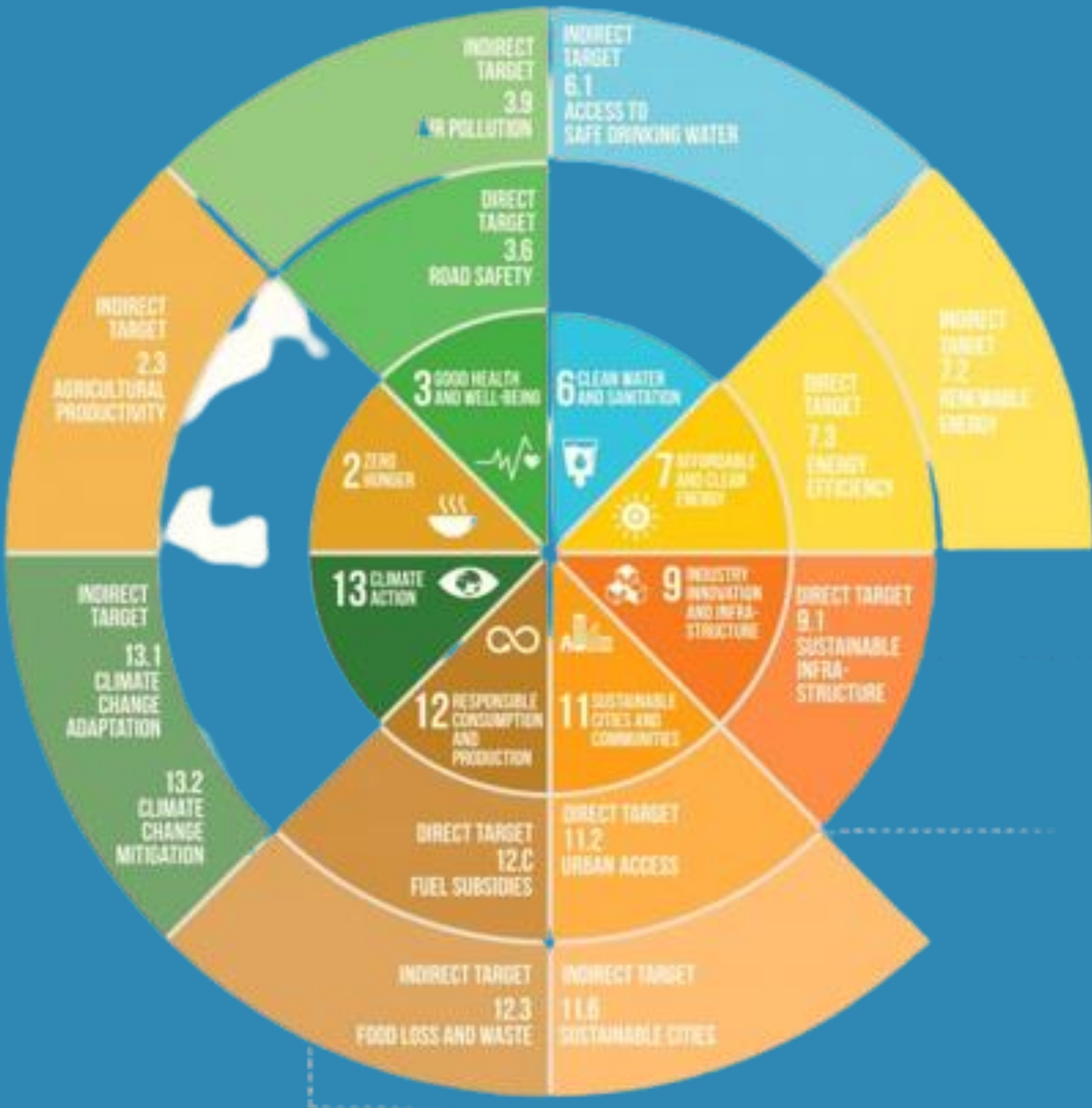
HEALTH RELATED INTERSECTORAL INTERVENTIONS

ACTION PLAN

2022-30


INDIRECT TARGET 3.9 AIR POLLUTION
INDIRECT TARGET 6.1 ACCESS TO SAFE DRINKING WATER
DIRECT TARGET 3.6 ROAD SAFETY
INDIRECT TARGET 2.3 AGRICULTURAL PRODUCTIVITY
INDIRECT TARGET 7.2 RENEWABLE ENERGY
DIRECT TARGET 7.3 ENERGY EFFICIENCY
3 GOOD HEALTH AND WELL-BEING
6 CLEAN WATER AND SANITATION
2 ZERO HUNGER
7 AFFORDABLE AND CLEAN ENERGY
13 CLIMATE ACTION
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
INDIRECT TARGET 13.1 CLIMATE CHANGE ADAPTATION
DIRECT TARGET 9.1 SUSTAINABLE INFRASTRUCTURE
12 RESPONSIBLE CONSUMPTION AND PRODUCTION
11 SUSTAINABLE CITIES AND COMMUNITIES
13.2 CLIMATE CHANGE MITIGATION
DIRECT TARGET 12.C FUEL SUBSIDIES
DIRECT TARGET 11.2 URBAN ACCESS
INDIRECT TARGET 12.3 FOOD LOSS AND WASTE
INDIRECT TARGET 11.6 SUSTAINABLE CITIES

MOVING TOGETHER
TO BUILD A HEALTHIER PAKISTAN
UNIVERSAL HEALTH COVERAGE

Health Related Intersectoral Interventions

PAKISTAN

Health and Wellbeing through Inter-Sectoral Actions

MOVING TOGETHER
TO BUILD A HEALTHIER PAKISTAN
UNIVERSAL HEALTH COVERAGE

Intersectoral Interventions on Health
National Framework 2021-30

Endorsed by
Inter-ministerial health and population council

Produced by
Health Planning, System Strengthening and Information Analysis Unit (HPSIU),
Ministry of National Health Services, Regulations and Coordination

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World Health Organization, Pakistan Country Office

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Message from the Federal Minister of Health

Abdul Qadir Patel
Federal Health Minister

Health is a human right and quality essential health services should be available to everyone, every time, with a special focus on equity for the most vulnerable in society. Health is determined by a complex set of interrelated factors and measures to protect and promote health and wellbeing cannot be confined to the health sector alone. Working together across sectors to promote health is often referred to as intersectoral action for health.

Universal Health Coverage through evidence-based cost effective and equitable essential health interventions lays the foundation of a responsible health care system for ALL. It is an investment in human capital and a foundational driver of inclusive and sustainable economic growth and development of the country. It is a way to build more inclusive and resilient societies that will ensure protection and promotion of physical and mental well-being for all.

Consistent with the definition of UHC, intersectoral health-promoting interventions are critical for achieving UHC and are a major component of national health policy. They are essential in addressing common risk factors like tobacco use, micronutrient deficiencies, other forms of malnutrition and unhealthy diet, physical inactivity, harmful use of alcohol, injuries, air pollution and other environmental risks. Implementing intersectoral health interventions is a key message of the political declaration of the United Nations high-level meeting on universal health coverage in 2019.

Ministry of National Health Services Regulation & Coordination with the support of all the relevant sectors / ministries including Climate Change, Agriculture, Industries, Communications, Science and Technology has achieved an important milestone of developing Intersectoral Action Plan for Health. The development of this action plan and subsequent implementation will address the factors beyond the health sector that contribute to half of the current burden of disease.

This work is an important part of the healthcare reforms in Pakistan and we have to move in a more coordinated and effective manner, while developing stronger partnerships.

Abdul Qadir Patel
Federal Health Minister

Foreword

Dr. Muhammad Fakhre Alam Irfan
Secretary (NHSR&C)

More than half of the total burden of disease in Pakistan are attributable to factors related to environmental / occupational, behavioral and metabolic risks. The Intersectoral Action Plan addresses risk factors that extend beyond health sector and brings forward an important element of the health care reforms in Pakistan. The intersectoral Action Plan builds on the global best practices recommended by Disease Control Priorities 3 (DCP3) and identifies the most effective intersectoral interventions that address issues such as Addictive substance use, Diet, Environmental risks and Injuries. These interventions make use of several types of instruments, including fiscal measures (taxes, subsidies, and transfer payments); laws and regulations; changes in the built environment (roads, parks, and buildings); and information, education, and communication campaigns. It is important to reflect here that the intersectoral interventions are an integral part of the Universal Health Coverage Benefit Package (UHC BP) and critical for achieving UHC.

This Action Plan has been developed in close consultation with all the relevant sectors / ministries including Climate Change, Agriculture, Industries, Communications, Science and Technology. The close collaboration between all these sectors / ministries is critical for taking the agenda of intersectoral interventions forward. The Ministry of NHSR&C is fully committed to working closely with all the relevant sectors for smooth implementation of the intersectoral Action Plan. The Ministry of NHSR&C look forward to full support from all other relevant private stakeholders, academia, civil society organizations, United Nations agencies and Development partners in the implementation of this intersectoral Action Plan for health.

I appreciate the support of the DCP3 secretariat and WHO to the production of this Intersectoral Action Plan. I am also thankful to all members of the UHC Steering Committee / Inter-Ministerial Health and Population Council, National Advisory Committee, the Technical Working Group on intersectoral interventions and all the international experts for their contributions and inputs. I would like to specially thank Professor Ala Alwan and DCP3 secretariat for their consistent support throughout the whole process. I appreciate the leadership role of Dr Shabana Saleem, Director General (Health)/ Chair of National Advisory Committee for effectively coordinating this reform initiative.

However, the task is not over yet and we have to move forward in close collaboration with all the relevant sectors for the implementation of intersectoral Action Plan.

Dr. Muhammad Fakhr-e-Alam Irfan
Secretary, M/o NHSRC

Acknowledgement

Dr. Shabana Saleem
Director General (Health)

Government of Pakistan's Vision 2025 guides the health sector to achieve universal health coverage through efficient, equitable, accessible, and affordable health services; fulfil international obligations and commitments. The Government of Pakistan, with the ratification of the 2030's Sustainable Development Agenda, further express its clear resolve and commitment to improve the health of all people. Health is influenced by determinants beyond the traditional conception of the health sector. Disease Control Priorities – Edition 3 (DCP3) defines a model concept of essential health services to ensure better health outcomes and achieving UHC.

The Disease Control Priorities (DCP3) acknowledged the importance of factors outside the health sector that affect human health. In this regard, it has proposed a list of intersectoral policies for health. This is underpinned by the fact that most of the reduction in health loss globally over the past few decades was attributable to reductions in risk factors such as tobacco consumption and unsafe drinking water that was achieved almost exclusively by stakeholders other than the health sector. We have to give attention to environmental risk factors (such as air pollution, water supply and sanitation, toxic wastes), road safety, diet and physical activity.

In this regard, the intersectoral action plan has been developed by Ministry of National Health Services Regulation & Coordination with the support of all the relevant sectors / ministries including Climate Change, Agriculture, Industries, Communications, Science and Technology. These intersectoral interventions address the risk factors such as **Addictive substance use** (alcohol & tobacco), **Diet** (inadequate and excessive nutrient intake), **Environmental risks** (air pollution, occupational, WASH, other environmental toxins), **Injuries** (RTI and other injuries) that contribute a considerable proportion of burden of disease.

I am grateful to Honourable Federal Minister of Health Abdul Qadir Patel sb, all relevant sector ministries and Dr. Fakhre Alam Irfan, Secretary NHSR&C in providing the leadership and guidance.

My gratitude is due to the Disease Control Priorities -3 secretariat and more specifically Professor Ala Alwan for his valuable guidance and support. I am grateful to Dr Mahipala Palitha, Head of Office, WHO Pakistan, Dr Sameen Siddiqui, Chair, Department of Community Health Sciences-Aga Khan University, Dr Safi Malik, M/o NHSR&C Advisor on UHC and Dr Raza Zaidi, Health System Specialist in providing all support to successfully complete the review, ensure inclusive consultative process and produce the Intersectoral Action Plan of Pakistan.

I am thankful to the team at the Health Planning, System Strengthening & Information Analysis Unit / Ministry of NHSR&C, members of the Technical Working Group who worked tirelessly to generate dialogue in defining and agreeing on the Intersectoral Interventions for health.

In the end, Now, the need of hour is to focus on the recommended intersectoral policies for health and look beyond health sector. It is high time that all sectors should work in coordination to take the agenda of intersectoral interventions forward.

Acronyms

AMR	Anti-Microbial Resistance
ANF	Anti-Narcotic Force
BISP	Benazir Income Support Program
BMGF	Bill & Melinda Gates Foundation
BoD	Burden of Disease
DALYs	Disability Adjusted Life Years
DCP	Disease Control Priorities
DRAP	Drug Regulatory Authority of Pakistan
FCDO	UK's Foreign, Commonwealth and Development Office
FCDO	UK's Foreign, Commonwealth and Development Office
GATS	Global Adult Tobacco Survey
GAVI	Global Alliance for Vaccine Immunization
GAVI	Global Alliance for Vaccine Immunization
GBD	Global Burden of Disease
GDP	Gross Domestic Product
GHSA	Global Health Security Agenda
GYTS	Global Youth Tobacco Survey
IAQ	International Air Quality
IHME	Institute of Health Metrics and Evaluation
IHR	International Health Regulation
LMICs	low-income and middle-income countries
M/ o NHSR&C	Ministry of National Health Services Regulation & Coordination
NCD	Non-Communicable Diseases
NDMA	National Disaster Management Authority
NDMA	National Disaster Management Authority
NNS	National Nutrition Survey
NTRC	National Transport Resource Centre
OGRA	Oil and Gas Regulatory Authority
PBS	Pakistan Bureau of Statistics
PCRWR	Pakistan Council of Research in Water Resources
PEMRA	Pakistan Electronic Media Regulatory Authority
PFMA	Pakistan Floor Mills Association
PHRC	Pakistan Health Research Council
PNRA	Pakistan Nuclear Regulatory Authority
POPs	Persistent Organic Pollutants
PSLM	Pakistan Social and Living Standards Measurement Survey
PSQCA	Pakistan Standards and Quality Control Authority
PWIDs	people who inject drugs
QA / QC	Quality Assurance / Quality Control
RMNCH	reproductive and maternal and child health
SUN	Scaling UP Nutrition
TAPS	Tobacco Advertising, Promotion and Sponsorship
UHC	Universal Health Coverage
UNEP	United Nations Environment Program
UNICEF	United Nations Children's Emergency Fund
UNODC	United Nations Office on Drugs and Crime
VRU	Vulnerable Road User
WAQR	World Air Quality Report
WASH	Water, Sanitation and Hygiene
WB	World Bank
WHO	World Health Organisation
WRA	Women of reproductive age
WTO	World Trade Organisation

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BACKGROUND – DISEASE CONTROL PRIORITIES 3

Health needs prioritization is a complex undertaking. In the presence of various competing interests, it becomes difficult for decision makers to decide what direction should be given to available resources. The situation is more challenging in countries that have limited resources to begin with. For example, in Pakistan where public health expenditure has been historically low, close to one percent of Gross Domestic Product (GDP), the question that usually flummoxes decision makers is not only which pressing need to address first but also how to go about deciding which need takes precedence over the other and what criteria to apply. The World Bank (WB) commenced the journey in 1993 to address the challenge of conceiving a process which would enable decision makers globally to make decisions regarding which health need prioritization. The results were published in the form of the first edition of 'Disease Control Priorities in Developing Countries (DCP1)'. This was a unique attempt at systematically assessing value for money (cost-effectiveness) of interventions that would address the major sources of disease burden in low-income and middle-income countries (LMICs).[1]

The second edition of Disease Control Priorities (DCP2), published in 2006, updated and extended DCP1 most notably by explicit consideration of the implications on health systems of expanded coverage of high-priority interventions.[2] A key feature of DCP2 was the adoption of a platform-based health service delivery mechanism which enables delivery of a diverse set of services from a single delivery platform. An added advantage of this approach is that it allows for a more practical costing exercise than would be possible while costing individual interventions.

The Disease Control Priorities initiative, hosted at the University of Washington with support from the Bill & Melinda Gates Foundation (BMGF) developed the third edition (DCP3), through an extensive review of the evidence and cost-effectiveness covering a broad range of health interventions across 20 areas which was published by the World Bank. DCP3 is available in the form of nine volumes where each volume is structured around packages of conceptually related interventions in a particular area/ domain like communicable diseases, reproductive and maternal and child health (RMNCH), noncommunicable diseases, mental health, surgery, environmental health, injury prevention and others. The ninth provides an overview with main findings and conclusions about health priorities.

[1] Jamison DT, Mosley WH, Measham AR, Bobadilla JL, eds., 1993; Disease control priorities in developing countries, 1st edn. New York: Oxford University Press, 1993

[2] Jamison DT, Breman JG, Measham AR, et al.2006; Disease Control Priorities in developing countries, 2nd edn. New York, Washington, DC: Oxford University Press, World Bank, 2006.

DCP3 differs from DCP1 and DCP2 is that it covers a comprehensive range of interventions across 21 health areas with emphasis on financial risk protection and equity and it also includes intersectoral interventions which have a critical health-promoting impact. What is also unique about DCP3 is the focus on supporting low- and lower-middle-income countries (LMICs) in accelerating progress towards universal health coverage (UHC) and in designing model UHC essential health packages to serve as a guide for LMICs. The criteria adopted in the design of DCP3 packages include evidence of impact, cost-effectiveness, financial risk protection, equity, and feasibility for implementation.

