit 10)
	SWOT ANALYSIS	<ul style="list-style-type: none"> SWOT method is used to evaluate the Internal (Strengths/Weaknesses) and External (Opportunities/Threats) factors of a program to identify the favorable/unfavorable aspects to achieve project target (See Exhibit 9)
	PROJECT COST ANALYSIS	<ul style="list-style-type: none"> This analysis is used to determine the value of a project's costs and benefits, which focuses to analyze if a project is feasible or not. (See Exhibit 11)
	STATISTICAL DATA ANALYSIS	<ul style="list-style-type: none"> Data collected from site visits, interviews and survey questionnaire is statistically examined using software like SPSS and others & results are represented for further Interpretation

		FINANCIAL EVALUATION METHODS <ul style="list-style-type: none"> • Static Approach <ol style="list-style-type: none"> 1. Pay Back Period – PBP 2. Average Rate of Return – ARR • Dynamic Approach <ol style="list-style-type: none"> 1. Net Present Value – NPV 2. Internal Rate of Return – IRR 3. Cost – Benefit Analysis (CBA)
		MECASSESSMENT
8	OBSERVATION	<ul style="list-style-type: none"> • Data findings that have been gathered through selective statistical methods along with graphical representation which shows the overall analysis will be provided by the Section
9	CONCLUSION	<ul style="list-style-type: none"> • The findings/results extracted by doing the data analysis, data findings, results from interviews/rating progress reports and surveys will be explained by the section concerned and will be proven, based on results if the project intervention was a success or a failure. (See Exhibit 13)
10	PC - V REVIEW	<ul style="list-style-type: none"> • PC-V is an annual performance report after completion of project, it will be reviewed to analyze the progress of the project and the information will facilitate to carry out the best results for evaluation. it gives a clear idea about the project's actual and desired results. (See Exhibit 14)
11	LESSON LEARNED	<ul style="list-style-type: none"> • Lesson learned will focus on the identification of a project's success or failure. It will recommend how this project can be further improved by using specified plans, frameworks, policies or strategic design to facilitate the project execution in future. • The Project Manager will present the report of the lesson learnt to the stakeholders/sponsors and other parties involved in project. • A report should present an overview of project strengths/weaknesses including: <ul style="list-style-type: none"> ○ What went right ○ What went wrong ○ What is needed to be improved ○ How it can be improved/Recommendations
12	RECOMMENDATIONS	<ul style="list-style-type: none"> • Suggestions and recommendations to improve the project will be provided by the concerned Section/Project manager, these recommendations will tell how some problematic areas can be resolved by choosing what tools, methods, processes or techniques.
13	REPORT SUBMISSION	<ul style="list-style-type: none"> • A final report will be submitted at the end which will provide the overall final evaluation report by including project details, data collection methodology, results/findings, lesson learned and recommendations

		<ul style="list-style-type: none"> • It will also include all kind or reports relating to project evaluation i.e., <ul style="list-style-type: none"> ○ Progress report ○ Financial report (quarterly, Monthly & Annually) ○ Physical report (quarterly, Monthly & Annually) ○ Mid-term assessment report ○ Minutes of meeting ○ PERI ○ Procurement record ○ Others (if any) • The final evaluation report will be submitted to Sr. Chief (Monitoring & Evaluation) P&DD, & Head of the concerned department for their knowledge so later it can be discussed in evaluation committee meeting
14	EVALUATION COMMITTEE	<ul style="list-style-type: none"> • Evaluation committee is formed of the members of P&DD: • DG (MEC), P&DD, Secretary/representative of admin dept., Secretary/representative of executing dept., Project Director, Sr. Chief (Evaluation) P&DD and Evaluation Team (MEC) P&DD. • In an Evaluation committee, the completed projects are discussed with the involvement of project sponsors, stakeholders finance officials of P&DD and decisions are made as recommendations whether a project should be continued or not, how further actions can be taken etc. • Minutes of meetings will be prepared and circulated to the concerned departments/shareholders/sponsors involved in project.

Exhibit 6

Benefits of an Evaluation Framework

Some of the benefits of evaluation framework includes:

- Provides a roadmap and direction to analyze the results of a programme/project systematically and periodically
- Providing a chance to improve and modify the programme/project's goals, if evaluation provides evidence that course-correction can help achieve better results
- Determining the value-for-money and resources
- Recognizing what components of a program or initiative work/do not work and why
- Identifying areas that need improvement in order to ensure optimization of results/outcomes

Project Evaluation is a suitable strategy for differentiating programs and interventions that make an impact from those that don't. Evaluation generates numerous potential benefits for beneficiaries, stakeholders and the government to make decisions of budget allocation based on the results acquired from project evaluations. This recommended framework for program evaluation is both a synthesis of existing best practices and a set of standards for further improvement. It supports a practical approach to evaluation based on steps and standards that can be applied in almost any setting. The framework is adaptive and can be used as a customizable template to create useful evaluation plans to contribute to holistic public sector development understanding and improvement.