DCP3 is also unique because of the explicit consideration of a broad range of intersectoral and fiscal policies for health. In both the health services and the intersectoral packages, the goal of DCP3 is to influence health system design and guide decision makers with respect to optimum resource allocation. It follows that the two major components of DCP3 are:

- ***Health Sector Interventions / services*** - A total of 218 health sector interventions distributed across five platforms (community, primary health center, first level hospital, referral hospital and population) and four clusters (i) Age related / RMNCAH, ii) Infectious Diseases, iii) NCD and injury and iv) health services access). A sub-set of these interventions are identified as High Priority Interventions (104) keeping in view the limited fiscal space of low-income countries.
- ***Intersectoral Interventions*** – an expanded list of 71 health-promoting policy interventions that includes policies related to tax & subsidies, regulations, environment and information / communication. A sub-set of these intersectoral interventions (29) are recommended as an essential early implementation high priority interventions.

Figure 1 illustrates the pathway of intersectoral and health policies leading to financial protection from health costs. DCP3 analysis shows that both intersectoral and health policies aim to reduce risk factors impacting health outcomes. It is demonstrated that while health policies are aimed at reducing the impact of physiological risk factors such as weight, anemia, hypertension, blood glucose and others, intersectoral policies on the other hand are aimed at reducing behavioral and environmental risk factors for example addictive substance use and occupational health among others. It is important to understand that DCP3 structure views the role of intersectoral actions to be reduction of behavioral and environmental risks, which affect the level of physiological risks and health outcomes. Together, both intersectoral and health policies offer the potential for reducing health-related financial risks in a population.

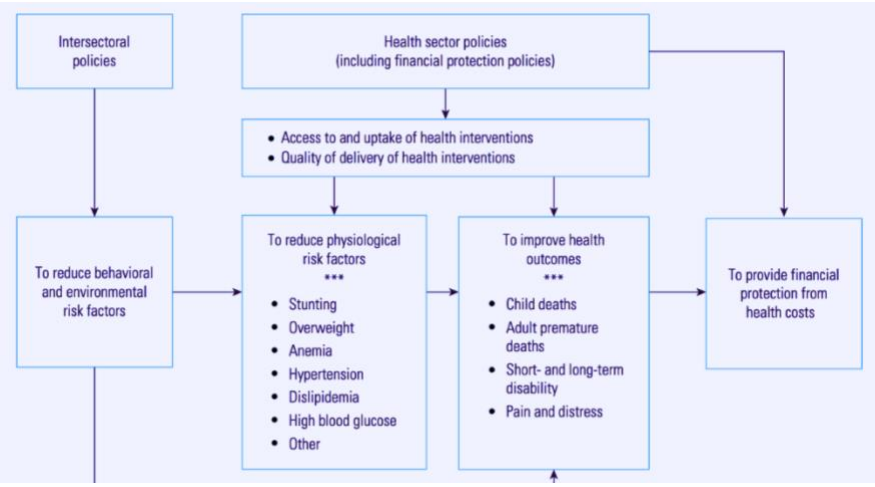


Figure 1: Intersectoral and health sector policies (reproduced from DCP3, chapter 1 volume 9)

2

HEALTH PROMOTING DCP3 INTERSECTORAL INTERVENTIONS

Health is determined by a complex set of interrelated factors. Measures to protect and promote health and wellbeing cannot be confined to the health sector alone. Working together across different sectors to promote health is often referred to as intersectoral action for health. Common risk factors such as tobacco use, micronutrient deficiencies, other forms of malnutrition and unhealthy diet, physical inactivity, harmful use of alcohol, injuries, air pollution and other environmental risks contribute towards adverse health outcomes.

Consistent with the definition of Universal Health Coverage (UHC), intersectoral health-promoting policies are critical for achieving UHC and are a major component of national health policy. They are essential in addressing measures to control/ reduce common environmental, behavioural and other risk factors. Implementing intersectoral health policies is a key message of the political declaration of the United Nations high-level meeting on UHC in 2019.

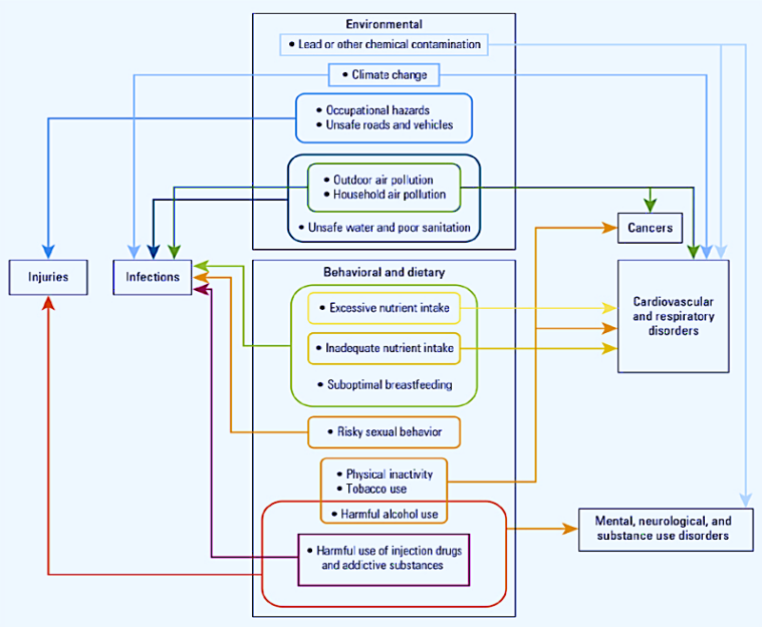


Figure 2: Conceptual Model of Interactions among Key Risk Factors and Diseases (reproduced from Chapter 2 Volume 9 DCP3)

Behavioral and environmental risk factors can be disaggregated into multiple specific risks, illustrating sources and pathways of risk exposure. The more disaggregated set of risk factors outlined in Figure 2 has two striking features. First, multiple risk factors can overlap and interact to influence the incidence of specific diseases or injuries; for example, smoking, dietary risks, and physical inactivity all contribute to the development of Non-Communicable Diseases. Second, single risk factors can be responsible for a substantial fraction of cases of multiple diseases or injuries; for example, air pollution from outdoor sources can lead to chronic obstructive pulmonary disease and asthma, among other conditions. One

implication of these interactions is that aggressive targeting of a few major risk factors, such as tobacco smoke and air pollution, can greatly improve population health.

DCP3 provides a comprehensive review and analysis of intersectoral policies by sector of intervention and the associated risk factors that these policies target. Table 1 provides a breakdown of the number of intersectoral policies that potentially impact health outcomes. In total there are 71 policy interventions under the intersectoral domain organized under:

- taxes and subsidies
- regulations, and related enforcement mechanisms
- built environment and
- information

Table 1: Intersectoral interventions, their types and key domains

71 ESSENTIAL INTERSECTORAL POLICIES 29 HIGHEST PRIORITY	4 TYPES OF INTERSECTORAL POLICIES	1. Taxes and subsidies - 15 2. Regulations - 38 3. Built environment - 11 4. Information - 7

29 HIGHEST PRIORITY INTERSECTORAL POLICIES							
		RISK DOMAIN					Total
		Addictive Substance Use	Diet	Environment	Injuries	Others	
Type of intersectoral policy	Taxes & Subsidies	1	2	3	0	0	6
	Regulations	2	5	5	2	3	17
	Built Environment	0	0	0	2	1	3
	Information	0	1	2	0	0	3
Total		3	8	10	4	4	29

The highest number of intersectoral interventions are regulatory in nature (38 out of 71) while 15 are related to taxes and subsidies, 11 to built environment and 7 related to information and communication. Out of the 71 policies, 29 are proposed by DCP3 as core, highest priority, for early implementation. 17 out of the 29 highest priority interventions are regulatory in nature while 6 are related to taxes and subsidies and 3 each are related to built environment and information & education.

The intersectoral interventions under the DCP3 are further organized in the following risk domains; (a) Addictive Substance Use (b) Diet (c) Environmental (d) Injuries and (e) Others. The complete list of 71 DCP3 proposed intersectoral interventions are reflected in the Annexure 2.

Figure 3: Key domains for intersectoral interventions

3

SITUATION ANALYSIS OF RISK DOMAINS

The Institute of Health Metrics and Evaluation (IHME) at University of Washington measures disability and death from a multitude of causes worldwide through Burden of Disease (BoD) analysis. The IHME Global Burden of Disease (GBD) provides quantifiable health loss, utilizing Disability Adjusted Life Years (DALYs) methodology, from hundreds of diseases, injuries, and risk factors, at the country level so that health systems can be improved and disparities can be eliminated.

The IHME GBD has categorized the risk factors / domains in three main categories i.e. (1) Environmental / occupational risks (2) Behavioral risks (3) Metabolic risks. The analysis for Pakistan reflects that more than half of the total burden of disease in Pakistan (53.5% of the total DALYs) are attributable to factors related to environmental / occupational, behavioral and metabolic risks. More than half of the DALYs attributed to these risks are due to behavioral factors (56%), 27% due to environmental / occupational hazards and 17% due to metabolic risks.

The major contribution to the DALYs in the behavioral risk group comes from the child and maternal malnutrition (68.4%), followed by dietary risks (13.2%), Tobacco use (12.6%), Alcohol use (2.4%) and drug use (1.3%).

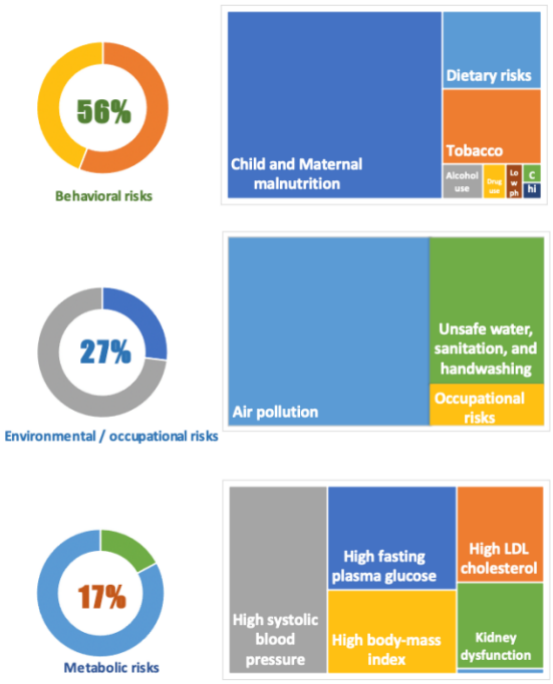


Figure 4:Burden of Disease contributed by risk domains

For the environmental / occupational risk group, the major contribution to DALYs is from air pollution (64%), followed by Unsafe water, sanitation, and handwashing (28%) and occupational risks (8%).

This section is organized by DCP3 suggested risk domains (a) Addictive Substance Use (b) Diet (c) Environmental and (d) Injuries which the DCP3 proposed 71 Intersectoral Interventions target.

Addictive Substance Use

Tobacco Use

Tobacco use is the single largest contributor to adverse health outcomes in Pakistan. Around 1.4 million DALYs and 47,119 deaths in Pakistan during 2019 were attributed to the use of tobacco[3]. The age standardised mortality rate due to tobacco use for 2019 is estimated to be around 41 deaths per hundred thousand. Out of the total deaths during 2019 attributed to tobacco use, 78% were in males and 22% in females[3]. The high mortality in males due to tobacco is supported by the findings of STEP wise approach to Surveillance (STEPS) survey of 2013-2014[4] which shows that Smoking is more prevalent among males (27.8%) compared to females (4.2%). Overall prevalence of current tobacco smokers in Pakistan is 13.9% and the average age to start smoking is 22.1 years (21.4-22.9) in both genders combined.

According to GATS 2014, in Pakistan, the prevalence of tobacco product use is very high (19.1%) particularly among men (31.8%) (women:5.8 %). Of the 19.1% adults currently using tobacco products, 12.4% smoked tobacco, and 7.7% used smokeless tobacco. 86.0% of adults (21.2 million people) who visited restaurants in 2014 were exposed to second hand smoke, and 76.2% who used public transport (49.2 million people) were exposed to second hand smoke[5]. These statistics reflect poor implementation of laws pertaining to smoking ban in public spaces.

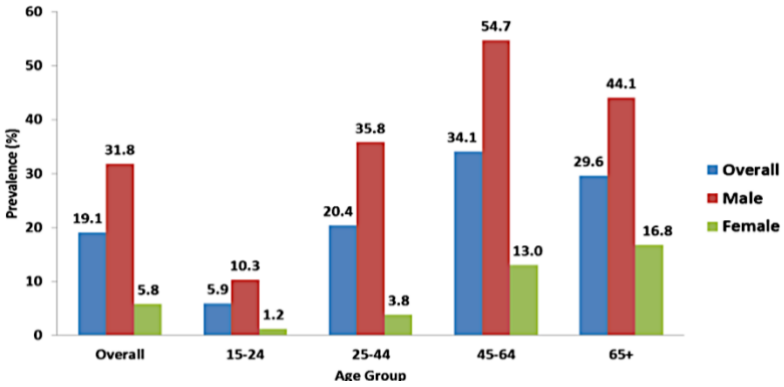


Figure 5: Current Tobacco Use by Age Group and Gender, GATS Pakistan, 2014

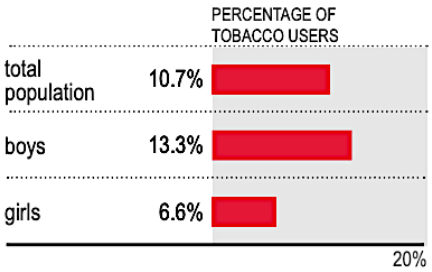


Figure 6: Youth Tobacco Use (Ages 13-15 years) (GYTS, 2013)

According to Global Youth Tobacco Survey (GYTS) 2013, among the youth (13-15 years of age students), 10.7% of school students (13.3% boys and 6.6% girls) currently use tobacco. Overall, 21.0% of students are exposed to second-hand smoke in their homes and 37.8% were exposed to smoke inside enclosed public places[6].

Despite having a comprehensive law, the enforcement has been an issue. A recent WHO study implemented by the Pakistan Bureau of Statistics (PBS) in collaboration with the Ministry of NHSR&C to monitor the compliance to smoke free laws and tobacco advertising, promotion and sponsorship

[3] Institute of Health Metrics and Evaluation (IHME)
[4] PHRC, WHO and M/o NHSR&C, 2016; NCD Risk factors survey (STEPS) - Pakistan
[5] Burden of Tobacco in Pakistan: Findings from Global Adult Tobacco Survey 2014
Muhammad Arif Nadeem Saqib, Ibrar Rafique, Huma Qureshi, Muhammad Arif Munir, Rizwan Bashir, Babur Wasim Arif, Khalid Bhatti, Shahzad Alam Khan Ahmed, Lubna Bhatti
[6] Global Youth Tobacco Survey 2013

(TAPS) suggested high levels of non-compliance which was around 36%. The study was conducted in hospitals, educational institutions, government and private offices public transport.

Illicit Drug Use

Illicit drug use has extended over the entire globe and the consequences of drug use on health are far reaching. Illicit drugs are substances for which extra medical use is illegal under international control systems. Their use leads to problems of drug addiction which is a complex brain disease leading to its irrepressible compulsive use. Pakistan is prone to drug abuse because of younger population and factors such as poverty, joblessness, lack of drug abuse awareness, parental negligence, peer pressure and easy accessibility to drugs.

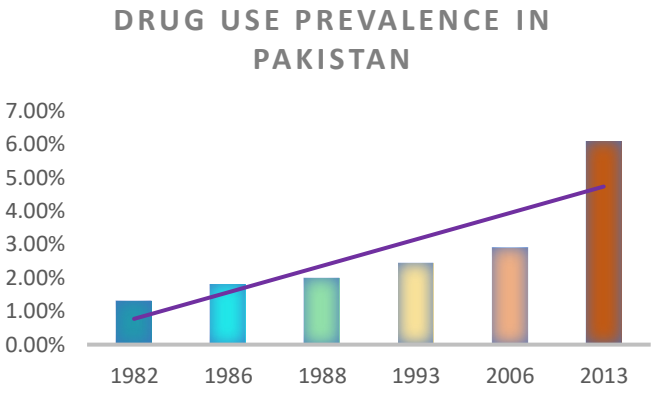


Figure 7: Drug Use Prevalence trend in Pakistan

The available data on drug use prevalence in Pakistan reflects a worrisome situation. In 1982, the drug use was around 1.30% which more than doubled to 2.90% in 2006 i.e. in 24 years. However, from 2006 onwards drug use only took 6 years to double, a steep rise considering previous trends[7]. At present there is a lack of recent drug use data at the national/ provincial level.

The last national level survey was conducted in 2013 and reported 6.7 million people of 15 to 64 years using one or more illicit substance during the past twelve months[8]. Most of the drug users were between 25 to 39 years of age. Cannabis is the most commonly used substance and is used by four million of the population. The survey also estimated that there were 860,000 regular heroin users while people who inject drugs (PWIDs) were 430,000, out of which 73 percent shared syringes. Around 1.6 million people reported the use of non-medical use of opioids in the past twelve months. Nineteen thousand reported the use of methamphetamine in the previous one year. 4.25 million were dependent on drug substances requiring planned treatment for their drug use disorder. Men were the most frequent drug users as compared to women who chose tranquilizers, methamphetamine and sedatives. Women who use drugs were found to be less likely to report undergoing treatment compared with men. The most common reason for not seeking the treatment was an inability to pay the cost for the treatment.

[7] Anti Narcotic Force. National Seizure Data. Islamabad: ANF; 2021 [cited 2022 January 9,2022]; http://www.anf.gov.pk/library/surveys/comparative_survey_reports.pdf

[8] UNODC. Drug Use in Pakistan 2013. Islamabad: United Nations Office on Drugs and Crime2013.

Diet

Malnutrition is a significant problem in Pakistan. Overall, around 28 million DALYs and 290,246 deaths annually are attributed to maternal and child malnutrition[3]. The National Nutrition Survey (NNS) 2018 found that around 4 out of every 10, under 5, child is stunted (40.2%) while close to 2 out of every 10, under 5, child (17.7%) is wasted with urban areas faring well compared to rural areas[9].

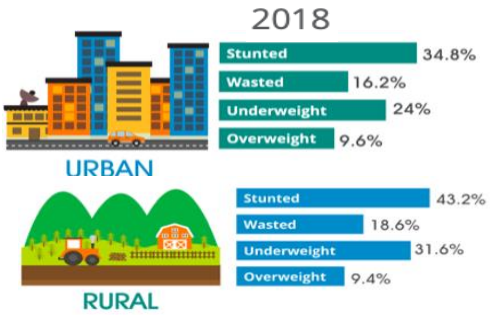


Figure 8: Stunting, Underweight, Wasting and Overweight in under 5

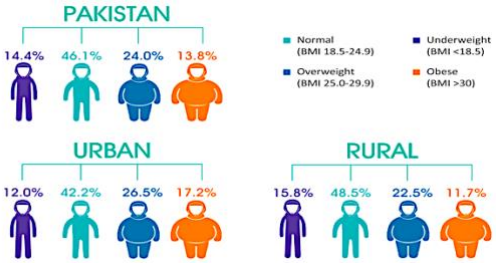


Figure 9: Prevalence of malnutrition among women of reproductive age (15-49 years) by Body Mass Index

The prevalence of malnutrition in women of reproductive age (15-49 years - WRA) is also worrisome. The NNS found that 3 out of 20 (14.4%) were underweight (BMI < 18.5) with higher numbers in rural compared to urban areas. It is important to mention here that less than half of the women of reproductive age had a normal weight (BMI 18.5-24.9) while more than 3 out of every 10 (37.8%) of the women were overweight / obese[9].

Vitamins and minerals, or micronutrients, are vital components of good nutrition and health which promote physical and intellectual development. More than half of the children under 5 have Vitamin D deficiency (63%), anemia (54%), Vitamin A deficiency (52%) and ferritin deficiency (29%). Women of reproductive age (WRA) depicts a similar picture, more 4 out of 10 WRA (42%) suffer from anemia, overwhelming majority (80%) have vitamin D deficiency, and 2 out of ten women have deficient ferritin levels.

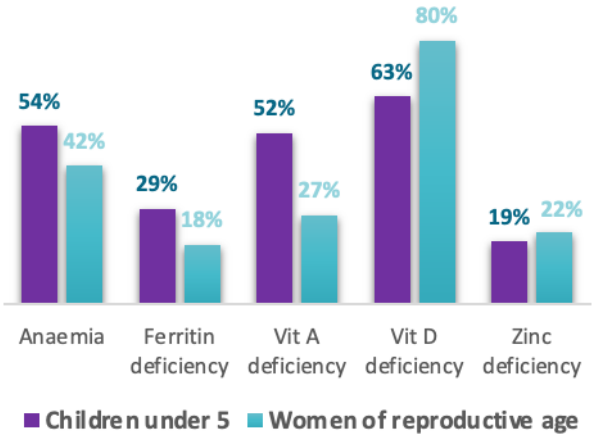


Figure 10: Micronutrient deficiency in women and children

[9] National Nutrition Survey 2018

Climate Change

Pakistan faces an increased risk to all facets of life and across multiple sectors because of climate change. Projections for the 21st century show that the average temperature in Pakistan is expected to rise by up to 5°C.[10] If that happens Pakistan's average temperature will be 1°C higher than the global average.[11] Cities such as Chitral, Drosh, Gilgit, and Gupis, all in the northern area of Pakistan, are projected to experience the highest increase in average temperature in the country. The region's increasing climatic extremes are a significant source of increased glacier melting, affecting the livelihoods of millions of people both directly and indirectly. As a result, there is a need to build resilience and adaptive capacity to the impacts of climate change, as well as efficient emergency preparedness and response measures, to tackle climate-related hazards and catastrophes in Pakistan's mountainous areas.[10] Climate change does not just mean higher daily temperatures it also means that the country will be more frequently hit by the full gamut of climate hazards, which will mainly be manifested in the form of extreme precipitation events (monsoons and riverine flooding), increased frequency and intensity of droughts and heatwaves, glacier melting, forest fires, and rising sea levels. Climate hazards present significant risks to the health system. At the individual level, rising average temperatures are expected to result in increased heat-related mortality, heat exhaustion, and heat stroke[12] Other individual health issues that will result from extreme heat include increased cardiovascular, respiratory, and kidney-related health problems. Respiratory problems will be exacerbated by air pollution from fires during heat waves. At the health system level, climate hazards have the potential to cause infrastructure damage, disruption in energy, water, essential food, goods, and medicines supplies, and, as well as threaten the optimum functioning of the health workforce in terms of their health and their capacity to continue to deliver services in the case of adverse climatic events.[13]

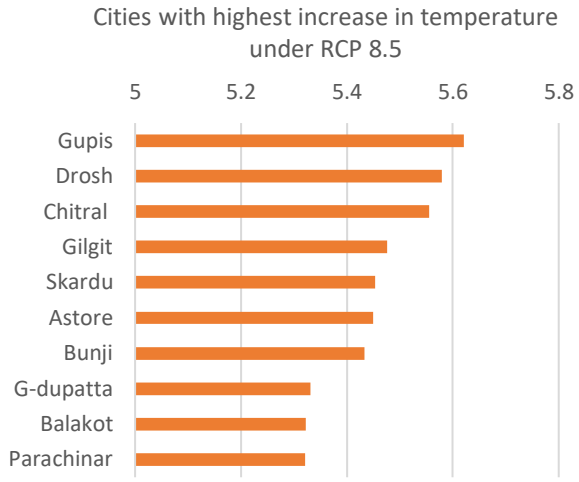


Figure 11: Cities with the highest increase in projected temperature (°C) during the 21st century for high (RCP 8.5) emissions scenarios

[10] Ali, S., Kiani, R. S., Reboita *et al*. (2021) 'Identifying hotspots cities vulnerable to climate change in Pakistan under CMIP5 climate projections', *International Journal of Climatology* 41(1), pp. 559–581.
[11] Rehman, N., Adnan, M., and Ali, S. (2018) 'Assessment of CMIP5 climate models over South Asia and climate change projections over Pakistan under representative concentration pathways', *International Journal of Global Warming* 16(4), pp. 381–415
[12] Heat-related illnesses (heat cramps, heat exhaustion, heat strokes). Available from: www.hopkinsmedicine.org/health/conditions-and-diseases/heatrelated-illnesses-heat-cramps-heat-exhaustion-heat-strok 2022 August 7
[13] Pradhan, N.A., Najmi, R., Fatmi, Z. (2022) 'District health systems capacity to maintain healthcare service delivery in Pakistan during floods: A qualitative study', *International Journal of Disaster Risk Reduction* 30, 103092.

Environment

Air pollution

According to the 2020 World Air Quality Report (WAQR), Pakistan is ranked as second-most polluted country in the world[14]. Air pollution exposure is responsible for 15.7% (235,657) of the total deaths in Pakistan per year (105 deaths per 100,000)[3] and is the second highest contributor to the Burden of Disease after maternal and child malnutrition[3]. In accordance with the WHO guidelines, the air quality in Pakistan is considered unsafe - concentration of PM2.5 being five times more than the WHO recommendation (annual mean is 58 µg/m3, exceeding the recommended maximum of 10 µg/m3). Among the cities, the most polluted city is Lahore, followed by Faisalabad, Gujranwala, Karachi, Rawalpindi, and Islamabad. Based on the WAQR, Lahore emerged as the world's 18th most polluted city during 2020 and 2nd most polluted megacity (following Delhi), exposing its over 11 million residents to hazardous PM2.5 levels largely stemming from local transportation, industry (including solid-fuel powered brick kilns), and dust, Key drivers of air pollution in Pakistan include urbanization, rapid economic development, and industrialization. Major sources of Pakistan's air pollution include road transport emissions (both vehicle exhausts and road dust), industrial activity such as brick kilns, factories, and power plants, and crop burning, and domestic biomass burning[15]. There is seasonal variation in the air pollution with relatively higher air pollution in the winter months (December to March).

PM2.5: µg/m³	2019 Annual AVG
Karachi	43.8
Lahore	79.2
Faisalabad	73.2
Rawalpindi	42.4
Gujranwala	62.1
Islamabad	39.0

Figure 12: Annual average PM2.5 in big cities of Pakistan

[14] IQAir Global Air Quality Report 2020

[15] Shi Y, et al. (2020). Urbanization and regional air pollution across South Asian developing countries – A nationwide land use regression for ambient PM2.5 assessment in Pakistan. Environmental Pollution. DOI: 10.1016/j.envpol.2020.115145

Occupational risks

Occupational risks in Pakistan attribute to around 1.5 million DALYs and 22,690 deaths annually[3]. Out of the 22,690 deaths attributed to occupational risks, around 44% are due to injuries at work place, 37% due to occupational particulate matter, gases, and fumes, 12% due to occupational carcinogens and 6% due to occupational asthmagens.

The recent estimates revealed that 2.7 million (4.4%) of the employed population (61.7 million) experienced an injury at work in 2017-18. Injury rates were higher among women (4.4%) than men (3.7%) in 2017-2018. Urban areas fared well compared to the rural areas (4.5% in rural and 2.4% injury rate in urban areas). The sectoral trends of injury rate show that 41.6% of the reported injuries were in the agricultural sector while 58.4% were reported in the modern sectors [16].

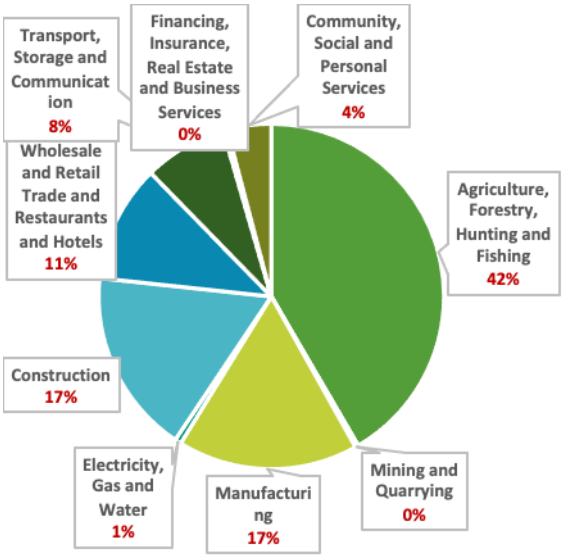


Figure 13: Industry wise distribution of injured workers over the time period of 2001-2018

Water sanitation and hygiene

Risks related to unsafe water, sanitation and including handwashing are the third highest contributors of Burden of Disease in Pakistan after maternal and child malnutrition and air pollution[3]. Unsafe water, poor sanitation and inadequate handwashing practices contribute to around 4.8 million DALYs and 79,813 deaths annually[3]. Majority (94%) of the households in Pakistan have access to drinking water with improved source, Punjab at the top (99%) followed by Sindh (94%), Balochistan (84%) and Khyber Pakhtunkwa (83%). Improved sources include tap water, motor pump, hand pump, dug well (closed), spring protected, bottled water, filtration plant and water delivered through tanker truck. With regards to availability of toilets within the households, more than two thirds of the households (68%) in Pakistan have a toilet facility which is not shared with any other household. More than half of the households (54%) have a specific place of handwash with soap[17].

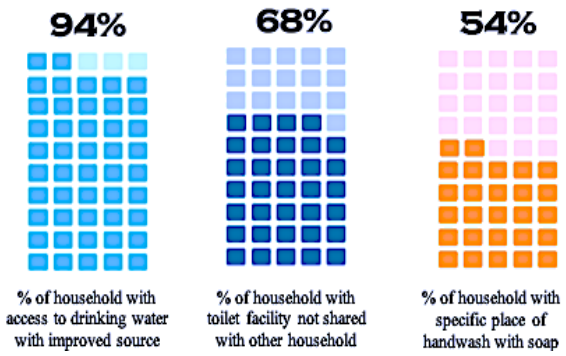


Figure 14: Drinking water access, toilet and handwashing space availability

[16] Muhammad Noman, Nooreen Mujahid, Ambreen Fatima, The Assessment of Occupational Injuries of Workers in Pakistan, Safety and Health at Work, Volume 12, Issue 4, 2021, Pages 452-461,ISSN 2093-7911, https://doi.org/10.1016/j.shaw.2021.06.001.
(https://www.sciencedirect.com/science/article/pii/S2093791121000512)

17 Pakistan Social and Living Standards Measurement (PSLM) Survey 2019-20

Lead exposure

Lead exposure contributes to around 0.7 million DALYs and 21,167 deaths annually in Pakistan[3]. In adults, lead blood levels up to 10 mcg/dL are considered normal. Anywhere from 10 to 25 mcg/dL is a sign that the person is regularly exposed to lead. At the concentration of 80 mcg/dL treatment is recommended. Although few in number, all studies have reported high blood lead levels in Pakistan since 1989[18,19,20,21,22,23,24]. Comparatively higher blood lead levels ranging 7.2–38.2 µg/dL were reported from the megacity Karachi while the range was lower between 3.22–2.3 µg/dL in Islamabad with less dense traffic (). A survey for lead poisoning in lead factory workers in Pakistan reported median blood lead levels of 61.20 µg/dL [25]. A study by Aga Khan University in Karachi showed that 80% of children aged 36 to 60 months had blood lead concentrations 10 µg/dl and that living near the city centre, application of surma and child's habit of hand-to-mouth activity were associated with elevated lead concentrations in blood[24]. Important sources of Lead contamination in the environment include Leaded paint, leaded gasoline, leaded aviation fuel, lead in spices, cosmetics, ayurvedic medicines, toys, and other consumer products; Mining, Smelting, Manufacturing, Lead acid battery recycling, and Lead solder in food cans.

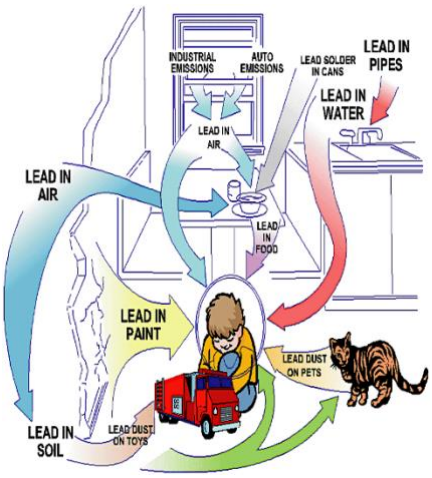


Figure 15: Sources of Lead exposure

18 Janjua, N.Z.; Delzell, E.; Larson, R.R.; Meleth, S.; Kabagambe, E.K.; Kristensen, S.; Sathiakumar, N. Maternal nutritional status during pregnancy and surma use determine cord lead levels in Karachi, Pakistan. Environ. Res. 2008, 108, 69–79

19 Kadir, M.M.; Janjua, N.Z.; Kristensen, S.; Fatmi, Z.; Sathiakumar, N. Status of children's blood lead levels in Pakistan: Implications for research and policy. Public Health 2008, 122, 708–715.

20 Kazi, T.G.; Shah, F.; Shaikh, H.R.; Afridi, H.I.; Shah, A.; Arain, S.S. Exposure of lead to mothers and their new born infants, residents of industrial and domestic areas of Pakistan. Environ. Sci. Pollut. Res. Int. 2014, 21, 3021–3030

21 Manser, W.W.; Khan, M.A.; Hasan, K.Z. Trace element studies on Karachi population. Part IV: Blood copper, zinc, magnesium and lead levels in psychiatric patients with depression, mental retardation and seizure disorders. J. Pak. Med. Assoc. 1989, 39, 269–274.

22 Manser, W.W.; Khan, M.A.; Hasan, Z. Trace element studies in Karachi populations. Part III: Blood copper, zinc, magnesium and lead levels in psychiatric patients with disturbed behaviour. J. Pak. Med. Assoc. 1989, 39, 235–238.

23 Manser, W.W.; Lalani, R.; Haider, S.; Khan, M.A. Trace element studies on Karachi populations. Part V: Blood lead levels in normal healthy adults and grammar school children. J. Pak. Med. Assoc. 1990, 40, 150–154

24 Rahbar, M.H.; White, F.; Agboatwalla, M.; Hozhabri, S.; Luby, S. Factors associated with elevated blood lead concentrations in children in Karachi, Pakistan. Bull. World Health Organ. 2002, 80, 769–775.