Models/Approaches Used for Data Analysis & Interpretation – Detailed

A project/programme requires adequate resources and efforts to provide the best possible outcome and to assess the project’s impact and performance. Numerous methods should be used for data analysis in order to determine how overall projects and the specific components perform and what strategic decisions can be made to improve the success rate of a programme/project.

Following are the Approaches and Models that can be adopted as framework(s) for evaluation:

- The Logic Model / Logical Framework Approach
- Performance Measurement Framework – PMF
- SWOT Analysis
- PEST Analysis
- Project Cost Analysis
- Project Evaluation Rating Index – PERI

The Logical Model

This Logical Model, also named as “Log-frame”, “Logical Framework Approach (LFA)” is an analytical tool for the objectives/goals-oriented projects planning and management. It designed to provide a helpful guide to what you want to achieve and how you’ll get there. This model shows logical connection between the inputs, processes/activities, and how they link to the program’s objectives (outcomes and impacts). Consequently, the logical model facilitates planning, execution and evaluation of project.

The five essential components are the same as described earlier i.e., Inputs, activities, outputs, outcomes and impacts. Performance Indicators/Targets, Means of Verification and Assumption and Risks form the columns of LFA whereas the five components stated above make its rows as exhibited in the table below to delineate the Log-Frame Approach:

Design Summary	Performance Indicators/ targets	Means of verification	Assumptions and risks
Input			
Activities			
Outputs			
Outcomes			
Impact			

Exhibit 7

[Source: Source: MSDP. (2013, March). M&E Manual – Sindh Municipal Services Delivery Program (MSDP). RSPN]

Performance Measurement Framework (PMF)

The Performance Measurement Framework is a tool used for Results Based Management (RBM). This framework ensures that the information collection of performance is done regularly and in a timely manner. PMF exhibits various components of a Program and the sequence of steps needed to achieve the desired outcomes.

This table represents an overview about:

- The expected goals, purposes or outputs of a project/programme
- How you will follow-up progress of the project (Qualitative/Quantitative indicators)
- The baseline and targets of a project. Setting a benchmark for each indicator to compare your actual result against it.
- What data sources (verification sources) will be used
- How you will collect data of a project (methodology & techniques)
- How often you will gather the performance information (frequency)
- Who's responsible for the data collection.

The main components of a PMF are organized in a matrix format as given in following table:

Design Summary	Performance Indicators	Baseline Data	Performance Targets	Data sources	Method of Data collection	Data Collection Frequency	Responsibility for Data Collection
Impact							
Outcome							
Output							
Activities							
Input							

Exhibit 8

[Source: Source: MSDP. (2013, March). M&E Manual – Sindh Municipal Services Delivery Program (MSDP). RSPN]

SWOT Analysis

A S.W.O.T. Analysis (Strengths, Weaknesses, Opportunities and Threats) is a method used by project officials to analyze project's strengths, weaknesses, opportunities and threats. It identifies the internal or external factors that may or may not be favorable for the project. It is an efficient process for identifying the positives and negatives for a project execution. A SWOT analysis, if done well – will help to know about the areas that are doing well and what areas need improvement.