25 Khan DA, Malik IA, Saleem M, Hashim R, Bashir R. Screening for chronic lead poisoning in lead factory workers. J Pak Med Assoc 1994;44:239-41.

Injuries

The burden of injuries in Pakistan has increased from 10,641 per 100,000 in the year 2000 to 13,885 per 100,000 in 2019. There were around 31 million injury cases in 2019 with nearly two fifth (39%) unintentional injuries (falls, drowning, fire, poisoning, animal contact and foreign body), more than one third (35%) self-harm & interpersonal violence and more than one forth (27%) transport related injuries. The 31 million injuries during 2019 resulted in 85,346 deaths, out of which 20,747 deaths were related to transport injuries while 32,868 deaths due to unintentional injuries and 31,731 deaths due to self-harm and interpersonal violence[3].

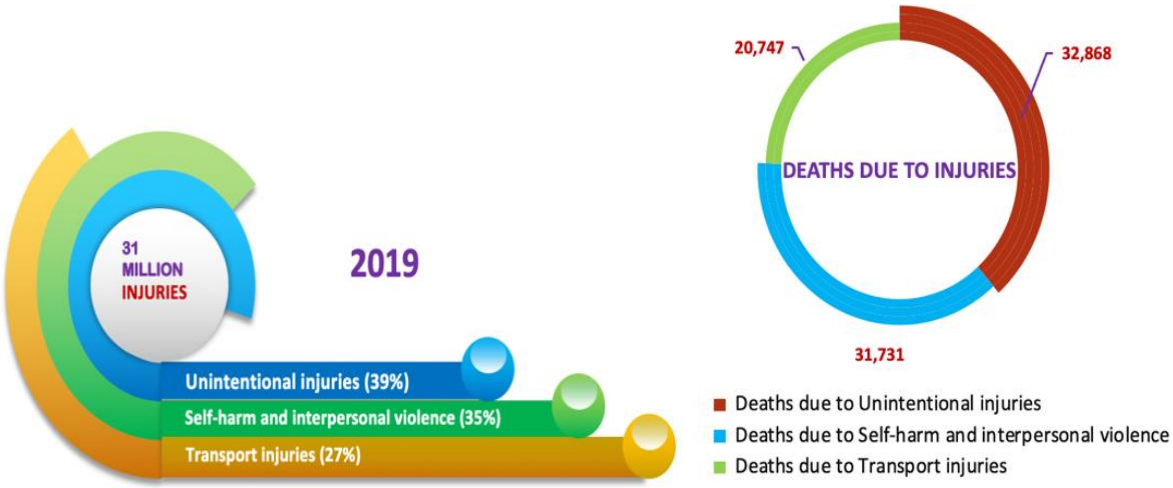


Figure 16: Injuries by cause and associated mortality[3]

4

INTERSECTORAL INTERVENTION PACKAGE FOR PAKISTAN

Vision

‘“To improve the health of citizens of Pakistan, particularly women and children by providing universal access to affordable, quality, essential health services which are delivered through a resilient and responsive health system and effective multi-sectoral joint work, both capable of attaining the Sustainable Development Goals and fulfilling its other global health responsibilities”

Goal

The Action Plan will strive to reduce the preventable and avoidable burden of morbidity and mortality by mitigating risk factors through coordinated inter-sectoral actions at national and sub-national levels, so that the population reaches the highest attainable standards of health and productivity contributing to socioeconomic development and well-being

Objectives

1. To address the addictive substance use through intersectoral interventions reflected as 30% relative reduction in prevalence of current tobacco use in persons aged 15+ years by 2030
2. To modify the diet related behaviors reflected as 30% relative reduction in mean population intake of salt/sodium by 2030
3. To improve the environmental conditions reflected as 5% decrease in the Annual average Air Quality Index in big cities by 2030
4. To reduce the burden associated with injuries reflected as a 10% reduction in road traffic accidents by 2030
5. To identify coordination mechanism for stakeholders responsible for implementing the interventions covered by the intersectoral package.

The UHC Intersectoral Intervention Package is a collaborative effort. Considering the importance and impact of intersectoral interventions a detailed review and consultation with relevant stakeholders on the DCP3 proposed 71 inter-sectoral interventions was carried out through four consultative

workshops from December 2018 to February 2019. The stakeholder's consultation reflected that 50 (70.4%) of the 71 DCP3 inter-sectoral policies can potentially be considered for inclusion in the UHC Benefit Package (BP) for Pakistan, of which 6 are fiscal, 27 are regulatory, 7 are Info & Education and 10 are related to building environment. Among the 50 suggested intersectoral interventions, 21 interventions are also among the DCP3 high priority interventions.

As part of the collaboration between DCP3 and the Government of Pakistan on UHC-BP, formal work on the development of a national package of high-priority intersectoral policies was initiated in early 2020. A meeting was held in January 2020 to deliberate on the DCP3 intersectoral policies and the preliminary assessment made during the consultative workshops mentioned above. The deliberations reflected that a practical and realistic approach is for the country to initially consider the core intersectoral package of 29 policies recommended by DCP3 for early implementation in low- and middle-income countries. It was also agreed to review the current situation in Pakistan in relation to the 29 intersectoral policies with a focus on:

- their description
- status of implementation and enforcement
- identification of the key stakeholders
- further technical needs
- key recommendations for moving forward

As a first step DCP3 Country Translation Project in collaboration with Aga Khan University and with the support of WHO developed a detailed description of each of the 29 interventions. Second, the Ministry of National Health Services Regulation & Coordination (MoNHSR&C) reviewed the intersectoral intervention description with the key stakeholders and DCP3 international experts in a workshop held in February 2021. The feedback provided during the February 2021 workshop and during follow up consultations was incorporated and the intersectoral policies description updated.

In order to have more in-depth sector specific review and deliberation on the intersectoral intervention descriptions, four technical sub-committees were constituted (Diet, Environment, Substance Abuse and Injuries) with representation of the sectoral experts. Several consultations were carried out with each of the technical sub-committee from February till August 2021 and concluded on the conduction of the Technical sub-committee workshop in September 2021. The intersectoral intervention description was finalised during the workshop which reflected the current status, further technical needs, lead ministry & key stakeholders and key recommendations for each of the prioritised intersectoral intervention. During the National Advisory Committee meeting, it was suggested to include the interventions related to climate resilient health systems as Pakistan ranks as the fifth most vulnerable country in the world according to the Global Climate Risk Index (included in Table 2).

During the consultations of the Technical sub-committees, the high priority interventions were further categorised as immediate priority, medium and long-term priority as reflected below in Table 2.

Table 2: High Priority Intersectoral Interventions (29) For Pakistan

No.	Inter-sectoral policies and interventions	Instrument	Priority Category
			Immediate
			Medium term
			Long term
1. RISK DOMAIN – ADDICTIVE SUBSTANCE USE			
1.	Substance use: Impose Large Excise Taxes on Tobacco	Fiscal	Immediate
2.	Substance use: Impose and enforce strict regulation of advertising, promotion, packaging and availability of tobacco	Regulation	Immediate
3.	Smoking control: Ban Smoking in Public Places	Regulation	Immediate
2. RISK DOMAIN – DIET			
4.	Inadequate Nutrition; Iron and Folic Acid; Fortify Food	Regulation	Immediate
5.	Inadequate Nutrition; Iodine; Fortify Salt	Regulation	Immediate
6.	School feeding: Finance School Feeding for all Schools and Students in Selected Geographical Areas	Fiscal	Medium term
7.	Food quality: Ensure that Subsidized Foods and School Lunches have Adequate Nutritional Quality	Regulatory	Medium term
	- Excessive nutrient intake		
8.	Salt: Impose Regulations to Reduce Salt in Manufactured Food Products	Regulatory	Immediate
9.	Salt and sugar: Provide Consumer Education Against Excess Use, Including Product Labelling	Information and education	Immediate
10.	Sugar Sweetened Beverages: Tax to Discourage Use	Fiscal	Immediate
11.	Trans Fats: Ban and Replace with Polyunsaturated Fats	Regulatory	Immediate
3. RISK DOMAIN – ENVIRONMENTAL			
	- Air pollution		
12.	Indoor sources: Ban on kerosene and halt the use of unprocessed coal as a household fuel	Regulatory	Medium term
13.	Indoor sources: Subsidies to promote the use of low emission household energy devices and fuels	Fiscal	Long-term
14.	Indoor air pollution: Promote the Use of Low Emission Household Devices	Information and education	Immediate
15.	Fossil Fuel Emissions: Regulate Transport, Industrial, and Power Generation Emissions	Regulatory	Immediate
16.	Fossil fuel emissions: tax emissions and/or auction off transferable emission permits	Fiscal	Long term
17.	Fossil Fuel Emissions: Dismantle Subsidies for and Increase Taxation of Fossil Fuels (Except LPG)	Fiscal	Medium term
	- Water supply and sanitation		
18.	WASH: Enact National Standards for Safe Drinking Water and Sanitation within and Outside Households and Institutions	Regulatory	Immediate
	- Toxic substances		
19.	Hazardous waste: Legislation and Enforcement of Standards for Hazardous Waste Disposal	Regulatory	Immediate
20.	Pesticides: Enact Strict Control and Move to Selective Bans on highly Hazardous Pesticides	Regulatory	Medium term
21.	Lead exposure: Take Actions to Reduce Human Exposure to Lead, including Bans on Leaded Fuels and Phase-Out of Lead-Based Consumer Products	Regulatory	Immediate
	- Climate Resilient Health Systems		
22.	Initiative to make health systems climate		Immediate
4. RISK DOMAIN – INJURIES			
	- Road traffic injuries		
23.	Public transportation: Build and Strengthen Public Transportation Systems in Urban Areas	Build environment	Long-term
24.	Traffic Safety: Include Traffic Calming Mechanisms into Road Construction	Build environment	Medium term
25.	Traffic Safety: Set and Enforce Speed Limits on Roads	Regulatory	Immediate
26.	Vehicle safety: enact legislation and enforce personal transport safety measures, including seatbelts in vehicles and helmets for motorcycle users	Regulatory	Immediate
	- Other injuries		
5. RISK DOMAIN – OTHERS			
27.	Exercise: take steps to develop infrastructure enabling pedestrians and bicyclists	Build environment	Long-term
28.	Agricultural antibiotics use: Reduce and Eventually Phase-out Subtherapeutic Antibiotic use in Agriculture	Regulatory	Medium term
29.	Emergency Response: Create and Exercise Multisectoral Response and Supply Stockpiles to Respond to Pandemics and Other Emergencies	Regulatory	Immediate
30.	Safe Sex: Remove Duties and taxes on Condoms and Subsidize in at-risk Key Populations	Fiscal	Immediate

5

STAKEHOLDER ANALYSIS

During the consultations lead ministries along with key stakeholders were proposed by participants for the 29 high priority interventions. The proposed lead ministries and key stakeholders were then deliberated within the respective sub-committees and finalized based on consensus. The distribution of the 29 interventions across the lead ministries is reflected in Table 3. Ten intersectoral interventions each are led by M/o NHSR&C and the Ministry of Climate Change while 4 interventions are led by Ministry of Planning, Development and Special Initiatives, 2 by Ministry of Federal Education and one each by Ministry of Communications, Ministry of National Food Security and Research, and National Disaster Management Authority (NDMA).

Table 3: Distribution of intersectoral interventions by lead ministry

LEAD MINISTRY	NUMBER OF INTERSECTORAL INTERVENTIONS
Ministry of NHSR&C	10
Ministry of Climate Change	10
Ministry of Planning, Development and Special Initiatives	4
Ministry of Federal Education	2
Ministry of Communications	1
Ministry of National Food Security and Research	1
National Disaster Management Authority (NDMA)	1
TOTAL	**29**

The lead ministries and the key stakeholders are reflected in Table 4 for each of the 29 high priority interventions.

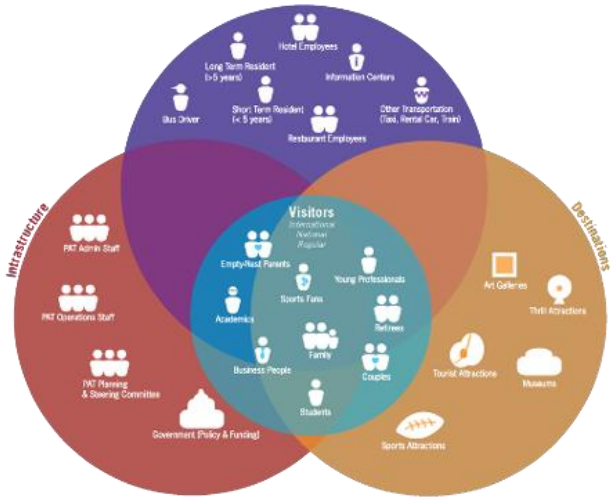


Table 4: Key Stakeholders for intersectoral interventions

No.	Inter-sectoral policies and interventions	Lead Ministry	Key Stakeholders
1. RISK DOMAIN – ADDICTIVE SUBSTANCE USE			
1.	Substance use: Impose Large Excise Taxes on Tobacco	M/o National Health Services Regulations & Coordination Islamabad (M/o NHSR&C), Tobacco Control Cell (M/o NHSR&C),	▪ Federal Board of Revenue, Islamabad. ▪ Ministry of Finance, Revenue & Economic Affairs, ▪ Ministry of Commerce, Islamabad, ▪ Antinarcotics Force, ▪ World Health Organization (WHO), ▪ Civil Society Organizations. ▪ PEMRA, ▪ Pakistan Tobacco Control Board, ▪ Print & Electronic Media Organizations, ▪ Local/District Governments.
2.	Substance use: Impose and enforce strict regulation of advertising, promotion, packaging and availability of tobacco		
3.	Smoking control: Ban Smoking in Public Places		
2. RISK DOMAIN – DIET			
4.	Inadequate Nutrition; Iron and Folic Acid; Fortify Food	M/o National Health Services Regulations & Coordination Islamabad (M/o NHSR&C), National Fortification Alliance (NFA) consortium of M/o NHSR&C, nine other ministries, consumer organizations and industry.	▪ Ministry of Finance, Revenue & Economic Affairs, ▪ Federal Board of Revenue, ▪ Nutrition wing, Planning Commission, ▪ Ministry of Industry & Production, ▪ M/o Planning, development and special initiatives, ▪ Scaling up Nutrition (SUN) secretariat, Planning and Development Division, ▪ M/o National Food Security and Research & Agriculture. ▪ Ministry of Federal Education and Professional Training, ▪ Pakistan Standard and Quality Control Authority (PSQCA), ▪ Global Alliance for Improved Nutrition (GAIN) Pakistan, ▪ World Food Programm, ▪ Food and Agriculture Organization, ▪ World Health Organization (WHO). ▪ United Nation Children Emergency Fund (UNICEF), ▪ Pakistan Floor Mills Association (PFMA) and small-scale wheat flour producers (Chakkis), ▪ Bilateral partners working on nutrition. Food and beverage industry (multinational and local) ▪ Social Protection Programs e.g. BISP, Provincial governments and food authorities, Civil society. ▪ The Micronutrient Initiatives
5.	Inadequate Nutrition; Iodine; Fortify Salt		
- Excessive nutrient intake			
6.	Salt: Impose Regulations to Reduce Salt in Manufactured Food Products		
7.	Salt and sugar: Provide Consumer Education Against Excess Use, Including Product Labelling		
8.	Sugar Sweetened Beverages: Tax to Discourage Use		
9.	Trans Fats: Ban and Replace with Polyunsaturated Fats		
10.	School feeding: Finance School Feeding for all Schools and Students in Selected Geographical Areas	Ministry of Federal Education	▪ Ministry of National Health Services, Regulation and Coordination (Mo NHSR&C) ▪ National Fortification Alliance (NFA) [Multisectoral Platform of Mo NHSR&C, nine other ministries, consumer organizations and industry] ▪ Ministry of Federal Education and Professional Training ▪ Ministry of Planning, Development and special initiatives – Nutrition Section ▪ Scaling Up Nutrition (SUN) secretariat, Planning and Development Division ▪ Pakistan Standards and Quality Control Authority (PSQCA) ▪ Ministry of National Food Security and Research (and agriculture) ▪ Global Alliance for Improved Nutrition (GAIN) Pakistan ▪ World Food Program ▪ Food and Agriculture Organization ▪ World Health organization ▪ UNICEF ▪ Global Health Advocacy Incubators ▪ Bilateral partners working on nutrition ▪ Social Protection Programs e.g. BISP / EHSAAS, Provincial SWDs
11.	Food quality: Ensure that Subsidized Foods and School Lunches have Adequate Nutritional Quality		