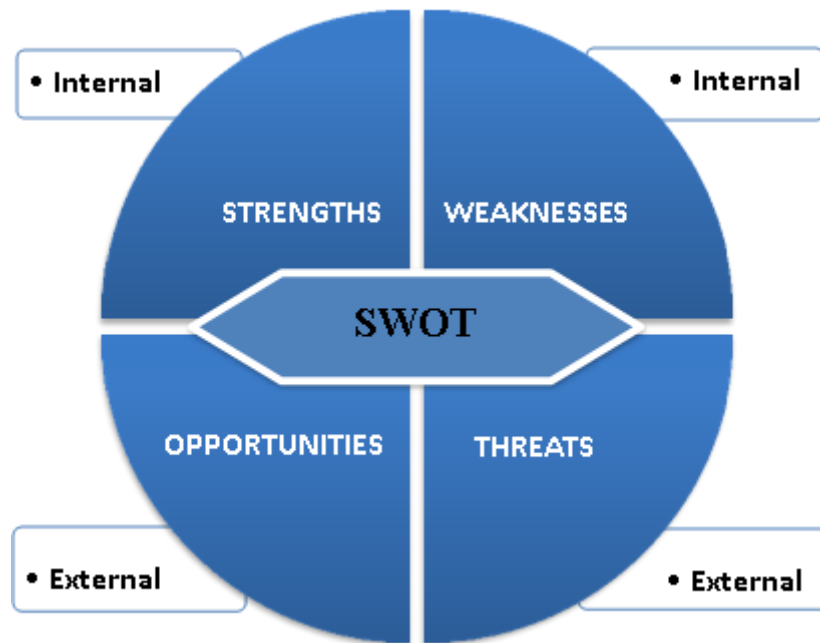


Exhibit 9

[Source: DGM&E. (2012, June). DGM&E Evaluation Guidelines]

PEST Analysis

A PEST analysis is a strategic planning tool used to assess the political, economic, social and technological factors that could affect a programme/project during the execution process or in the future. This model can be used to anticipate the problematic factors that can be managed before they affect the project.

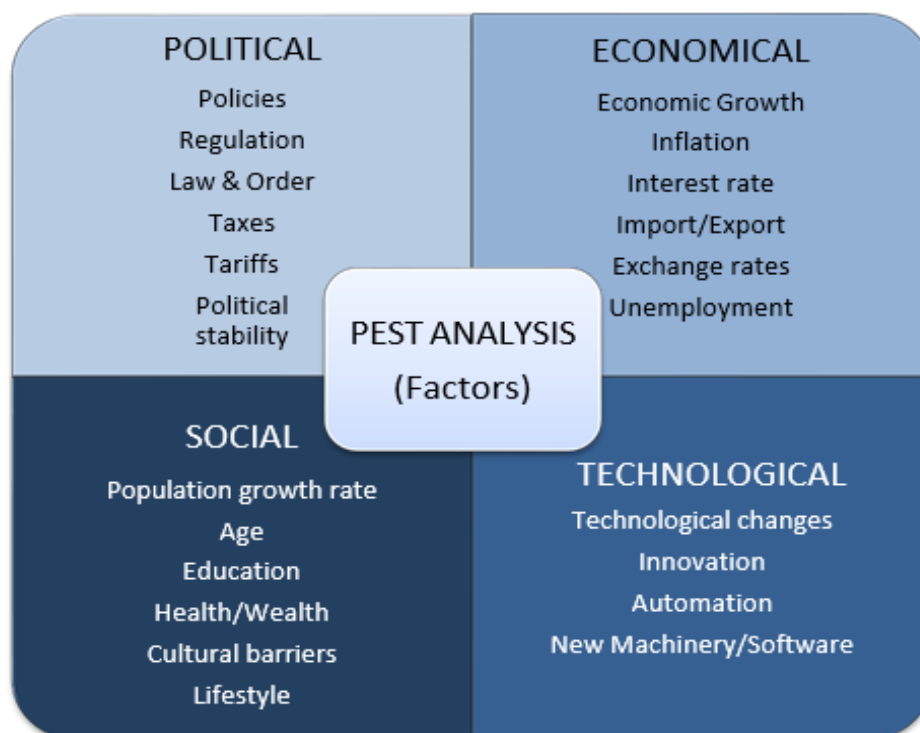


Exhibit 10

[Source: DGM&E. (2012, June). DGM&E Evaluation Guidelines]

Project Cost Analysis

A comprehensive analysis is done for the project which includes the cost allocated for the project, actual cost, revised cost and overall actual expenditures used in a project. This analysis is done to measure the financial performance after the completion of the project and data interpreted through this analysis will further be assessed for evaluation. Comparison of actual cost, allocated cost, actual expenditure incurred against the releases and percentage of releases utilization is shown in a tabular form as shown below (Exhibit 10)

Year	Phasing as per PC-I	PSDP/ADP Allocations	Releases	Expenditures	%age Utilization on Releases

Changes in the table can be made depending on the project

Exhibit 11

[Source: DGM&E. (2012, June). DGM&E Evaluation Guidelines]

Project Evaluation Rating Index (PERI)

PERI tool is used to rate the performance of the project in a score-sheet format, this worksheet shows 15 evaluation particulars for the rating.

PERI Score-Sheet

Rating (highest number= Excellent – lowest number=Poor)

PROJECT EVALUATION RATING INDEX (PERI)			
Sr.no.	CRITERIA	Maximum Points	Obtained Points
1	PC-IV Submission (Before Project Completion)	5	
	Within One Month of Project Closure	4	
	After Two Months of Project Closure	3	
	After Four Months of Project Closure	2	
	After Six Months of Project Closure	1	
	After Nine Months of Project Closure	0	
	Sub-total	5	
2	Data Availability & Response of Concerned Agency (Excellent)	5	
	Very Good	4	
	Good	3	
	Satisfactory	2	
	Average	1	
	Poor	0	
	Sub-total	5	
3	Financial Progress (Excellent)	10	
	Very Good	8	
	Good	6	
	Satisfactory	4	
	Average	2	
	Poor	0	
	Sub-total	10	
4	Physical Progress (Excellent = 100%)	10	
	Very Good (>90%)	8	
	Good (80-90%)	6	
	Satisfactory (70-80%)	5	
	Average (60-70%)	4	
	Poor (<60%)	0	
	Sub-total	10	
5	Objectives Achievement (All Achieved)	10	
	90% Achieved	9	
	80% Achieved	6	
	70% Achieved	4	

	60% Achieved	2	
	<50% Achieved	0	
	Sub-total	10	
6	Project Justification (Excellent)	5	
	Very Good	4	
	Good	3	
	Satisfactory	2	
	Average	1	
	Poor	0	
	Sub-total	5	
7	Beneficiaries Assessment (Excellent)	5	
	Very Good	4	
	Good	3	
	Satisfactory	2	
	Average	1	
	Poor	0	
	Sub-total	5	
8	Sponsor's Assessment (Excellent)	5	
	Very Good	4	
	Good	3	
	Satisfactory	2	
	Average	1	
	Poor	0	
	Sub-total	5	
9	Formulation of Project Team & Organization (Excellent)	5	
	Very Good	4	
	Good	3	
	Satisfactory	2	
	Average	1	
	Poor	0	
	Sub-total	5	
10	Revisions (No Revision)	5	
	One Revision	3	
	Two Revisions	2	
	Three or More Revisions	1	
	Sub-total	5	
11	Schedule & Cost Analysis (Within Planned Schedule and/or Within Budget Completion)	10	
	6 Months Deviation in Planned Schedule and/or 5% Cost Variation	7	
	9 Months Deviation in Planned Schedule and/or 10% Cost Variation	5	
	12 Months Deviation in Planned Schedule and/or 20% Cost Variation	3	
	18 Months Deviation in Planned Schedule and/or 30% Cost Variation	0	
	Sub-total	10	

12	Civil Works (Completed in all Respect)	10	
	90% Completed	8	
	85% Completed	6	
	80% Completed	5	
	70-75% Completed	4	
	Not Applicable	0	
	Sub-total	10	
13	Quality of Civil Works (Excellent)	5	
	Good	4	
	Satisfactory	3	
	Average	2	
	Poor	1	
	Not Applicable	0	
	Sub-total	5	
14	Quality of Operational Procedures (Excellent)	5	
	Good	4	
	Satisfactory	3	
	Average	2	
	Poor	1	
	Not Acceptable	0	
	Sub-total	5	
15	MEC's Assessment (Excellent)	5	
	Very Good	4	
	Good	3	
	Satisfactory	2	
	Average	1	
	Poor	0	
	Sub-total	5	
TOTAL		100	

Exhibit 12

[Source: DGM&E. (2012, June). DGM&E Evaluation Guidelines]

PERI Calculation

CRITERIA (with Civil Works)		Max=100
Exceptionally Successful Intervention		> 81
Successful Intervention		71 - 80
Partially Successful Intervention		61 - 70
Unsuccessful Intervention		51 - 60
Partially Failure Intervention		41 - 50
Failure Intervention		< 40

CRITERIA (with No Civil Works)		Max=85
Exceptionally Successful Intervention		> 71
Successful Intervention		61 - 70
Partially Successful Intervention		51 - 60
Unsuccessful Intervention		41 - 50
Partially Failure Intervention		31 - 40
Failure Intervention		< 30

Project Rating Criteria

PROJECT STATUS	RATING	PROJECT RATING
Highly Satisfactory	1	
Satisfactory	2	
Moderately Satisfactory	3	
Moderately Unsatisfactory	4	
Unsatisfactory	5	
Highly Unsatisfactory	6	

Exhibit 13

[Source: DGM&E. (2012, June). DGM&E Evaluation Guidelines]

PC-V Proforma (Impact Evaluation/Assessment)

The PC-V is an impact assessment report of a project which is used to quantify the sustained benefits of a completed project. It is an annual operational report which has to be submitted to P&D Department after the project's completion for 3-5 years consecutively. It shows the desired planning of a project relative to the actual performance of the project including lesson learned, recommendations and suggestions that can help to improve the project's outcome.