Table 4: Key Stakeholders for intersectoral interventions

No.	Inter-sectoral policies and interventions	Lead Ministry	Key Stakeholders
			▪ Provincial governments and food authorities ▪ Civil society organizations
3. RISK DOMAIN – ENVIRONMENTAL			
- Air pollution		Ministry of Climate Change	▪ Ministry of Energy, ▪ Ministry of Science and Technology, ▪ Ministry of Commerce, ▪ Ministry of Industry and Production, ▪ Pakistan Environmental Protection Agency, ▪ Ministry of national health services regulation and coordination (Mo NHSRC) [NCD and MNCH focal persons]. ▪ Ministry of Finance, ▪ Federal Board of Revenue, ▪ World Health Organization, ▪ Pakistan Health Research Council, ▪ UNICEF, ▪ National Commission on the status of Women, ▪ Ministry of Energy, ▪ Oil and Gas Regulatory Authority (OGRA) ▪ Academia. ▪ Ministry of Information & Broadcasting, ▪ M/o National Food Security and Research & Agriculture. ▪ Pakistan Standards & Quality Control Authority (PSQCA), ▪ Consumer protection activists ▪ Alternative Energy Development Board, ▪ National. Energy Efficiency & Conservation Authority
12.	Indoor sources: Ban on kerosene and halt the use of unprocessed coal as a household fuel		
13.	Indoor sources: Subsidies to promote the use of low emission household energy devices and fuels		
14.	Indoor air pollution: Promote the Use of Low Emission Household Devices		
15.	Fossil Fuel Emissions: Regulate Transport, Industrial, and Power Generation Emissions		
16.	Fossil fuel emissions: tax emissions and/or auction off transferable emission permits		
17.	Fossil Fuel Emissions: Dismantle Subsidies for and Increase Taxation of Fossil Fuels (Except LPG)		
- Water supply and Sanitation			
18.	WASH: Enact National Standards for Safe Drinking Water and Sanitation within and Outside Households and Institutions		
- Toxic Substances			
19.	Hazardous waste: Legislation and Enforcement of Standards for Hazardous Waste Disposal		
20.	Pesticides: Enact Strict Control and Move to Selective Bans on highly Hazardous Pesticides		
21.	Lead exposure: Take Actions to Reduce Human Exposure to Lead, including Bans on Leaded Fuels and Phase-Out of Lead-Based Consumer Products		
- Climate Resilient Health Systems		M/o National Health Services Regulations & Coordination Islamabad (M/o NHSR&C)	▪ Ministry of Climate Change ▪ UNEP ▪ SUPARCO
22.	Initiative to make health systems climate		
4. RISK DOMAIN – INJURIES			
- Road traffic injuries		Ministry of Planning, Development and Special Initiatives	▪ Ministry of Communications ▪ National Transport Research Center ▪ Ministry of national health services regulation and coordination (Mo NHSRC) ▪ Engineering Development Board, ▪ Ministry of Industries and Production ▪ National Institute of Transportation, National University of Sciences and Technology (NUST), Islamabad ▪ World Health Organization ▪ Environment Protection Agency (EPA) ▪ Building and Roads ▪ Transport Unions ▪ Ministry of Education ▪ Ministry of Communications ▪ National Highway Authority ▪ Engineering Development Board, ▪ Asian Development Bank ▪ FCDO, UK ▪ National Highways and Motorway Police ▪ Ministry of Interior ▪ Traffic Police ▪ Ministry of Science & Technology ▪ Pakistan Standards & Quality Control Authority (PSQCA) ▪ Ministry of Commerce
23.	Public transportation: Build and Strengthen Public Transportation Systems in Urban Areas		
24.	Traffic Safety: Include Traffic Calming Mechanisms into Road Construction		
25.	Traffic Safety: Set and Enforce Speed Limits on Roads		
26.	Vehicle safety: enact legislation and enforce personal transport safety measures, including seatbelts in vehicles and helmets for motorcycle users		
- Other injuries			
5. RISK DOMAIN – OTHERS			
27.	Exercise: take steps to develop infrastructure enabling pedestrians and bicyclists	Ministry of Communications	▪ Traffic Police

Table 4: Key Stakeholders for intersectoral interventions

No.	Inter-sectoral policies and interventions	Lead Ministry	Key Stakeholders
			▪ National Transport Research Center ▪ Ministry of national health services regulation and coordination (Mo NHSRC) ▪ Engineering Development Board, Ministry of Industries and Production ▪ Asian Development Bank ▪ FCDO, UK ▪ National Institute of Transportation, National University of Sciences and Technology (NUST), Islamabad ▪ World Health Organization
28.	Agricultural antibiotics use: Reduce and Eventually Phase-out Subtherapeutic Antibiotic use in Agriculture	Ministry of National Food Security and Research (Livestock wing; livestock and dairy development board; National Veterinary Laboratory)	▪ Ministry of National Health Services, Regulation and Coordination (Mo NHSR&C) ▪ Drug Regulatory Authority of Pakistan (DRAP) ▪ National Taskforce for IHR and GHSA ▪ Pakistan Agricultural Research Council ▪ Pakistan Veterinary Medical Council ▪ World Organization for Animal Health ▪ World Health Organization ▪ UN Food and Agriculture Organization ▪ Alliance for the Prudent Use of Antibiotics - Pakistan chapter
29.	Emergency Response: Create and Exercise Multisectoral Response and Supply Stockpiles to Respond to Pandemics and Other Emergencies	National Disaster Management Authority (NDMA)	▪ Ministry of National Health Services, Regulation and Coordination (Mo NHSR&C) ▪ National Institute of Health ▪ National IHR taskforce (multisectoral health and non-health forum as well as provincial representation) ▪ Ministry of Planning, Development and Special Initiatives ▪ Ministry of Law and Justice ▪ Ministry of Interior ▪ Armed Forces ▪ Ministry of National Food Security and Research ▪ Ministry of Finance and Revenue ▪ Economic Affairs Division ▪ National Taskforce for IHR and GHSA ▪ World Health Organization ▪ UN Food and Agriculture Organization
30.	Safe Sex: Remove Duties and taxes on Condoms and Subsidize in Brothels and At-risk Key Populations	Ministry of National Health Services, Regulation and Coordination (Mo NHSR&C) & Ministry of Finance and Revenue	▪ Ministry of Finance and Revenue ▪ Parliamentary Group on Population and Development ▪ Ministry of Planning, Development and Special Initiatives ▪ National AIDs Control Program ▪ Federal Board of Revenue ▪ United Nations Population Fund ▪ World Health Organization ▪ UNAIDS ▪ Bilateral partners

6

KEY RECOMMENDATIONS ON THE PRIORITIZED INTERVENTIONS

Deliberations on the selected 29 high priority interventions (early intersectoral package) with sectoral experts involved determining the current status of interventions future implementation mechanism and technical work required to be done in this regard. Based on the discussions, further technical needs were identified for each of the 29 interventions. A summary of the key recommendations for the prioritized interventions is provided in Table 5.

Table 5: Inter-sectoral interventions Pakistan – Key recommendations

No.	Inter-sectoral policies and interventions	Key Recommendations
1. RISK DOMAIN – ADDICTIVE SUBSTANCE USE		
1.	Substance use: Impose Large Excise Taxes on Tobacco	▪ Directorate of Tobacco should work with various stakeholders e.g., Health ministry, Excise, FBR and industry to progressively raise excise taxes on cigarettes; ▪ Strictly enforce the rules which limit tobacco industry interactions with the government across various relevant ministries including Finance and Revenue. ▪ Assign responsibility to the federal and provincial healthcare commissions ▪ Imposition of taxes on Tobacco/products should be optimized in a manner that controls Tobacco consumption vis-à-vis Tobacco Farming/Industry and related job market/FDI ▪ Sustainable effort needs to be institutionalized for regular/updated research, behavioral change and standardization of prevention/treatment. ▪ In addition to imposition of taxes, there is need for o implementation of rules, o Behavior change and their modification, o incorporate messages in the educational curriculum, o tobacco pack size reduction o Awareness in educational institutes (messages display) ▪ Need to identify solutions for the demand and supply side ▪ Identify various tobacco variants that by-pass the government rules and regulations ▪ Parallel system of taxation at local government/District administration/UC
2.	Substance use: Impose and enforce strict regulation of advertising, promotion, packaging and availability of tobacco	▪ Strengthen local implementation by empowering local/district governments ▪ evidence-based multisectoral plan of action for tobacco control in Pakistan ▪ A comprehensive ban on tobacco advertisement, promotion and sponsorship ▪ Implementing large-sized graphic health warnings on cigarette packs ▪ Introducing plain packaging ▪ Strictly enforce the rules which limit tobacco industry interactions with the government across various relevant ministries including Finance and Revenue. ▪ Need supervisory committee and Community participation (Key informants) for continued prohibition of promotion e.g., Ambiance Branding e.g., Velo Music Station

No.	Inter-sectoral policies and interventions	Key Recommendations
		▪ Risk statistics on the cigarette packing ▪ Need social and behavior change communication, regularly ▪ Involvement of Censor board (prohibit smoking scenes in entertainment) ▪ Prohibit the display of tobacco products on the shops ▪ Key messages display on the institutional websites ▪ Integration of different Helplines for mutual referrals and collective action. ▪ Need to have age-appropriate institutional intervention at every level ▪ Need to have the National Action Plan on annual basis with key milestone
3.	Smoking control: Ban Smoking in Public Places	▪ Strengthen local implementation by empowering local/district governments and provincial governments. ▪ Prohibit and enforce public smoking in all indoor public places, indoor workplaces, and public transport without exception. Designated smoking areas in public places and restaurants should be prohibited. ▪ Require all establishments to remove ash trays from smoke free premises ▪ Improve monitoring of compliance and strengthen enforcement by collaboration with local governments with resources and training for staff ▪ Evidence-based multisectoral plan of action for tobacco control in Pakistan ▪ Strictly enforce the rules which limit tobacco industry interactions with the government across various relevant ministries including Finance and Revenue. ▪ Public entertainment programs with high impact message ▪ Media campaigns ▪ Increase awareness regarding smoking restricted areas ▪ Regulation required for smokeless/flavored tobacco and tobacco products.
2. RISK DOMAIN – DIET		
4.	Inadequate Nutrition; Iron and Folic Acid; Fortify Food	▪ PSQCA / Provincial Food Authorities (PFAs) need to be strengthened technically with incorporation of appropriate and adequate technical experts in technical committees ▪ Increase testing capacity at PSQCA / PFA ▪ Improve compliance with fortification standards of fortified food available in the market of large-scale producers to ensure fortification is up to the established PSQCA / PFA standards ▪ Appropriate incentives and penalties must be put in place to ensure compliance ▪ Ensure availability of fortified wheat flour for the poor by making subsidized flour available ▪ Strengthen quality control laboratories at mills for effective enforcement ▪ Research around taking fortified food in one population and adopting healthy eating behaviors through education and using flour with bran and local iron and folic acid diet recipes through randomized control trial' ▪ Policy advocacy around fortified food to be used in schools and institutions in nutrition emergency areas of Pakistan ▪ Governance mechanisms for accountability and progress monitoring ▪ Formative and summative evaluation ▪ Piecemeal third-party evaluations along with Lot quality assurance surveys ▪ Sharing and learning best examples and success stories around the world with program cycle approach/ 360-degree mixed methods review because of stagnant/ low progress in indicators ▪ Cost Transfer Mechanism ▪ Capacity building of Govt. & Millers staff on fortification methods & QA/QC ▪ Sustained Import duty exemptions on Premix ▪ Allocation of funds for sustainability (enforcement, QA/QC) ▪ Chakki miller's engagement in fortification process ▪ Awareness raising around use of fortified food and subsidization on fortified food in vulnerable communities
5.	Inadequate Nutrition; Iodine; Fortify Salt	▪ NFA should support provinces in creation of universal salt iodization legislation ▪ Ensure fortification of salt according to national standards by addressing drivers of poor compliance at production level as well as by adequate testing and enforcement ▪ Support small- and medium-scale producers to improve the iodization process, technology and quality control ▪ Develop strategies to engage all departments (health, trade, finance, business) in support for universal salt iodization ▪ Effective policies and regulations to reduce salt consumption. The strategy should include targets for salt levels in foods; ensuring coordination of program implementation through close engagement of noncommunicable disease and nutrition interest groups; and exploring a range of other fiscal and regulatory options – as an example, trade standards

No.	Inter-sectoral policies and interventions	Key Recommendations
		that promote importation and exportation of healthy foods and incentives for low sodium iodized salt. Strengthen quality control laboratories for effective enforcement ▪ Identify strategies to reach out to households that do not consume fortified salt e.g., advocacy information campaign and subsidized access ▪ National & Provincial level Legislation ▪ Capacity building of Govt & Millers staff on fortification methods & QC / QA ▪ Sustained Import duty exemptions on Premix ▪ Allocation of funds for sustainability (enforcement, QA / QC) ▪ Sharing and learning best examples and success stories around the world with program cycle approach/ 360-degree mixed methods review because of stagnant/ low progress in indicators
6.	School feeding: Finance School Feeding for all Schools and Students in Selected Geographical Areas	▪ The Federal government in collaboration with the BISP, World Food Program and by mobilizing funds from internal and bilateral and multilateral partners launch a school meal program focusing on disadvantaged areas and populations / high burden districts making sure that all children and adolescents in public schools get at least one full healthy meal a day while they are in school. Poverty Survey can be used to identify the most vulnerable and high burden districts. The program can be progressively scaled up to all public schools in the country ▪ Based on evidence of school retention, take-home rations can be added to the programs in areas where the number of out-of-school children is high, retention is a problem or in selected underdeveloped areas ▪ Promote establishment of school gardening in coordination with local communities. ▪ Private sector / Corporate sector should be engaged ▪ BCC focusing on Nutritious diet behavior. Nutrition and health counseling/SBCC is the most common direct intervention in national plans targeted at adolescent girls, followed by iron folic acid (IFA) supplementation, or ensuring access to IFA supplementation. ▪ Provision of nutrient-rich food for adolescent girls was noted in the plans of several countries and included via school feeding or school gardens in selected areas. Indirect interventions for adolescents linked to a nutrition objective are limited. The most common references are to the provision of adolescent-friendly reproductive health services for boys and girls (including via schools), promotion of girls' education, and promotion of economic empowerment and income generation for various groups of adolescents.
7.	Food quality: Ensure that Subsidized Foods and School Lunches have Adequate Nutritional Quality	▪ Ensure the nutritional quality of school meals (including the school feeding program) is based on age-appropriate nutritional needs of children and adolescents. The meals should incorporate all food groups including fruits and vegetables guided by Pakistan Dietary Guidelines for Better Nutrition 2018 and should not include unhealthy foods or drinks high in salt, sugars and unhealthy fats. Monitoring of nutritional quality and food hygiene should be ensured by provincial food authorities. ▪ Implement policies to create healthy environments inside and around the school to ensure access of students to healthy diet through regulatory measures to set standards for any food served, sold or brought into schools and by prohibiting any sale or marketing (including advertising and sponsorship) for foods high in fats, sugars and/or salt on or around school premises.
- Excessive nutrient intake		
8.	Salt: Impose Regulations to Reduce Salt in Manufactured Food Products	▪ Development of salt content guidelines in manufactured food by PSQCA / PFA based on uptake or adaption of CODEX recommendations including changing the local codex Alimentarius reducing maximum approved salt concentration with leadership from the Mo/NHSR&C Nutrition wing ▪ Multisectoral Nutrition Strategy should include strategies to address over nutrition and to reduce salt intake including salt reduction in manufactured food ▪ Incremental, and initially voluntary, reduction in salt content by food industry followed by mandatory content limits in line with the WHO global sodium benchmarks ▪ Support establishment regulatory measures for public procurements such as military, hospitals, boarding schools etc. ▪ Apply salt reductions on the foodstuffs that contribute most to the high salt intake among the public. ▪ Support provinces in enhancing monitoring and implementation capacity ▪ Mandatory labeling of salt content ▪ Mandatory salt standards in PSQCA / PFA ▪ National Action Plan for Salt Reduction (along with sugar, fats etc) ▪ Follow SHAKE for framing of salt reduction planning o **S**urveillance: measure and monitor salt use.