PC-V Proforma Requirements

S.No.	Requirements		
1.	Name of the Project		
2.	Name of executing agency/sponsor		
3.	Objectives & scope of project as per approved PC-I and state as to what extent the objectives have been met:		
		Planned	Actual
4.	Planned and actual recurring cost of the project, with details:		
5.	Planned & actual manpower employed:		
6.	Planned and actual physical output of the project:		
7.	Planned and actual income of the project:		
8.	Planned and actual benefits to the economy:		
9.	Planned and actual social benefits:		
10.	Planned and actual cost per unit produced/sold:		
11.	Marketing mechanism:		
12.	Arrangement for maintenance of building & equipment:		
13.	Whether output targets or facilities as envisaged in the PC-I have been achieved. If not, provide reasons:		
14.	Project Priority scale at the time of intervention:		
	Scale		
	High Priority		
	Average priority		
	Low Priority		
15.	Lesson learned during the year in:		
	Operations		
	Maintenance		
	Marketing		
	Management		
16.	Any change in project management during the year:		
17.	Suggestions to improve projects performance:		

Exhibit 14

[Source: Planning & Development Department. (n.d.). Project Documents. Planning & Development Department, Sindh]

Planning and managing programs/projects mean making evidence-based decisions. This process to make complex yet an effective decision can be supported by interpreting the data, based on selection of different approaches of data analysis in order to make better choices and resolving project problems. Post-completion evaluation can help extract useful lessons that can inform future planning.

Data related to project plays a very significant role. If a sound evaluation framework is available, planning officials and management can easily observe any slippages and deficiencies for timely rectification course-correction. Once key indicators are captured through rigorous evaluation, analytics can also be employed to assign a 'risk' score to ongoing development schemes to ascertain whether it is susceptible to cost and/or time over-runs or whether the project will run smoothly without any foreseen hurdles. By employing evaluation for both ongoing and completed schemes, the Government of Sindh can generate substantial evidence to help foster evidence-based planning and implementation of projects.

Conclusion

The use of 'Evaluation Framework' is becoming highly important to assess the programme, project, activity or intervention. We have proposed a customizable evaluation framework for development projects by undertaking relevant approaches and methodologies on evaluating multiple facets of a project. This evaluation framework can focus on various evaluation domains including project's efficiency, effectiveness, appropriateness, validity, feasibility, sustainability and impact.

The purpose of this report is to present an evaluation framework for Sindh's public sector development projects which can show the project's relevance by applying different approaches. This pathway will lead to the projects/programs or intervention's success by providing result-based evidence and by identifying and highlighting the complicated areas. In order to eradicate or mitigate such problematic areas, a suitable approach of evaluation has to be selected. These models/frameworks are The Logic Model / Logical Framework Approach, Performance Measurement Framework – PMF, SWOT Analysis, PEST Analysis, Project Cost Analysis and Project Evaluation Rating Index – PERI as described in this report. In addition to mid-term, terminal and ex-post evaluation methods, this report also shows the ex-ante (before starting the project) financial & economic evaluation methods that are Payback Period, Average Rate of Return, Net Present Value – NPV, Internal Rate of Return – IRR and Cost – Benefit Analysis (CBA) that can be used to select the best possible project based on the highest 'returns on investment'. The selection of the right approach can be challenging and complex, but is imperative. It is necessary to choose the evaluation model/framework depending on the project's goal and objective.

The essence of evaluation is centered on generating credible evidence from the appraisals, evaluations, and assessments carried out at different stages of the project cycle. The overarching aim must be to foster evidence-based planning and project implementation such that the critical decisions become grounded in credible evidence rather than on ad-hoc or discretionary basis which often leads to sub-optimal outcomes. It is imperative to have suitable and adaptive evaluation models/frameworks to internalize the practice of evaluations in public sector development processes and systems.

Internalization of robust evaluation mechanisms in the project cycle can pave the way for an evidence-based development planning and implementation paradigm. Embedding evaluation models/frameworks into the public sector systems would considerably enhance the systemic capacity to generate credible and timely evidence for substantial improvements in subsequent planning.