No.	Inter-sectoral policies and interventions	Key Recommendations
		○ **H**arness industry: promote the reformulation of foods and meals to contain less salt. ○ **A**dopt standards for labelling and marketing: Implement standards for effective and accurate labelling and marketing of food. ○ **K**nowledge: educate and communicate to empower individuals to eat less salt. ○ **E**nvironment: support settings to promote healthy eating ▪ Take measure to counter industry lobbying in negatively influencing policy interventions
9.	Salt and sugar: Provide Consumer Education Against Excess Use, Including Product Labelling	▪ Development of standards for nutritional or front-of-pack labelling of all packaged food by PSQCA / PFA based on uptake or adaption of CODEX recommendations including changing the local codex Alimentarius with leadership from the M/o NHSR&C Nutrition wing ▪ Incorporate modules on healthy eating including low use of salt and sugar in school curriculum ▪ Public information campaign on healthy diet including reducing the use of salt and sugar with easily understandable messages for the public e.g., quantities expressed in tea spoons rather than grams or other locally understandable metric, etc. ▪ Multisectoral Nutrition Strategy should include strategies to address over nutrition and to reduce salt and sugar intake including food labelling and public information campaign ▪ Implementation of simplified, interpretive front-of-pack labelling of all packaged food, with energy, salt/sodium, sugars and saturated fat content followed by mandatory labelling requirements ▪ Take measure to counter industry lobbying in negatively influencing policy interventions
10.	Sugar Sweetened Beverages (SSBs): Tax to Discourage Use	▪ M/o NHSR&C should work with Ministry of Finance and FBR to impose an excise tax on all sugar-sweetened beverages and explore ear-marking mechanisms for diversion of the funds to health. ▪ Expedite approval/tabling of health levy bill to National Assembly and its implementation (Cabinet approved in 2019 but pending) ▪ Increase Federal Excise Duty on SSBs from current level of 11.5% to 20% (M/o NHSR&C to send proposal to FBR for upcoming finance bill) ▪ Take measure to counter industry lobbying in negatively influencing policy interventions ▪ Set up benchmarks for the levels of sugars on sweetened beverages and soft drinks and other foodstuffs.
11.	Trans Fats: Ban and Replace with Polyunsaturated Fats	▪ Legislation to ban production and use of oils and fats, including those sold to both consumers and businesses, containing trans fats in the country. Given the informal nature of large parts of the food industry in Pakistan where trans fats are used, lesser regulatory measures will face serious challenges of enforcement; a legislation banning all use may be the most effective measure. Establish a mandatory limit for TFAs as no more than 2g per 100g of total fats/oils in all foods and ban partially hydrogenated oils. ▪ Before the legislative or regulatory measures come into force, availability of healthier oils and fats should be ensured while making sure that other unhealthy alternatives such as oils with high proportion of saturated fats such as palm oil do not become the main substitute. This could require a review of local production of oil and import options including subsidies, in collaboration with ministries of commerce and agriculture. ▪ PSQCA / PFA should institute mandatory standards for nutrition labelling for all packaged food, including an understandable statement of the amount of TFA immediately following the declaration of total fat, and ensure harmful oils are not being branded as healthy substitutes. ▪ While it may be desirable to limit or ban the import of food with TFA content, this may be subject to reservations by other countries with more lax regulation of TFA content as a non-tariff barrier under WTO rules. Advocating with WHO and FAO for including a trans-fat ban in the international Codex Alimentarius and, in the longer term, an international treaty banning trans fats may be more feasible. ▪ Provide technical outreach support to retailers, restaurants, food companies, and informal sector to source healthier fats and oils and promote Partially Hydrogenated Oil (PHO) replacement with healthier fats and oils. ▪ Update import standards to ensure local TFA limits and labelling requirements are being adhered to in food imports. ▪ Empower and build capacity (including laboratory capacity) in provincial food authorities to assess TFA levels and monitor and enforce legislation, including by periodic testing and inspection of food facilities. ▪ Countrywide communication strategy on need to reduce TFA consumption.
3. RISK DOMAIN – ENVIRONMENTAL		

No.	Inter-sectoral policies and interventions	Key Recommendations
- Air pollution		
12.	Indoor sources: Ban on kerosene and halt the use of unprocessed coal as a household fuel	▪ Multiple strategies should be adopted in tandem to ensure that polluting fuels and devices are phased out, and use of cleaner alternatives is feasibly expanded – while avoiding fuel poverty for any segment of the population. ▪ Fund research to design and test 'clean' stoves which can feasibly replace stoves that cause Hazardous Air Pollutants due to their design or due to use of polluting and unsafe fuels including kerosene and unprocessed coal. o In the longer term provide subsidies for mass production by local industry and/or purchase by households. o As similar research is being carried out in other neighboring countries, opportunities for collaboration should be considered ▪ Reviewing subsidies on natural gas in urban and higher income areas and using the available resources to increase availability of cleaner fuels to other segments of the population ▪ In the long term expand access of rural and peri-urban areas to safer fuel networks (e.g., natural gas and renewable energy) and electricity grids while phasing out and ultimately banning the sale of kerosene and unprocessed coal for household consumption. ▪ Provide subsidies to households and communities for adopting the use of cleaner, renewable energy sources based on local feasibility (wind, solar, hydro power) ▪ Consider replacing kerosene with high-quality, locally-made solar lamps. ▪ Create air pollution thresholds (development of indoor air quality standard link with health-based data with concern department) ▪ Focus on monitoring and evaluation, across both indoor and outdoor air pollution sources. Rural areas are often ignored, but can provide data on ~65% of the population. Allows tracking of the impact of policies seeking to reduce air pollution. ▪ Addressing data needs: An update on the solid fuel use, emissions and exposure database, using recent DHS data and some measurement and modeling papers from the last few years; recent evidence from the Pakistan Social and Living Standards Measurement (PSLM) Survey shows that kerosene use is on the decline. Thus, some follow-up may be needed to help with prioritization (i.e., if reducing quickly on its own, additional work may not be needed, though tracking will be important). ▪ Long-term consideration of geographic boundaries for air pollution control -- rather than municipal or administrative ones. ▪ Improved ventilation and housing design can also reduce household pollution exposures
13.	Indoor sources: Subsidies to promote the use of low emission household energy devices and fuels	▪ Provide subsidies (e.g., vouchers in BISP) to industry and/or households for purchase of clean devices, which should be complaint with PSQCA clean device standards based on WHO IAQ guidelines (PSQCA to develop and enforce standards) ▪ Reviewing subsidies on natural gas in urban and higher income areas and using the available resources to increase availability of cleaner fuels to other segments of the population ▪ In the long term use targeted subsidies to expand access of rural and peri-urban areas to safer fuel networks (e.g., natural gas and renewable energy) and electricity grids while phasing out polluting fuels ▪ Provide subsidies to households and communities for adopting the use of cleaner, renewable energy sources based on local feasibility (wind, solar, hydro power) ▪ Consider replacing kerosene with high-quality, locally-made solar lamps
14.	Indoor air pollution: Promote the Use of Low Emission Household Devices	▪ Switching to low-emission biomass stoves: Stoves with special features, such as secondary combustion, insulated combustion chambers and/or fans can improve combustion efficiency and significantly lower emissions. While not all "improved" biomass stoves meet WHO guidelines, low-emission stoves serve as an important transitional technology. ▪ PSQCA to devise and enforce standards for household cooking devices which are 'clean' in line with WHO IAQ standards. The International Organization for Standardization is in the process of creating standards (based on WHO IAQ guidelines) for clean cooking devices considering indoor and overall emissions, fuel use and safety. PSQCA can adopt these standards for clean devices. ▪ Grass-roots and government supported information and education campaigns should be launched about the hazards of HAP and the use of polluting devices and promoting the use of PSQCA approved clean devices as well as the need to provide access to clean energy networks and sources for all by 2030. ▪ In rural areas, people are without efficient energy services because it is too expensive for retailers to service these low-density markets. Governments may provide the remedy for some of these equity problems through various price subsidies and taxation programs

No.	Inter-sectoral policies and interventions	Key Recommendations
		▪ Promote Innovative sources of household lighting by incentivizing / encouraging the local industry to manufacture low-cost household lighting sources such as solar technology-based lighting system ▪ Advocacy for biogas plants, introduce biogas plants (non-functional) ▪ Strengthen existing EPA and enforcement capabilities ▪ Consider replacing kerosene with high-quality, locally-made solar lamps. ▪ Consider locally made solar stoves for cooking purposes ▪ Key recommendations for mitigating the current rural energy use in the country designed to achieve two targets: ○ The first is to make modern forms of energy more accessible, affordable, and widely used ○ The second is to make biofuel use more sustainable. A successful transition to modern fuels will require broad-based income growth in both rural and urban areas.
15.	Fossil Fuel Emissions: Regulate Transport, Industrial, and Power Generation Emissions	▪ Monitoring fuel quality is the key ▪ Industrial regulations in revised National Environment Quality Standards (NEQS) regarding emission and its implementation ▪ Vehicular standards [Euro2 to Euro 6] ▪ Reintroduction of Self-Monitoring and Reporting SMART program and Polluter-pay principle with incentives/penalties for industries ▪ Strengthen regulatory capacity e.g., the air quality expert group led by Mo CC and regular review of national clean air program in background of available research. ▪ EPA to devise emission standards for all two, three and four-wheeler vehicles. All vehicles to be periodically tested for compliance as a condition of maintain registration of vehicle ▪ Attracting climate investment in the country by development and registration of robust Clean Development Mechanism projects ▪ Mass/public transport system need to be introduced in major cities. Further there is also a need to shift the goods transport from local transport to mass transport system to reduce CO2 emissions
16.	Fossil fuel emissions: tax emissions and/or auction off transferable emission permits	▪ Choose appropriate carbon pricing instrument(s) and sectors where application can result in most health and climate benefits ▪ Establishment of a robust monitoring and verification system for carbon pricing in Pakistan ▪ Consider banning the two stroke engines and setting up criteria to remove very old vehicles from the road.
17.	Fossil Fuel Emissions: Dismantle Subsidies for and Increase Taxation of Fossil Fuels (Except LPG)	▪ Review the pricing policy of fossil fuels and dismantling subsidies keeping in view health effects, environmental damage, economic concerns and development needs ▪ Incrementally higher carbon taxes on fossil fuels taxes (with exception for crucial industry e.g., export where justified by competitive disadvantage) while simultaneously increasing investment in and up scaling availability of clean energy in line with international commitments and local development needs ▪ A tax regime that gives priority to the import of natural gas, LNG and LPG over import of oil and coal, except for meeting specific fuel requirements, e.g., liquid fuel for transportation, etc. ▪ Reducing subsidies and increasing taxes may face very strong public opposition and to be acceptable may have to be tied to clear public benefits such as healthcare benefits
- Water supply and sanitation		
18.	WASH: Enact National Standards for Safe Drinking Water and Sanitation within and Outside Households and Institutions	▪ Update drinking water standards to comply with WHO criteria ▪ Support provinces in enforcement of standards and expand drinking and waste water treatment capabilities ▪ Improve access to safe drinking water ▪ Support provinces in improving capacity for enforcement of drinking water quality standards ▪ Promote low-cost waste water treatment technologies
- Toxic substances		
19.	Hazardous waste: Legislation and Enforcement of Standards for Hazardous Waste Disposal	▪ A systematic mechanism for collection and disposal of hazardous waste generated from hospitals, industries, and agriculture activities. ▪ Increase the number of disposal facilities ▪ Build skill and capacity for monitoring and enforcement ▪ Cleaner production and end-of-pipe methods for pollution control for industries (requires high investment and strong regulatory mechanism) ▪ Conduct study to collect data on hazardous waste and develop inventory of chemicals in country

No.	Inter-sectoral policies and interventions	Key Recommendations
		▪ Create a multi-sectoral national directorate on chemicals and hazardous waste management in Pakistan ▪ To the extent possible, inventories of hazardous chemicals including waste and pesticides need to be maintained and tracked. ▪ Develop the concept of proper landfill site in cities ▪ Proper data presentation of hospital infectious waste collected and disposed at country level with no of health facilities. ▪ Under UNEP Persistent Organic Pollutants (POPs) project with ministry of Climate Change (data of eliminated POPs and disposal is available) and UNEP developed the regulation pertaining to ban on POPs
20.	Pesticides: Enact Strict Control and Move to Selective Bans on highly Hazardous Pesticides	▪ An integrated pest management strategy should be developed with careful consideration of all available pest control techniques and subsequent integration of appropriate measures that discourage the development of pest populations and keep pesticides and other interventions to levels that are economically justified and reduce or minimize risks to human health and the environment. ▪ With adequate investment in scaling-up existing and new ecological alternatives for pest control, pesticides that pose unacceptable risk to humans and the environment can be phased out ▪ Strengthening & Up-gradation of Pesticides Testing Laboratory
21.	Lead exposure: Take Actions to Reduce Human Exposure to Lead, including Bans on Leaded Fuels and Phase-Out of Lead-Based Consumer Products	▪ Establishment of a cross-sectoral mechanisms (or incorporation into an existing mechanism) for a cohesive response across various sectors such as industry, energy, commerce, climate to achieve rapid elimination of lead from the environment ▪ Revise PSQCA and National Drinking Water Standards to align acceptable levels with WHO recommendation ▪ Revise PSQCA standards to reduce the allowed limit of lead in all paints and other consumer products such as lead containing batteries ▪ Require new household plumbing materials to be free of lead and encourage replacement of old lead-containing plumbing systems through public information about health impact and providing incentives to households ▪ All petroleum products to be lead free including imported petroleum ▪ Ban the use of lead in all local and imported cosmetics ▪ Develop and implement hazardous substances rules for import chemical
- Climate Resilient Health Systems		
22.	Initiative to make health systems climate resilient	▪ Designate focal points for climate change and health within the Ministries of Health and Climate Change as a first step ▪ Develop a steering mechanism for joint collaboration in the shape of a TWG combining Health & Climate divisions at the national and provincial levels ▪ Develop monitoring, evaluation and accountability mechanisms within the Ministry of Health, and Climate Change and other relevant ministries ▪ Collect information on existing capacity of human resource to respond to climatic events and identify gaps ▪ Develop curricula and training courses on climate resilience with respect to health for various levels of health professionals/ students ▪ Develop indicators for monitoring vulnerabilities and risks for climate change impact on health & periodic review of health system capacity with respect to vulnerabilities ▪ Establish a network of researchers linked across academia, international and national development partners, public sector institutes, and relevant departments/ line ministries. ▪ Engage with members of the community, through effective communication campaigns, on best practices for responding to climate threats ▪ Conduct GHG emissions assessment of the health sector and potential adaptation options for mitigation measures ▪ Develop integrated monitoring mechanisms with other sectors such as energy, transport, climate, food and agriculture, housing and disaster management ▪ Apply to receive funding for international projects and programmes on building health systems' resilience by the main international climate change funds (e.g. the GEF, Adaptation Fund, bilateral donors)
4. RISK DOMAIN – INJURIES		
- Road traffic injuries		
23.	Public transportation: Build and Strengthen Public Transportation Systems in Urban Areas	▪ Update transport laws at federal level and coordinate with and facilitate provinces in instituting safe and effective mass public transit systems in urban centers. ▪ Strong coordination mechanism between federal and provincial level to ensure minimum level of availability of safe and effective public transport across all provinces through development of an inter-provincial coordination Group/Technical Working Group.

No.	Inter-sectoral policies and interventions	Key Recommendations
		Coordination and technical support from the federation should be solicited to harmonize efforts and the National Road Safety Council should be made more proactive. ▪ Implementation for all interventions needs enforcement of the laws and collaboration with all stakeholders ▪ Data on road fatality and injuries should be continuously updated using a mobile phone application linked with the emergency helpline 1122 which can be used to modify policies and strategies accordingly ▪ Pre-hospital Emergency Care Management Framework, which is reliable system for data collection can be used for better implementation and can be a reliable resource for evidence-based policy making. There is still no legislation on mass transit in Urban areas. The Draft Road Safety Act, 2020 is still pending approval by the parliament.
24.	Traffic Safety: Include Traffic Calming Mechanisms into Road Construction	▪ Implementation of road audits for existing roads and implementation of recommended standards into the construction of new roads ▪ Increase capacity and skills related to road engineering needed to implement and monitor road safety measures ▪ Support provinces in implementing various standards including minimum road safety standards once enacted ▪ Behaviour change communication to improve traffic sense and movement. ▪ Data collection on the cause of death for all accidents can also lead to a better understanding of the situation. Built environment can be modified to reduce deaths due to accidents.
25.	Traffic Safety: Set and Enforce Speed Limits on Roads	▪ Review and reduce speed limits on highways and motorways considering general road and vehicle condition and fitness standard in Pakistan ▪ All new roads projects with a speed limit > 60km/h should include the infrastructure required to install speed cameras and electronic (variable) signboards ▪ As part of common National Road Safety Standards develop consensus implementing reduced speed limits including in urban and rural areas to below 50km/hr and below 30km/hr where traffic and other road users mix. ▪ Improve enforcement of speed limit compliance by empowerment, increased capacity and improved training of traffic police ▪ Enforcement for the rules needs behaviour change. Rules are there but not enforced. Safety audits should be conducted. ▪ Data collection on the cause of death for all accidents can also lead to a better understanding of the situation. Built environment can be modified to reduce deaths due to accidents.
26.	Vehicle safety: enact legislation and enforce personal transport safety measures, including seatbelts in vehicles and helmets for motorcycle users	▪ Strengthen legislation and standards related to vehicle safety in manufacturing for local industry including minimum national safety standards which should guide provincial legislation, standards and enforcement. These should be in line with UN standards or similar internationally accepted standards. Continued support of local industry, as in the last many years, should be conditional on compliance with such standards ▪ Institute and enforce mandatory use of seat belts for front and rear passengers and improve enforcement of helmet laws. ▪ Strengthen the deficient Accident Reporting System to investigate frequent causes and locations of accidents and create a registry of road traffic incidents for continuous health impact evaluation. ▪ Strengthen and enforce quality standards for locally produced helmets and consider subsidies to ensure use by all socio-economic strata combined with strict enforcement. ▪ Strengthen regulation and enforcement of locally produced three-wheeler vehicles (combined with reducing public transport infrastructure gaps, which these vehicles fill) ▪ Increase consumer information and implement a system of safety rating to increase consumer demand of safety provision in vehicles. ▪ Standardization of vehicle registration requirements and inclusion of key safety features. ▪ Strengthen vehicle inspection system and regular checks by supporting federal and provincial implementation and enforcement skills and capacities. ▪ Awareness and education to change behaviour is vital ▪ Manufacturers have to be taken on board. ▪ Standards have to be maintained. Legal provisions are there; compliance should be ensured.
5. RISK DOMAIN – OTHERS		
27.	Exercise: take steps to develop infrastructure enabling pedestrians and bicyclists	▪ Update road safety laws and rules with more consideration to pedestrians in line with recommendations in National Road Safety Strategy 2018-2030 and UN regulations for road safety