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**Sindh Strategic
Action Plan for
Floods
2022**

Sindh's Strategic Action Plan for Floods 2022: Snapshot of Priorities

As delineated in the 'Post-Disaster Needs Assessment' report of 28th October 2022, Sindh has received the largest share of damages and losses due to the recent floods. The adverse impact of climate change has disrupted every conceivable facet of life in the province. The devastating impact of floods has 'undone' a significant chunk of public sector investments in the province as it permeated across all sectors. The well-documented devastation scale should catalyze the public sector development paradigm toward sustainable climate-resilient planning, programming, and investments. In this catastrophic context, the 'Business-as-Usual' approach would be highly detrimental to the province.

A 'Transformational Path' needs to be pursued that is centered on addressing the 'systemic' issues that exacerbate the climate change impact and embedding environment-friendly practices in the public sector planning and development systems. The strategic action plan is a 'live document' that aims to guide Sindh's Flood Response and priorities from a short-, medium- and long-term perspective. The document may be recalibrated, reconfigured, and updated as per the evolving situation. The core focus of the action plan is to serve as a guide for strategic prioritization for planning, programming, and implementation for Sindh in the post-flood context.

Before delving into the specifics of sectoral prioritization of 'Sindh Floods Response: Strategic Action Plan,' it is imperative to conceptualize the strategy and its contours. The Strategy prioritizes critical intervention areas to address systemic issues plaguing the province, especially concerning disasters. Setting unrealistic recovery goals is 'counter-intuitive' without addressing the longstanding issues of the drainage systems. Public investments will again be jeopardized if the inefficiencies of the drainage network continue.

The four pillars of the Strategic Policy are centered on the following:

- Rectifying the Systemic Issues
- People-Centered Approach
- Building Upon the Existing Models and Systems
- Aligning Existing Budgetary Framework with Resource Commitments

Rather than 'diluting' the strategy by spreading the focus upon superfluous sectors, the strategic policy focuses on the following priority thematic areas:

- Rectifying the Drainage Systems (including Irrigation and Water Resources)
- Housing and Community Facilities
- Livelihood
- Communications (Roads Infrastructure)
- Health
- Education
- Human Impact (Poverty, Social Protection, Food Security, Psycho-Social impact)

The action plan builds upon the strategic contours to operationalize how the prioritization can be translated into concrete interventions. Given the monumental task of rebuilding in the post-flood context, even at the bare-minimum needs level, it cannot be achieved with the limited resources available at the provincial level. The substantial financial gap of over US\$ 9.2 billion to meet the basic

reconstruction needs can only be met with proactive international assistance and expedited global resource mobilization. The strategic action plan of Sindh has been developed with the overarching idea of focusing the investments and contributions on priority sectors and the corresponding sectoral plans.

The core focus of the action plan is to serve as the operational guide for the prioritization of the planning, programming, and implementation for Sindh in the post-flood context. The plan serves as a gateway for the local and global community to prioritize sectoral investments and bridge the financing gaps pertaining to planned or implemented programs. The wide spectrum of provincial needs would require significant technical and financial resources to strengthen the flood response substantially.

Finally, the international community can play a critical role in mobilizing resources, providing access to global climate funds and creating a ‘green channel’ for projects in Pakistan, especially in Sindh. Local capacity also needs to be significantly augmented to pivot towards green growth and climate-resilience programming across all sectors. Local institutional arrangements of the Public-Private Partnerships in Sindh can be effectively leveraged to catalyze “green investments” and harness international financing for localized solutions in the post-flood context.



Sector Action Plans

• Housing and Community Facilities

- The Government of Sindh launched a house-to-house physical survey (Joint Survey) with the collaboration of Federal and Provincial Agencies. This recently completed joint survey estimates that about 2.1 million houses have been damaged (1.44 million fully damaged and 0.65 partially damaged houses). Out of the total damaged houses, 79% are Katcha and 21% are Pucca houses
- To cater to the massive housing needs, the Government has undertaken the World Bank-assisted ‘Sindh Post Flood 2022: Housing Reconstruction Project’ of US\$500 million. With an independent Public Sector Company under the Securities and Exchange Commission of Pakistan (SECP), i.e. ‘Sindh People’s Housing for Flood Affectees’, Ex-gratia financial assistance of PKR 300,000 and PKR 50,000 respectively will be provided to the affected people whose

houses have been fully or partially damaged.

- Housing reconstruction will be centered on a holistic settlement policy that fosters climate-resilient housing with allied facilities, like the provision of clean drinking water and sanitation services in the most neglected and affected areas.

● Drainage Systems (Water Resources and Irrigation):

- Sindh Emergency Rehabilitation Project (SERP) – Irrigation Component is being implemented with the financial support of the World Bank at a cost of US\$ 212 Million. The main focus of the project is on:
 - Restoration and Rehabilitation of Irrigation and Flood Control Infrastructure in the Immediate / Emergency Phase and medium to long-term phase respectively. In the immediate term these will include rehabilitation of Manchar Lake Bund, FP Bund, Aral Left Bank, Dhoro Puran, remodeling of Aral head and tail regulators, and rehabilitation of Danster channel and its tail regulator
 - Medium to Long Term Rehabilitation includes remodeling and rehabilitation of regulators, canals, drainage networks, flood embankments and other irrigation infrastructure. Flood detention dams/weirs are also proposed on the high flooding stream near Karachi to avoid urban flooding, mostly caused by Malir River.
 - The project also includes Institutional Strengthening for Resilience and Technical Assistance to commission technical Studies for Integrated Flood Assessment and Risk Management on River Indus, Manchar Lake and catchment areas affecting Sindh, Risk Assessment for Kirthar Hills, and Mapping of flooding and non-perennial water bodies.
 - In the medium to long-term, US\$ 2.2 billion is envisaged for restructuring and strengthening the irrigation and drainage network, e.g., re-modeling of RBOD (including MNV drain) & LBOD system, Providing drainage network to Khairpur, N.S. Feroze, Jacobabad, and Shikarpur (previously uncovered).

● Livelihood (including Agriculture, Livestock & Fisheries, and Enterprise Development)

- Restoration of Jobs and Livelihoods
 - Direct Cash Distribution (especially in the short-term) for creating a safety net for the affected population till livelihood opportunities are restored
 - Agriculture inputs (especially seeds & fertilizers) for immediate relief to the affected farmers whose crops have been significantly damaged
 - Cash-for-work interventions for providing alternate (short- to medium-term) employment opportunities to the local communities, especially the affected population
 - Commerce & Industries: Rehabilitation and Revitalization of the Industrial Estates (with allied facilities) in the 24 calamity-hit districts will be prioritized to strengthen the economic base and employment generation

- Recovery and reconstruction of critical assets
 - Recovery of the inundated agricultural land through dewatering & drainage
 - Recouping of Livestock losses through direct transfers in the short-term and livestock replenishment in the medium-term from other parts of the country
 - Mitigating the losses of Small & Medium Enterprises (including local shops) through direct transfers in the short-term and focusing on providing an enabling environment for growth in the medium- to long-term

● Roads Infrastructure

At the programmatic and projects level, the Investment Program will focus on:

- Sindh Flood Emergency Rehabilitation Project - Restoration of Roads subcomponent will support the rehabilitation and reconstruction of the affected road network to improve accessibility to public facilities and to facilitate socio-economic revival of worst-affected areas of the province. Geographically, these roads are spread in the 19 districts and have a cumulative cost of Rs. 22 billion.
- Emergency Flood Assistance Project (EFAP) – Works and Services Component – Sindh's provincial/district roads have been badly affected due to the heavy torrential rains requiring immediate rehabilitation. The project will rehabilitate 1,664 kilometers in 23 districts of Sindh having a cumulative cost of Rs. 48 billion.
- Rehabilitation and reconstruction plan in the communication sector based on prioritization criteria (national to local) and its implementation

● Health

The prioritized investments for Sindh are centered on restoring health services, functionalization of facilities, scaling up its nutrition services, and improving the outreach of health services with the following key programs:

- Provide comprehensive essential health services (Communicable Diseases, Non-Communicable Diseases, Reproductive, Maternal, Newborn, Child and Adolescent Health, nutrition) through makeshift units, mobile outreach services, and temporary established field hospitals including essential medicine, equipment & supplies
- Strengthen services for malaria, dengue, and other water-borne diseases
- Refurbish/ reconstruct and maintain affected primary, secondary, and tertiary health facilities and replenishment of equipment and supplies
- Prioritize health outreach services, especially for integrated nutrition and immunization services

● Education

The prioritized investments in the education sector for Sindh are centered on:

- Reconstruction and rehabilitation of the damaged schools (about 20,000) with build-back-better principle
- Alternative arrangements, like Temporary Learning Centers and Rental Buildings, to continue till rehabilitation and functionalization of damaged schools
- Voucher schemes may be introduced for affected children to attend low-cost private schools in tandem with the augmentation of such schools

● Human Impact (Poverty, Social Protection, Food Security, Psycho-Social Impact)

The prioritized investments to alleviate the human impact of floods in Sindh are centered on:

- Scaling of existing interventions (like community investment funds, kitchen gardening, income generating grants, village rehabilitation, enterprise development fund, etc.) to the flood-affected population
- Mainstreaming, Scaling and Integration of Social Protection Delivery Systems to offer a package of interventions to the flood-affected population (Social Registry, Cash transfers for mother and child support, etc.)