No.	Inter-sectoral policies and interventions	Key Recommendations
		▪ As part of the Minimum National Safety Standards revise recommended urban speed limits and reduce speed limits to 50km/h on urban arterial roads in which pedestrians, motorcycles and 3-wheeled vehicles mix with larger vehicles. Safe speed limits should be reduced to 30km/h (or lower based on local government assessment) in areas of high pedestrian activity in city centres, residential roads and around markets, shops, and schools. ▪ By 2030 strengthen road rules, increase enforcement, increase public support for responsible road use and toughen penalties for those drivers and passengers who continue to disobey the law. ▪ Include assessment of Vulnerable Road User (VRU) safety standards for new road construction.
28.	Agricultural antibiotics use: Reduce and Eventually Phase-out Subtherapeutic Antibiotic use in Agriculture	▪ Improve awareness and understanding of antimicrobial resistance through effective communication, education and training ▪ Review legislations - Drug Act 1976 and DRAP Act 2012 – to enhance control of antimicrobials usage as growth promoters and prophylaxis in veterinary sector ▪ Phase out use of antimicrobials as Growth Promoters and provide appropriate alternatives (such as prebiotics, probiotics); ▪ Increase vaccination rates for vaccine preventable disease in food producing animals. ▪ Establishment of an integrated national AMR surveillance system (human, animal usage and resistance monitoring) ▪ Amend and harmonize Drug Sales Rules for use in agriculture to prevent misuse of antimicrobials. ▪ Develop and implement an audit mechanism for antimicrobial sale and utilization. ▪ Increase enforcement capacity by increasing laboratory capacity for antimicrobial residues detection ▪ Enforcement of Drugs Act 1976 and DRAP Act 2012 regarding quality (substandard, counterfeit drugs) and sale of antimicrobials ▪ PSQCA certification of antibiotic- free poultry, meat, and milk products ▪ Strict implementation of rules by the provinces needed to minimize the use of antibiotics; AMR is likely to increase with the misuse of antibiotics by farmers; Legislation or legal framework is there but lack of implementation by the provinces; ▪ Bans on the use of growth promoters in poultry feeds should be made mandatory. ▪ Impose restriction on over-the-counter prescription of antibiotics. Agriculture antibiotics overuse cannot be prevented. Reduce the use of growth promoters in animal/bird feeds.
29.	Emergency Response: Create and Exercise Multisectoral Response and Supply Stockpiles to Respond to Pandemics and Other Emergencies	▪ National emergency and pandemic preparedness response should be created. The preparedness and response plan being developed for covid-19 could form the basis of this expanded plan incorporating a whole-of-society approach. ▪ National country roadmap to IHR capability should be developed in collaboration with provincial government with clearly defined roles of various parts of the federation to improve overall IHR preparedness as pointed out in the Joint External Evaluation ▪ Revise existing federal and provincial legislative framework to back up a robust emergency and pandemic response ▪ An emergency financing mechanism should be developed which takes into account external as well as internal funding mechanisms. A budget line for emergency and pandemic preparedness should be created to ensure dedicated funding. ▪ Other emergencies including floods and earthquakes should also be given due attention ▪ Cross-border transmission of infections should also be curtailed ▪ Stockpiling is necessary for emergencies ▪ Continuation of RMNCAH services should be ensured ▪ Management Frameworks and Surveillance systems ▪ HRH developed and trained: public health specialists for data analysis and interpretation
30.	Safe Sex: Remove Duties and taxes on Condoms and Subsidize in Brothels and At-risk Key Populations	▪ Review and revise taxes and duties on condoms to increase population use and subsidize to improve access to condoms of disadvantaged populations such as poor rural population and vulnerable segments such as sex workers, men who have sex with men, prisoners, and migrants. ▪ The supplies should be subsidized for the entire population; Currently, condoms are being provided by the Global Fund and no support exists from the Government whether national or provincial for the coverage. Currently the national coverage of safer sex programming is extremely low and needs to be enhanced.

7

ACTIONS TO STRENGHTEN THE INTERSECTORAL AGENDA

The intersectoral UHC package for Pakistan is intended to provide a list of policy actions delivered predominantly outside the health sector that have the potential to substantially improve population health through a whole-of-government approach. The application of this intersectoral package in provinces will vary according to epidemiological and demographic considerations. Following considerations are pivotal in the implementation of the intersectoral package:

- Careful consideration of the social, cultural, economic, and political context
- Emphasis on generating political will and commitment from all relevant sectors at the national and subnational levels
- Design and reinforcement of accountability mechanisms, which also integrate into the monitoring and evaluation process

Ministry of Finance has a central role in a successful implementation of the intersectoral package. Many of the intersectoral interventions in the package for Pakistan are fiscal in nature. Even the nonfiscal interventions proposed have implications for non–health sector budgets and thus involve ministry of finance to a degree.

The table below reflects the key activities along with costs to strengthen the prioritized 29 high priority intersectoral interventions during 2022 – 2030.

S.NO	Prioritised intervention	Activities to be undertaken	Lead Ministry / Department	Partner/s	Cost	
					PKR	USD
1.	Substance use: Impose Large Excise Taxes on Tobacco	1. Analysis to make a case for an ear-marked health tax on tobacco and identify priority areas where the ear-marked tax would be used in health sector allocation.	MoNHSR&C	WHO	3,089,900	14,045
		2. Study with respect to addictive substances use prevalence, consumption and socio-economic impact			22,247,280	101,124
		3. Market research on addictive substances to understand the market dynamics and understand the drug addicts behaviour			2,471,920	11,236
2.	Substance use: Impose and enforce strict regulation of advertising, promotion, packaging and availability of tobacco	1. Mapping and registration of all tobacco vendors with the excise department and the directorate of tobacco	MoNHSR&C	WHO	1,112,320	5,056
		2. Feasibility and stakeholder management strategies to introduce plain packaging and other interventions			1,081,520	4,916
		3. Develop National Behavioural Change Communication Strategy on Tobacco			2,502,720	11,376
		4. Develop National Action Plan on Tobacco use			2,502,720	11,376
3.	Smoking control: Ban Smoking in Public Places	1. Identify the existing implementation gaps and required capacities	MoNHSR&C	WHO	1,977,580	8,989
4.	Inadequate Nutrition; Iron and Folic Acid; Fortify Food	1. Assessment of enforcement and testing capacity of regulatory bodies such as PSQCA and Provincial Food Authorities	MoNHSR&C	WHO, WFP, Nutrition International, GAIN	2,471,920	11,236
		2. Cost implications on household budgets and equity implications			1,977,580	8,989
		3. Assessment of additional benefit of fortification initiatives among various population groups especially children and women			1,297,780	5,899
		4. Need assessment of additional complementary targeted interventions for populations not reached by fortification programs			1,297,780	5,899
5.	Inadequate Nutrition; Iodine; Fortify Salt	1. Assessment of drivers of poor compliance with fortification standards at production levels.	MoNHSR&C	WHO, WFP, Nutrition International, GAIN	1,853,940	8,427
		2. Quantitative HH assessment for iodine in salt			30,898,780	140,449
6.	School feeding: Finance School Feeding for all Schools and Students in Selected Geographical Areas	1. Assessment of potential co-benefits on health, improved school retention and improved educational achievement of investment in a national school meal program based on national nutrition standards.	Ministry of Federal Education	WHO, WFP, Nutrition International, GAIN	4,634,740	21,067
		2. Feasibility study of school feeding programmes to recommend context specific and cost-effective models, feasible for the Government to manage and sustain.			3,089,900	14,045
7.	Food quality: Ensure that Subsidized Foods and School Lunches have Adequate Nutritional Quality	1. Development of School Lunch quality standards	Ministry of Federal Education	WHO, WFP, Nutrition International, GAIN	3,089,900	14,045

8.	Salt: Impose Regulations to Reduce Salt in Manufactured Food Products	1. Food survey on national consumption and monitoring of changing trends in consumption as a result of salt reduction policies. Identification of the most common sources of high salt content processed foods (locally produced food as well imported food items)	MoNHSR&C	WHO, WFP, Nutrition International, GAIN	11,123,640	50,562
		2. Capacity and readiness of food industry for reformulation of low salt food products			3,089,900	14,045
		3. Assessment of regulatory capacity (technical and resource) for monitoring salt content in manufactured food			3,707,880	16,854
		4. Identification of feasible approaches to reduce salt content in processed food which maintain taste and are thus acceptable for food manufacturers and consumers			1,544,840	7,022
9.	Salt and sugar: Provide Consumer Education Against Excess Use, Including Product Labelling	1. Assessment of nutritional labelling and/or front-of-pack labelling approaches which are easily understandable by Pakistani consumers (using readily adaptable international study protocols)	MoNHSR&C	WHO, WFP, Nutrition International, GAIN	1,544,840	7,022
		2. Feasibility of mandatory labelling and capacity of industry (especially small- and medium sized industry) to implement and regulatory bodies to monitor and enforce			1,544,840	7,022
10.	Sugar Sweetened Beverages: Tax to Discourage Use	1. Post budget 2021, tax mapping and analysis to identify taxes on SSBs to beyond carbonated drinks like juices, energy drinks, iced teas, sweetened milk, coffee, concentrate CTC.	MoNHSR&C	WHO, WFP, Nutrition International, GAIN	1,235,960	5,618
		2. Study on the economic consequences of obesity			1,235,960	5,618
		3. Conduct an updated cost benefit analysis / Cost-benefit study			3,089,900	14,045
11.	Trans Fats: Ban and Replace with Polyunsaturated Fats	1. Study on feasibility of legislative and regulatory measures considering capacity of industry and regulatory agencies	MoNHSR&C	WHO, WFP, Nutrition International, GAIN	3,089,900	14,045
		2. Readiness and capacity of industry to replace trans fats with healthier alternatives for example olive oil production and its feasibility in Pakistan			3,089,900	14,045
		3. Generate evidence on cost effectiveness of TFA replacement			3,089,900	14,045
12.	Indoor sources: Ban on kerosene and halt the use of unprocessed coal as a household fuel	1. Designing, testing, and evaluating 'clean' stove and other interventions that can replace existing kerosene and coal stoves while also meeting specific energy service needs (i.e. lighting, cooking, space heating)	Ministry of Climate Change	UNEP, UNIDO	3,089,900	14,045
		2. Investigating clean biomass stoves that may serve as a stopgap to truly clean cooking with LPG, natural gas, or electricity complete Data in percent/number what type of fuel is used at local level.			3,089,900	14,045
		3. Economic feasibility, and health impact assessments of expanding safer fuel networks to rural and peri-urban households			3,089,900	14,045
		4. Health impact assessment – through measurement and modeling - of Hazardous Air Pollutants especially on health of women, children, and older people in the country			6,179,800	28,090
		5. Assess the contribution of Hazardous Air Pollutants to overall ambient air pollution in Pakistan			1,853,940	8,427
		6. Strategy to collect and collate Geospatial and temporal statistics of Pakistan			1,853,940	8,427

		7. Measure particulate matter levels in both urban and rural areas and identify target audience for survey			6,179,800	28,090
13	Indoor sources: Subsidies to promote the use of low emission household energy devices and fuels	1. Economic impact of revising subsidies on natural gas to household consumers in urban and high-income households	Ministry of Climate Change	UNEP, UNIDO	2,162,820	9,831
		2. Cost effectiveness of subsidizing and switching to renewable energy sources such as wind, solar and water, and co-benefits of such as switch for health, climate and industry			3,089,900	14,045
		3. Contribution of Hazardous Air Pollutants to overall ambient air pollution in Pakistan (at least previous 5-10 years of data/records from concern department for analytical analysis).			3,089,900	14,045
		4. Feasibility of household behavior change to cleaner fuels with subsidies and the effect of potential subsidies on health and environment			6,674,140	30,337
14	Indoor air pollution: Promote the Use of Low Emission Household Devices	1. Gap analysis of Lack of access, sufficient and sustainable supplies of energy	Ministry of Climate Change	UNEP, UNIDO	6,674,140	30,337
15.	Fossil Fuel Emissions: Regulate Transport, Industrial, and Power Generation Emissions	1. Assessment of regulatory capacity and capacity building needs and identification of stakeholders to take lead role for continuous monitoring for compliance with available standards (National Environmental Quality Standards - NEQS)	Ministry of Climate Change	UNEP, UNIDO	1,544,840	7,022
		2. Development of indoor air quality standards			1,544,840	7,022
16.	Fossil fuel emissions: tax emissions and/or auction off transferable emission permits	1. Analysis of the feasibility and applicability of various carbon pricing instruments in Pakistan's context. Choose appropriate carbon pricing instrument(s) and sectors where application can result in most health and climate benefits	Ministry of Climate Change	UNEP, UNIDO	1,544,840	7,022
		2. Establishment of a robust monitoring and verification system for carbon pricing in Pakistan			1,853,940	8,427
17.	Fossil Fuel Emissions: Dismantle Subsidies for and Increase Taxation of Fossil Fuels (Except LPG)	1. An assessment of existing level and sources of subsidies on fossil fuels	Ministry of Climate Change	UNEP, UNIDO	926,860	4,213
		2. Impact of various taxation and subsidy models on emissions and health as well as economic impact on industry (including export competitiveness), households and economic growth			2,471,920	11,236
		3. Usage survey of LNG and LPG at domestic level			6,674,140	30,337
18.	WASH: Enact National Standards for Safe Drinking Water and Sanitation within and Outside Households and Institutions	1. A bottleneck analysis to assess persistent barriers to implementation of basic water, sanitation and hygiene standards in Pakistan	Ministry of Climate Change	UNEP, UNIDO UNICEF	3,089,900	14,045
		2. Assessment of drinking and waste water treatment and testing capacity (How many Sewage Treatment Plants and Waste Water Treatment Plant are working/functional in country, some industries treating waste water but sewerage treatment is still big issue in cities.)			3,089,900	14,045
19.	Hazardous waste: Legislation and Enforcement of Standards for Hazardous Waste Disposal	1. Study to obtain data on hazardous waste and develop inventory of chemicals in country. Regular relay of data from waste management companies and waste disposal facilities and monitoring data of the already dumped sites	Ministry of Climate Change	UNEP, UNIDO	9,887,680	44,944

		2. Develop the system and collect data of hazardous waste available and disposing at country level including all type of hazardous waste			6,179,800	28,090
20.	Pesticides: Enact Strict Control and Move to Selective Bans on highly Hazardous Pesticides	1. Assess the capacity of main regulatory authorities (e.g., customs, pesticide regulatory authority) involved in the control of illegal pesticides at points of entry should be identified	Ministry of Climate Change	WHO, UNEP, UNIDO	3,707,880	16,854
21.	Lead exposure: Take Actions to Reduce Human Exposure to Lead, including Bans on Leaded Fuels and Phase-Out of Lead-Based Consumer Products	1. Economic impact of banning all lead use in paints and consumer products	Ministry of Climate Change	UNEP, UNIDO	2,471,920	11,236
		2. Develop inventory of available lead containing product in country			1,235,960	5,618
22.	Initiative to make health systems climate resilient	1. Develop a steering mechanism for joint collaboration in the shape of a TWG combining Health & Climate divisions at the national and provincial levels	MoNHSR&C	MoCC	92,400,000	420,000
		2. Develop monitoring, evaluation and accountability mechanisms within the Ministry of Health, and Climate Change and other relevant ministries		MoCC	2,500,000	11,364
		3. Collect information on existing capacity of human resource to respond to climatic events and identify gaps		MoCC	2,500,000	11,364
		4. Develop curricula and training courses on climate resilience with respect to health for various levels of health professionals/ students		MoCC	3,500,000	15,909
		5. Develop indicators for monitoring vulnerabilities and risks for climate change impact on health & periodic review of health system capacity with respect to vulnerabilities		MoCC	4,500,000	20,455
		6. Establish a network of researchers linked across academia, international and national development partners, public sector institutes, and relevant departments/ line ministries.		MoCC	3,000,000	13,636
		7. Engage with members of the community, through effective communication campaigns, on best practices for responding to climate threats		MoCC	5,000,000	22,727
		8. Conduct GHG emissions assessment of the health sector and potential adaptation options for mitigation measures		MoCC	10,000,000	45,455
		9. Develop integrated monitoring mechanisms with other sectors such as energy, transport, climate, food and agriculture, housing and disaster management		MoCC	1,500,000	6,818
		10. Apply to receive funding for international projects and programmes on building health systems' resilience by the main international climate change funds (e.g. the GEF, Adaptation Fund, bilateral donors)		MoCC	5,000,000	22,727
23.	Public transportation: Build and Strengthen Public Transportation Systems in Urban Areas	1. Review and update transport laws at federal level	Ministry of Planning Development and Reforms	UNEP, UNIDO	3,089,900	14,045
		2. Draft Road Safety Act 2020 should be passed and its enforcement ensured.			1,235,960	5,618
		3. Development of the costed National Transport Master implementation plan should be ensured following its approval by the MoPD&SI.			2,471,920	11,236
24.	Traffic Safety: Include Traffic Calming Mechanisms into Road Construction	1. Road audits and identification of areas where calming mechanisms need to be introduced. Identification of appropriate calming interventions considering types of vehicles and other road users	Ministry of Planning Development and Reforms	WHO	3,089,900	14,045
		2. Road safety impact assessment			3,089,900	14,045
25.	Traffic Safety: Set and Enforce Speed Limits on Roads	1. Health impact assessment of reduction in speed limits (RTI injuries, disability, and fatality)	Ministry of Planning Development and Reforms	WHO	3,089,900	14,045