Foreign-Funded Flood Rehabilitation Projects – Total of US\$ 1.84 billion

Name of Project/Program	Duration (Years)	Relevant Cost (USD Million)	Beneficiaries
Sindh Water and Agricultural Transformation (SWAT); Total Cost (USD 322 Million) - Project Subsidy on Agriculture Inputs (USD 110 Million)	5	Total: 110 WB: 110	385,000 HHs (Approx 1.9 million people)
Sindh Human Capital Investment, 1000 Days Integrated Health & Population Project (USD 280 Million)	5	Total: 280 WB: 200 IsDB: 50 GoS: 30	7.9 million people (catchment population)
Strengthening Social Protection Delivery System in Sindh (USD 230 Million)	5	Total: 230 WB: 200 GoS:30	CCTs to 1.3 million mothers and their children
Sindh Post Flood 2022 Housing Reconstruction Project (Estimated Cost USD 500 million)	5	500	350,000 HHs (more than 1.75 million people)
Sindh Flood Emergency Rehabilitation Project	3	500	2 million people to benefit from restoration of critical infrastructure
a) Rehabilitation of Irrigation System	3	215	-
b) Livelihood, Rescue 1122, Rehabilitation of Roads, Water Supply & Drainage	3	285	100,000 HHs to benefit from 'cash-for-work' program
Flood Emergency Road Rehabilitation Project (ADB-Assisted) (USD 220 Million)	3	Total: 220 ADB: 200 GoS: 20	-
TOTAL		1,840	

Overall estimated financial needs, vis-à-vis bare-minimum reconstruction, in Sindh total up to US\$ 11.57 billion. The committed funds (foreign and local resources) thus far amount to US\$ 2.33 billion which is only 20% of the total financial needs. A substantial financing gap of over US\$9.24 billion remains for Sindh. Sector-wise summary of estimated financial needs, commitments, and gaps is appended below.

Sector-wise financing needs, commitments (local and foreign), and financing gap is summarized below:

Sector	Financing Needs (Million USD)	Commitments (Million USD)	Financing Gaps (Million USD)	Gap (%)
<i>Housing</i>	2,080	727	1,353.0	65%
<i>Health</i>	122.4	54.5	67.9	55%
<i>Education</i>	2,465.5	296.3	2,169.2	88%
<i>Communications (Roads)</i>	475.0	301.9	173.1	36%
<i>Livelihood</i>	2,384.0	176.7	2,207.3	93%
<i>WASH</i>	212.7	50.0	162.7	76%
<i>Irrigation</i>	2,650.2	424.2	2,226.0	84%
<i>Social Protection</i>	1,177.0	297.5	879.5	75%
Total	11,566.8	2,328.1	9,238.7	80%

Notes:

1. Financing Needs are extracted from the preliminary estimates of the Post-Disaster Needs Assessment Report (Federal MoPD&SI). For Housing and Education, the needs have been ascertained after the in-depth assessment undertaken by the Government of Sindh.
2. For Water Resources & Irrigation, USD 212 million has been committed for flood rehabilitation, the rest is under negotiation to bridge the financing gap
3. For Water Resources & Irrigation, another USD 2.2 billion is envisaged for restructuring and strengthening the irrigation and drainage network, e.g. remodeling of RBOD (including MNV drain) & LBOD system, Providing drainage network to Khairpur, N.S. Feroze, Jacobabad, and Shikarpur (previously uncovered)
4. For Housing, USD 500 million committed by World Bank, USD 250 million by Govt. of Sindh, and USD 250 million requested from Govt. of Pakistan which if materializes will reduce the financing gap to about US\$ 1 billion
5. For Education, USD 2.47 billion is required (50% for restoration and 50% for upgradation using the build-back-better principle)
6. For USD 2.4 billion 'Livelihood' component, the most important is the financing need of USD 656 million for cash-for-work and agriculture inputs in short-term.

The complete report on Sindh's Strategic Action Plan for Floods 2022 can be found on the link below:

<https://bit.ly/3CCs9pZ>

RESEARCH HIGHLIGHTS 2022-23

RESEARCH & TRAINING WING,
PLANNING & DEVELOPMENT DEPARTMENT,
GOVERNMENT OF SINDH.

Office of the Director-General
Research & Training Wing,
Mezzanine Floor, Faiyaz Centre,
S.M.C.H.S, Shahrah-E-Faisal, Karachi.

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