26.	Vehicle safety: enact legislation and enforce personal transport safety measures, including seatbelts in vehicles and helmets for motorcycle users	1. Health Impact Assessment and Economic Analysis of non-fatal and fatal road traffic incidents due to inadequate vehicle and helmets safety standards and lack of compliance	Ministry of Planning Development and Reforms	WHO	3,089,900	14,045
27.	Exercise: take steps to develop infrastructure enabling pedestrians and bicyclists	1. Health Impact Assessment (including health benefit of increased physical activity)	Ministry of Communications	WHO	2,471,920	11,236
28.	Agricultural antibiotics use: Reduce and Eventually Phase-out Subtherapeutic Antibiotic use in Agriculture	1. Baseline survey of use of antimicrobials and growth promoters in animal feed in industry and utilization audit of feed	Ministry of National Food Security and Research (Livestock wing; livestock and dairy development board; National Veterinary Laboratory)	WHO	3,707,880	16,854
		2. Estimate economic burden of antimicrobial resistance in veterinary and agriculture sector		WHO	2,471,920	11,236
29.	Emergency Response: Create and Exercise Multisectoral Response and Supply Stockpiles to Respond to Pandemics and Other Emergencies	1. Identification of gaps in legal framework for disaster and pandemic preparedness and response	National Disaster Management Authority	WHO, UNICEF, GAVI	2,471,920	11,236
		2. Assessment / Identification of Essential supplies and commodities which need to be stock piled e.g. medicines, personal protective equipment, etc.		WHO, UNICEF, GAVI	3,089,900	14,045
30	Safe Sex: Remove Duties and taxes on Condoms and Subsidize in Brothels and At-risk Key Populations	1. Conduct an analysis of the cost effectiveness of reducing taxes and offering subsidies on condoms and resultant STI and HIV/AIDS prevention	MoNHSR&C	UNFPA, WHO	3,089,900	14,045

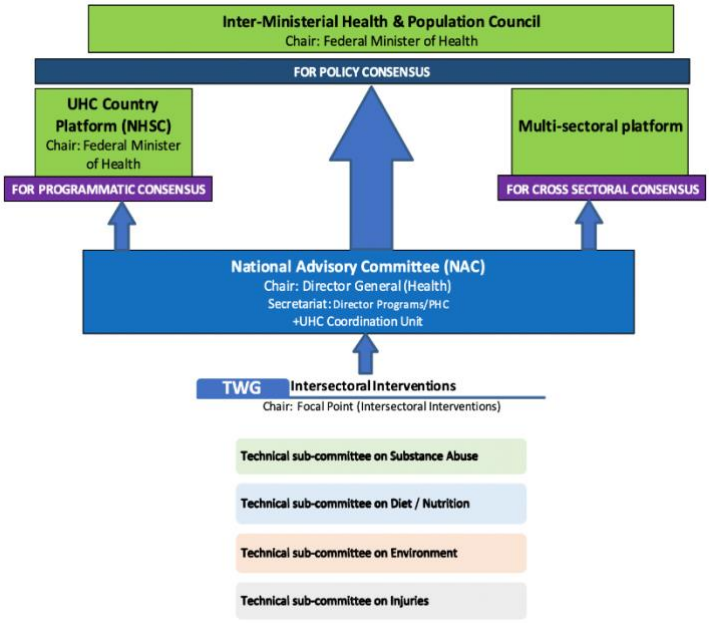
Exchange rate: 1 USD = 220 PKR

8

GOVERNANCE MECHANISM

To ensure clear and consistent governance for the intersectoral intervention action plan, it is important to set out the order of procedures for decision making across different tiers, roles and responsibilities. At the technical working level, **Technical Working Group (TWG) for intersectoral interventions** is responsible for Technical and Systems Recommendations for National Advisory Committee (NAC). The TWG has a particular focus on programmatic technical area, management and coordination, monitoring and evaluation of activities, risk management and escalation of issues to a higher level for decision making. TWG for the intersectoral interventions has constituted four sub-committees namely Substance abuse, Diet / Nutrition, Environment and injuries.

National Advisory Committee (NAC) - Responsible for technical oversight of programmatic reforms, reforms initiatives at national level, to set out guidelines to ensure clear and consistent directions on technical matters. As a senior technical level recommendation body, the NAC has a particular focus on prioritizing national level health and system strengthening interventions and making recommendations for UHC Country Platform and IMH&PC to resolve high levels technical issues. NAC can form time bound sub-committees on specific tasks for detailed deliberations and analysis.



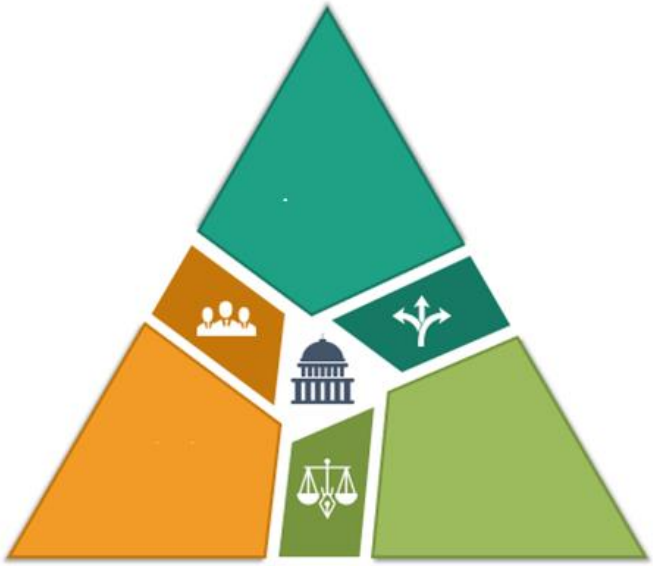
Inter-Ministerial Health & Population Council – a National level Strategic platform for decision-making in health & population. To undertake policy and strategic discussions to reach consensus on measures to strengthen the health and population sector in Pakistan and to achieve national health & population targets and Pakistan's international commitments including SDGs and UHC etc.

UHC Country Platform - National Programmatic consensus, decisions and coordination - To play a central role in national programmatic consensus, facilitating deliberations for decision making and

coordination efforts of the Government of Pakistan to improve the status of universal health coverage in Pakistan.

Multi-Sectoral Platform

The Multi-sectoral platform constituted by M/o NHSR&C would be utilised where decision making, coordination and cross-sectoral consensus building is required. This forum has representation from sectors relevant to the inter-sectoral interventions other than health. If the need may arise, a specific platform may be constituted for the intersectoral interventions.



MONITORING FRAMEWORK

Key indicators to monitor the implementation of Action Plan are as following:

RISK DOMAIN	TARGET	INDICATOR
ADDICTIVE SUBSTANCE ABUSE		
Tobacco use	1. A 30% relative reduction in prevalence of current tobacco use in persons aged 15+ years	1. Prevalence of current tobacco use among adolescents
		2. Age-standardized prevalence of current tobacco use among persons aged 18+ years
DIET		
Iron and Folic Acid deficiency	2. All Wheat flour mills fortify wheat flour with iron and folic acid	6. % of wheat flour mills with microfeeders installed
		7. % of wheat flour mills with premix available
		8. % of wheat flour mills fortifying wheat with iron and folic acid
Iodine deficiency	3. A 20% increase in Salt Iodisation (from 79.6% to 100%)	9. % of households consuming adequately iodised salt
Salt/sodium intake	4. A 30% relative reduction in mean population intake of salt/sodium	10. Age-standardized mean population intake of salt (sodium chloride) per day in grams in persons aged 18+ years
Food Supplementation	5. All public schools and students in selected disadvantaged geographical Areas provide one full healthy meal	11. % of public schools in selected disadvantaged areas (identified through BISP) providing one full healthy meal
		12. % of public schools following the food quality standards for provision of one full healthy meal
Sugar intake	6. **Health Levy / Tax** on Sugar Sweetened Beverages to discourage use	13. % change in the sales of Sugar Sweetened Beverages
		14. % change in the consumption of Sugar Sweetened Beverages
Trans fatty acids	7. **All** oil / ghee Mills replace Trans fatty acids with polysaturated fats	15. % of oil / ghee Mills who have replaced Trans fatty acids with polysaturated fats
ENVIRONMENTAL		
Ban on kerosene and halt the use of unprocessed coal as a household fuel	8. A 30% relative reduction in use of kerosene / coal at household level	16. % of households using kerosene / coal as a household fuel
	9. A 30% increase in use of low emission household energy devices and fuels	17. % of households using low emission household emission devices and fuels

RISK DOMAIN	TARGET	INDICATOR
	10. A 5% decrease in the Annual average Air Quality Index in big cities	18. Annual average Air Quality Index in big cities
Drinking water and Sanitation	11. A 3% increase in the access to improved source drinking water	19. Access to improved source drinking water
	12. A 10% increase in the availability of toilet facility at household level	20. % of households with availability of toilet facility
	13. A 20% increase in the availability of specific place and soap for handwashing at household level	21. % of households with specific place and soap for handwashing
Lead exposure	14. Ban on Lead based paints and fuels	22. Ban on use of lead in paints and fuels
INJURIES		
Road Traffic Injuries	15. A 10% reduction in road traffic accidents	23. Number of road traffic accidents
	16. A 10% reduction in deaths from road traffic accidents	24. Number of deaths due to road traffic accidents
OTHERS		
Physical inactivity	17. A 10% relative reduction in prevalence of insufficient physical activity	25. Prevalence of insufficiently physically active adolescents, defined as less than 60 minutes of moderate to vigorous intensity activity daily
		26. Age-standardized prevalence of insufficiently physically active persons aged 18+ years (defined as less than 150 minutes of moderate-intensity activity per week, or equivalent)
Family Planning	18. Remove Duties and Taxes on condoms	27. Duties and Taxes on condoms removed

ANNEXURES

ANNEXURE 1

DCP3 recommended Intersectoral interventions

No.	DCP3 recommended inter-sectoral policies and interventions	Instrument
1. Risk domain – ADDICTIVE SUBSTANCE USE		
1	Substance use: impose large excise taxes on tobacco, alcohol and other addictive substance	Fiscal
2	Substance use: impose and enforce strict regulation of advertising, promotion, packaging and availability of tobacco and alcohol	Regulation
3	Smoking control: ban smoking in public places	Regulation
4	Alcohol control: setting and enforcement of blood alcohol concentration limits	Regulation
2. Risk domain – DIET		
	- Inadequate nutrient intake	
5	Iron and folic acid: Fortify food	Regulation
6	Iodine: Fortify salt	Regulation
7	School feeding: ensure that subsidized foods and school lunches have adequate nutritional quality	Regulation
8	School feeding: finance school feeding for all schools and students in selected geographical areas	Regulation
	- Excessive nutrient intake	
9	Salt: impose regulations to reduce salt in manufactured food products	Regulatory
10	Salt and sugar: provide consumer education against excess use, including product labelling	Information and education
11	Sugar sweetened beverages: tax to discourage use	Fiscal
12	Transfats: ban and replace with polyunsaturated fats	Regulatory
3. Risk domain – ENVIRONMENTAL		
	- Air pollution	
13	Indoor sources: ban on kerosene as a source of household fuel	Regulatory
14	Indoor sources: halt the use of unprocessed coal as a household fuel	Regulatory
15	Indoor sources: promotion of kitchen retrofits to reduce household air pollution	Information and education
16	Indoor sources: regulations on building codes that ensure adequate ventilation	Regulation
17	Indoor sources: subsidize clean alternatives to kerosene such as liquid propane gas (LPG)	Fiscal
18	Indoor sources: subsidies to promote the use of low emission household energy devices and fuels	Fiscal
19	Fossil fuel emissions: dismantle subsidies for and increase taxation of fossil fuels (except LPG)	Fiscal
20	Fossil fuel emissions: measure to reduce diesel use, including engine retrofits and transition to compressed natural gas for fleets	Build environment
21	Fossil fuel emissions: regulate transport, industrial and power generation emissions	Regulatory
22	Fossil fuel emissions: relocation of brick kilns and retrofits for emission control	Build environment
23	Fossil fuel emissions: subsidies to renewable energy	Fiscal
24	Fossil fuel emissions: tax emissions and /or auction off transferable emission permits	Fiscal
25	Fossil fuel emissions: enhance clean fuel distribution networks	Build environment
26	Non-emission outdoor sources: Establish or strengthen municipal street cleaning and trash collection measures	Regulatory
27	Non-emission outdoor sources: fines for residual trash burning	Fiscal
28	Non-emission outdoor sources: impose and enforce measures to control non-emission sources of air pollution, including road and construction dust	Regulatory
29	Greenhouse gases: regulate CO2 and methane emissions (including cap and trade)	Regulatory
30	Greenhouse gases: tax CO2 and methane emissions	Fiscal
	- Occupational	
31	Animal husbandry: hygiene enforcement measures, including education, in occupations that involve animal husbandry	Regulatory
32	Medical workers: introduce safe injection devices, such as blunt tip suture needles	Build environment
33	Occupational safety: setting and enforcement of occupational safety standards	Regulatory
34	Hazardous occupations: setting and enforcement of regulations on the use of personal equipment in hazardous occupations	Information and education
	- Water supply and sanitation	
35	WASH: establish quality WASH facilities in schools, workplaces, public spaces and healthcare facilities	Build environment
36	WASH: targeted WASH subsidies to poor and vulnerable groups	Fiscal
37	WASH: enact national standards for safe drinking water and sanitation within and outside households and institutions	Regulatory

No.	DCP3 recommended inter-sectoral policies and interventions	Instrument
	- Toxic substances	
38	Hazardous waste: legislation and enforcement of standards for hazardous waste disposal	Information and education
39	Hazardous waste: restricted access to contaminated sites	Regulatory
40	Hazardous substances: regulations on child-resistant containers for hazardous substances (e.g. paraffin, paracetamol, etc.)	Regulatory
41	Pesticides: enact strict control and move to selective bans on highly hazardous pesticides	Regulatory
42	Silica: engineering controls to decrease release of silica and other toxins	Build environment
43	Arsenic: monitoring of groundwater supplies and provision of alternatives if needed	Regulatory
44	Asbestos: banning of import, export, mining, manufacture and sale	Regulatory
45	Lead exposure: concessionary financing for remediation of worst cases of lead contamination	Fiscal
46	Lead exposure: take actions to reduce human exposure to lead, including bans on leaded fuels and phase-out of lead based consumer products	Regulatory
47	Toxic emissions: established and enforced toxic element emissions for air and water	Regulatory
48	Mercury: monitoring and reduction or elimination of use in artisanal mining, large scale smelting and cosmetics	Regulatory
4. Risk domain – INJURIES		
	- Road traffic injuries	
49	Public transportation: build and strengthen public transportation systems in urban areas	Build environment
50	Public transportation: subsidies to encourage use of public transportation systems	Fiscal
51	Traffic safety: increased visibility, areas for pedestrians separate from fast motorized traffic	Build environment
52	Traffic safety: include traffic calming mechanisms into road construction	Build environment
53	Traffic safety: set and enforce speed limits on roads	Regulatory
54	Pedestrian safety: Programs that ensure the supervision of children walking to and from school	Information and education
55	Vehicle safety: enact legislation and enforce personal transport safety measures, including seatbelts and helmets for motorcycle users	Regulatory
56	Vehicle safety: social marketing to promote seatbelt use in vehicles and helmet use by child bicyclists	Information and education
57	Vehicle safety: mandatory use of daytime running lights for motorcycles	Regulatory
	- Other injuries	
58	Suicide prevention: decriminalization of suicide	Regulatory
59	Interpersonal injury prevention: stricter licensing laws and reduced availability of firearms and ammunition	Regulatory
60	Gender equity: micro-finance combined with gender equity training	Fiscal
61	Gender equity: school-based programmes to address gender norms and attitudes	Information and education
62	Drowning: legislation and enforcement of use of flotation devices	Regulatory
63	Drowning: programmes to prevent drowning in high-risk areas by supervising younger children and teaching older children how to swim	Information and education
64	Burns: safer stove design to reduce risk of burns	Build environment
5. Risk domain – OTHERS		
65	Exercise: take steps to develop infrastructure enabling pedestrians and bicyclists	Build environment
66	Agricultural antibiotics use: reduce and eventually phase-out sub therapeutic antibiotic use in agriculture	Regulatory
67	Emergency response: create and exercise multi-sectoral response and supply stockpiles to respond to pandemics and other emergencies	Regulatory
68	Safe sex: enact laws and policies to protect and reduce stigma for key populations	Regulatory
69	Safe sex: impose regulations requiring condom use in brothels	Regulatory
70	Safe sex: remove legal barriers to safe injection facilities and needle exchange programmes	Regulatory
71	Safe sex: remove duties and taxes on condoms and subsidize for high-risk populations.	Regulations

ANNEXURE 2

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World Health Organization

DCP3 Disease Control Priorities

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